

**GW-211**

**Q4 2012**

**Sampling Report**

**Date:**

**11/13/2013**

OIL CONS. DIV DIST. 3

NOV 29 2012

QUARTERLY GROUNDWATER MONITORING REPORT  
(October 2012 Sampling Event)

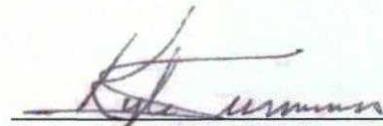
GROUNDWATER DISCHARGE PLAN GW-211

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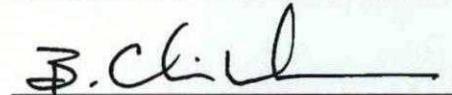
LARGO COMPRESSOR STATION  
Section 15, Township 26N, Range 7W  
Rio Arriba County, New Mexico  
SWG Project No. 0410002  
November 13, 2012

Prepared for:  
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QUARTERLY GROUNDWATER MONITORING REPORT  
(October 2012 Sampling Event)  
GROUNDWATER DISCHARGE PLAN GW-211

LARGO COMPRESSOR STATION  
Section 15, Township 26N, Range 7W  
Rio Arriba County, New Mexico

SWG Project No. 0410002

1.0 INTRODUCTION

1.1 Site Description & Background

The Largo Compressor Station is located off of County Road (CR) 379 in Section 15, Township 26N, Range 7W in Rio Arriba County, New Mexico, referred to hereinafter as the "Site" or "subject Site". The Site is a natural gas compressor station utilized to dehydrate and compress natural gas collected from production wells in the area for transportation via pipeline. The Site was constructed in the mid-1960s and currently includes two (2) compressor engines, a dehydration unit and related treater, one (1) bullet storage tank, an out-of-service condensate storage tank battery, which includes six (6) condensate storage tanks and two (2) below-grade drain tanks, a new condensate storage tank battery, which includes seven (7) new condensate storage tanks, inlet scrubbers, a control room, and an office/shop building.

The Site is subject to regulatory oversight by the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (OCD). To address activities related to crude oil/condensate related releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the EMNRD/OCD rules, specifically New Mexico Administrative Code (NMAC) 19.15.30 Remediation. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

The Site location is depicted on Figure 1 of Appendix A which was reproduced from a portion of the United States Geological Survey (USGS) 7.5-minute series topographic map. A Site vicinity map, created from an aerial photograph, is provided as Figure 2 of Appendix A.

The areas of known or suspected impact at the Site have been previously identified as Areas 1 through 4 in OCD correspondence. Each of the areas is depicted on Figure 3 in relation to pertinent Site features and general Site boundaries. These areas are briefly described below:

**Area 1(Condensate Storage Tank Area)**

Area 1 is defined as the northwestern portion of the Site and includes the out-of-service condensate storage tank battery associated with on-going investigation and/or corrective actions since a release from a condensate storage tank valve was reported to

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the OCD in January of 2008. Additional detail regarding the investigative and corrective activities at Area 1 are provided in the *Environmental Site Investigation - Largo Compressor Station (GW-211) (SWG - March 24, 2011)*, and the *Corrective Action Pilot Study Report (SWG - October 10, 2011)*. The old condensate storage tanks were physically removed from Area 1 during July/August 2012.

#### Area 2 (Valve Box Area)

Area 2 includes the new condensate storage tank battery and the immediately surrounding areas. This area is in the north central portion of the Site, immediately south of CR 379. During the construction of the new tank battery in June 2009, petroleum hydrocarbon impacted soils and groundwater were encountered in association with a former valve box and related appurtenances. Additional detail regarding the investigative and corrective activities at Area 2 are provided in the *Environmental Site Investigation - Largo Compressor Station (GW-211) (SWG - March 24, 2011)*.

#### Area 3 (Retention Pond Area)

Area 3 encompasses the northeast portion of the Site including the storm-water retention pond. Historical petroleum hydrocarbon affected soil and groundwater were identified during the construction of the retention pond in July of 2009, which apparently originated from historic oil and contact water treatment and storage in the area of the current retention pond. Additional detail regarding the investigative and corrective activities at Area 3 are provided in the *Environmental Site Investigation - Largo Compressor Station (GW-211) (SWG - March 24, 2011)*, and the *Supplemental Site Investigation & Quarterly Groundwater Monitoring Report (April 2012) (SWG - June 31, 2012)*.

#### Area 4 (Compression & Dehydration Area)

Area 4 includes the remainder of the Site, which includes the active compression and treatment area comprised of two (2) compressor engines, a dehydration unit and related treated and inlet scrubbers. Soil and groundwater investigation activities pertaining to Area 4 are provided in the *Environmental Site Investigation - Largo Compressor Station (GW-211) (SWG - March 24, 2011)*, and the *Supplemental Site Investigation & Quarterly Groundwater Monitoring Report (April 2012) (SWG - June 31, 2012)*.

### 1.2 Scope of Work

The objective of the groundwater monitoring event was to further evaluate the concentrations of constituents of concern (COCs) in groundwater at the Site.

### 1.3 Standard of Care & Limitations

The findings and recommendations contained in this report represent SWG's professional opinions based upon information derived from on-Site activities and other services performed under this scope of work and were arrived at in accordance with currently acceptable professional standards. The findings were based upon analytical results provided by an independent laboratory. Evaluations of the geologic/hydrogeologic conditions at the Site for the purpose of this investigation are

made from a limited number of available data points (i.e. soil borings and ground water samples) and site wide subsurface conditions may vary from these data points. SWG makes no warranties, express or implied, as to the services performed hereunder. Additionally, SWG does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties).

This report is based upon a specific scope of work requested by Enterprise. The agreement between SWG and Enterprise outlines the scope of work, and only those tasks specifically authorized by that agreement or outlined in this report were performed. This report has been prepared for the intended use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization of Enterprise and SWG.

## 2.0 SAMPLING PROGRAM

A quarterly groundwater sampling event was conducted between October 16<sup>th</sup> and October 19<sup>th</sup>, 2012 by Kyle Summers, a SWG environmental professional.

SWG's groundwater sampling program consisted of the following:

Prior to sample collection, SWG gauged the depth to fluids in each monitoring well using an interface probe capable of detecting light non-aqueous phase liquids (LNAPL). Monitoring wells exhibiting LNAPL were not sampled.

Each monitoring well was micro-purged utilizing low-flow sampling techniques. Low-flow refers to the velocity with which groundwater enters the pump intake and that is imparted to the formation pore water in the immediate vicinity of the well screen. It does not necessarily refer to the flow rate of water discharged at the surface which can be affected by flow regulators or restrictions. Water level drawdown provides the best indication of the stress imparted by a given flow-rate for a given hydrological situation. The objective is to pump in a manner that minimizes stress (drawdown) to the system, to the extent practical, taking into account established Site sampling objectives. Flow rates on the order of 0.1 to 0.5 L/min will be maintained during sampling activities, using dedicated sampling equipment.

The utilization of low-flow minimal drawdown techniques enables the isolation of the screened interval groundwater from the overlying stagnant casing water. The pump intake is placed within the screened interval such that the groundwater recovered is drawn in directly from the formation with little mixing of casing water or disturbance to the sampling zone.

Subsequent to the completion of the micro-purge process, one groundwater sample was collected from each monitoring well that did not contain LNAPL. The groundwater samples were collected from each monitoring well once produced groundwater was consistent in color, clarity, pH, DO, ORP, temperature and conductivity.

Groundwater samples were collected in laboratory, sealed with custody tape and placed on ice in a cooler secured with a custody seal. The sample coolers and completed chain-of-custody forms were relinquished to Hall Environmental Analysis

Laboratory (HEAL) in Albuquerque, New Mexico.

### 3.0 LABORATORY ANALYTICAL PROGRAM

The groundwater samples collected from the monitoring wells during the groundwater sampling event were analyzed for total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) utilizing EPA method SW-846#8015M, and benzene, toluene, ethylbenzene and xylenes (BTEX) utilizing EPA method SW-846 #8021B. Additionally, groundwater samples were collected from monitoring wells MW-6, MW-38, MW-40R, MW-43, and MW-52 for laboratory analysis of Total Dissolved Solids (TDS). In accordance with method protocol (SM2540C Modified), the TDS sample containers contained no chemical preservative, while the containers containing the samples for organic analyses were pre-preserved with HgCl<sub>2</sub>.

A summary of the analysis, sample type, sample frequency and EPA-approved methods are presented on the following table:

Analysis	Sample Type	No. of Samples	Method
<i>TPH GRO/DRO</i>	Groundwater	24	SW-846# 8015M
<i>BTEX</i>	Groundwater	24	SW-846# 8021B
<i>TDS</i>	Groundwater	6	SM2540C Mod

Laboratory results are summarized in Table 1 included in Appendix B. The executed chain-of-custody form and laboratory data sheets are provided in Appendix C.

### 4.0 GROUNDWATER FLOW DIRECTION

Each of the monitoring wells has been surveyed for top-of-casing (TOC) elevations. Prior to sample collection, SWG gauged the depth to fluids in each monitoring well. The groundwater flow direction at the Site is generally towards the northwest, with a gradient that ranges from 0.002 ft/ft to 0.005 ft/ft across the Site.

Groundwater measurements collected during the most recent gauging event in October 2012 are presented with TOC elevations in Table 2, Appendix B. A groundwater gradient map for the October 2012 event is included as Figure 4 (Appendix A).

### 5.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to crude oil/condensate related releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the EMNRD/OCD rules, specifically NMAC 19.15.30 Remediation. These guidance documents establish investigation and abatement action requirements for

sites subject to reporting and/or corrective action.

## 5.1 Groundwater Samples

SWG compared BTEX concentrations or laboratory reporting limits (RLs) associated with the groundwater samples collected from monitoring wells during the October 2012 sampling event to the New Mexico WQCC *Groundwater Quality Standards*; however, the New Mexico WQCC *Groundwater Quality Standards* may not be applicable since the initial groundwater-bearing unit would not be considered an "Underground Source of Drinking Water" in accordance with 19.15.30 NMAC *Remediation*. The results of the groundwater sample analyses are summarized in Table 1 of Appendix B.

### Benzene, Toluene, Ethylbenzene, and Xylenes

Due to the presence of LNAPL hydrocarbons in association with the initial groundwater-bearing unit, monitoring wells MW-12, MW-33, MW-35, and MW-37 were not sampled during the completion of field activities. Monitoring well MW-42 was dry during the October 2012 groundwater sampling event.

The groundwater samples collected from monitoring wells MW-7, MW-11, MW-15, MW-16, MW-39, MW-48, and MW-51 exhibited benzene concentrations ranging from 13 µg/L to 8,200 µg/L, which exceed the WQCC *Groundwater Quality Standard* of 10 µg/L.

The groundwater samples collected from the remaining monitoring wells did not exhibit benzene concentrations above the laboratory RLs, which are equal to or below the WQCC *Groundwater Quality Standard* of 10 µg/L.

The groundwater sample collected from monitoring well MW-48 exhibited a toluene concentration of 580 µg/L, which is below the WQCC *Groundwater Quality Standard* of 750 µg/L.

The groundwater samples collected from the remaining monitoring wells did not exhibit toluene concentrations above the laboratory RLs, which are below the WQCC *Groundwater Quality Standard* of 750 µg/L.

The groundwater samples collected from monitoring wells MW-3R, MW-7, MW-11, MW-15, MW-16, MW-48, and MW-51 exhibited ethylbenzene concentrations ranging from 1.2 µg/L to 150 µg/L, which are below the WQCC *Groundwater Quality Standard* of 750 µg/L.

The groundwater samples collected from the remaining monitoring wells did not exhibit ethylbenzene concentrations above the laboratory RLs, which are below the WQCC *Groundwater Quality Standard* of 750 µg/L.

The groundwater samples collected from monitoring well MW-48 exhibited a xylene concentration of 1,700 µg/L, which exceeds the WQCC *Groundwater Quality Standard* of 620 µg/L. The groundwater samples collected from monitoring wells MW-3R, MW-7, MW-11, MW-15, MW-47, and MW-51 exhibited xylene concentrations ranging from 2.8 µg/L to 91 µg/L, which are below the WQCC *Groundwater Quality Standard* of 620 µg/L.

The groundwater samples collected from the remaining monitoring wells did not exhibit

xylene concentrations above the laboratory RLS, which are below the WQCC Groundwater Quality Standard of 620 µg/L.

#### TPH Gasoline Range Organics/Diesel Range Organics

The groundwater samples collected from the monitoring wells during October 2012 exhibited TPH GRO concentrations ranging from <0.050 mg/L to 32 mg/L, and TPH DRO concentrations ranging from <1.0 mg/L to 2.5 mg/L. The highest GRO concentration during the October 2012 sampling event was observed in the groundwater sample from monitoring well MW-7 (32 mg/L) and the highest DRO concentration was also observed in the sample from MW-7 (2.5 mg/L).

#### Total Dissolved Solids

The TDS analyses performed on samples from six (6) of the unaffected monitoring wells demonstrated a wide variation in groundwater quality across the Site with TDS concentrations ranging from 3,000 mg/L to 30,200 mg/L. The only prior TDS sample that was collected at the Site came from upgradient monitoring well MW-42 (75,400 mg/L, March 2011) which is currently dry. Of the TDS samples collected to date, many of the elevated concentrations appear to be present at locations up- or cross-gradient to historical facility operations and known areas of impact, and are likely naturally occurring levels in those areas.

## 6.0 FINDINGS

During October 2012, SWG conducted a quarterly groundwater monitoring event at the Largo Compressor Station. The Site is a natural gas compressor station utilized to dehydrate and compress natural gas collected from production wells in the area for transportation via pipeline. The Site was constructed in the mid-1960s, and is located off of CR 379 in Section 15, Township 26N, Range 7W in Rio Arriba County, New Mexico. The objective of the groundwater monitoring event was to further evaluate the concentrations of COCs in groundwater.

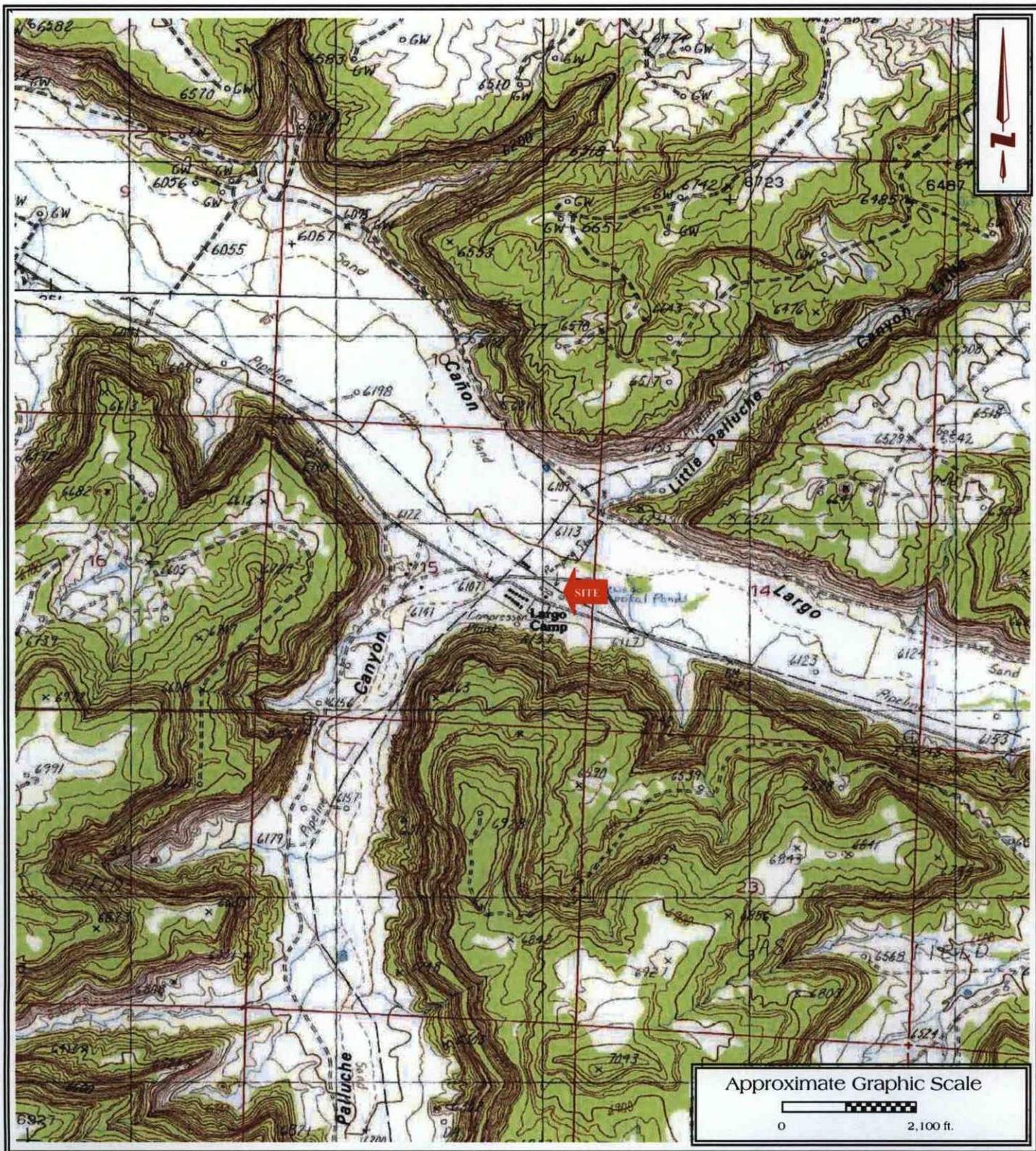
- Prior to sample collection, SWG gauged the depth to fluids in each monitoring well using an interface probe capable of detecting LNAPL. **Monitoring wells MW-12, MW-33, MW-35, and MW-37 exhibited LNAPL and were not sampled. This is the first event that monitoring well MW-12 has exhibited LNAPL.** Although the product thickness at MW-12 was minimal, the hydrocarbon odor was noticeable, and beads of apparent product were evident on the interface probe. The appearance of this small amount of NAPL is potentially the result of the flushing of soils by heavy rainfalls immediately following the recent removal of the condensate tanks and subsequent exposure of underlying soils.
- During the completion of the sampling event, one (1) groundwater sample was collected from each monitoring well utilizing low-flow sampling techniques. Monitoring well MW-42 was effectively dry during the October 2012 sampling event and was not sampled.
- The groundwater flow direction at the Site is generally towards the northwest, with a gradient that varies from 0.002 ft/ft and 0.005 ft/ft across the Site.

- The groundwater samples collected from monitoring wells MW-7, MW-11, MW-15, MW-16, MW-39, MW-48, and MW-51 exhibited benzene concentrations ranging from 13 µg/L to 8,200 µg/L, which exceed the WQCC *Groundwater Quality Standard* of 10 µg/L. The analytical results from monitoring well MW-7 indicate an increase in the benzene concentration when compared to the July 2012 analytical data, but are still less than the January 2012 concentrations. This well has exhibited several spikes throughout the monitoring history of the site. Monitoring wells MW-11, MW-15, and MW-15 also exhibited benzene concentration increases that may be related to soil flushing by significant rains that occurred after the condensate tank removals. The analytical results from monitoring wells MW-39 and MW-51 exhibited declines from the July 2012 sampling event, and are likely related to seasonal water table elevation variations.
- The groundwater samples collected from the remaining monitoring wells did not exhibit BTEX constituent concentrations above the WQCC *Groundwater Quality Standards*.
- The seven (7) TDS samples collected to date from unaffected wells indicate concentrations across the Site range from 3,000 mg/L to 75,400 mg/L.

## 7.0 RECOMMENDATIONS

Based on the results of groundwater monitoring activities, SWG has the following recommendations:

- Report the groundwater monitoring results to the OCD;
- Perform Supplemental Site Investigation activities to further evaluate the extent of COCs in groundwater in the vicinity north of Area 3; and,
- Pursuant to the completion of supplemental site investigation activities, continue the evaluation and execution of corrective actions to: 1.) Remove LNAPL from groundwater at the Site to the extent practical; and 2.) Reduce the concentrations of COCs in soil to below the OCD *Remediation Action Levels* and groundwater to below the New Mexico WQCC *Groundwater Quality Standards*.

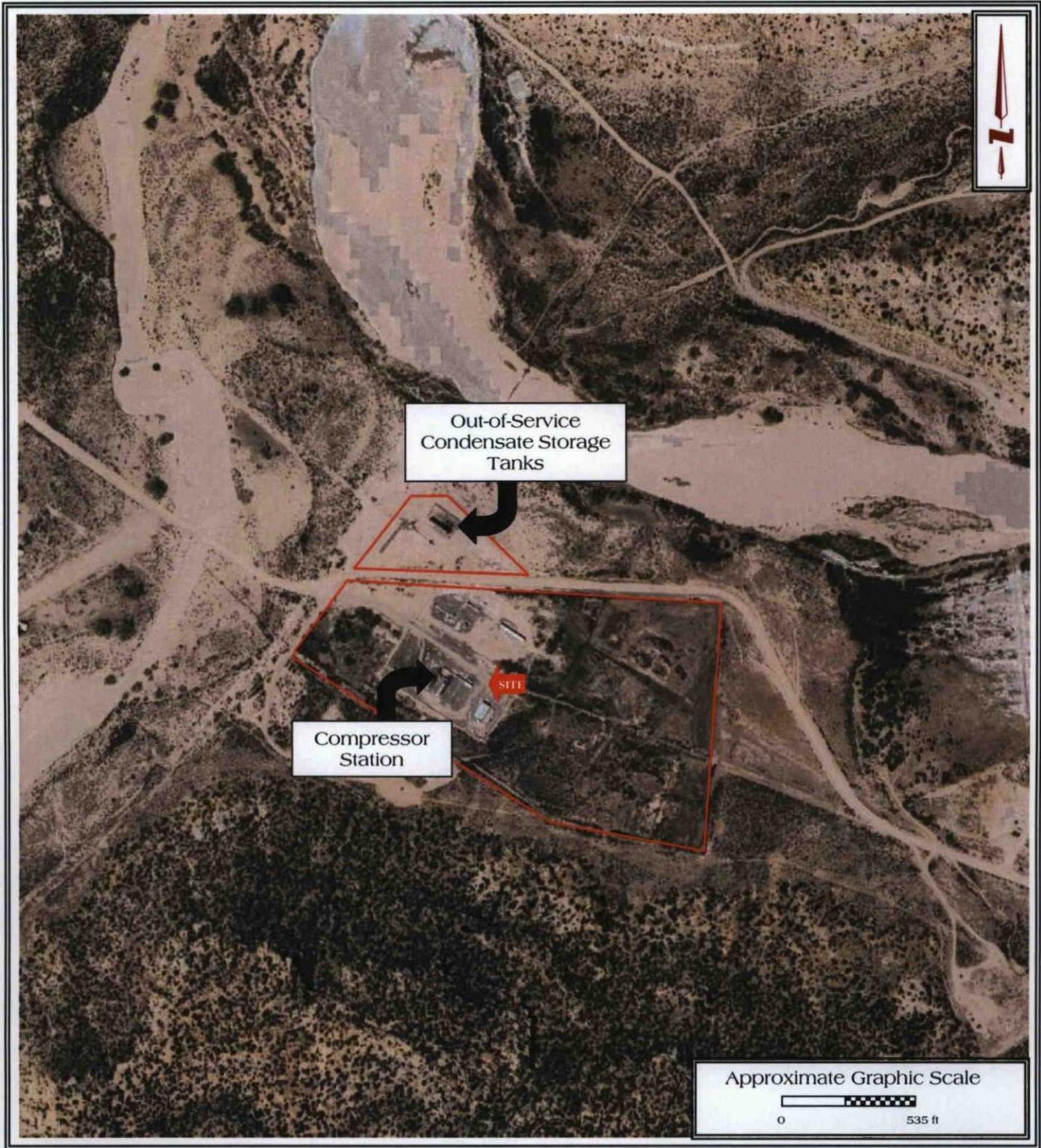


Largo Compressor Station  
 Condensate Storage Tank Battery  
 SE1/4 of NE1/4, S15 T26N R7W  
 Rio Arriba Co., New Mexico  
 N36° 29' 12.63"; W107° 33' 27.79"

SWG Project No. 0410002

Southwest  
 GEOSCIENCE

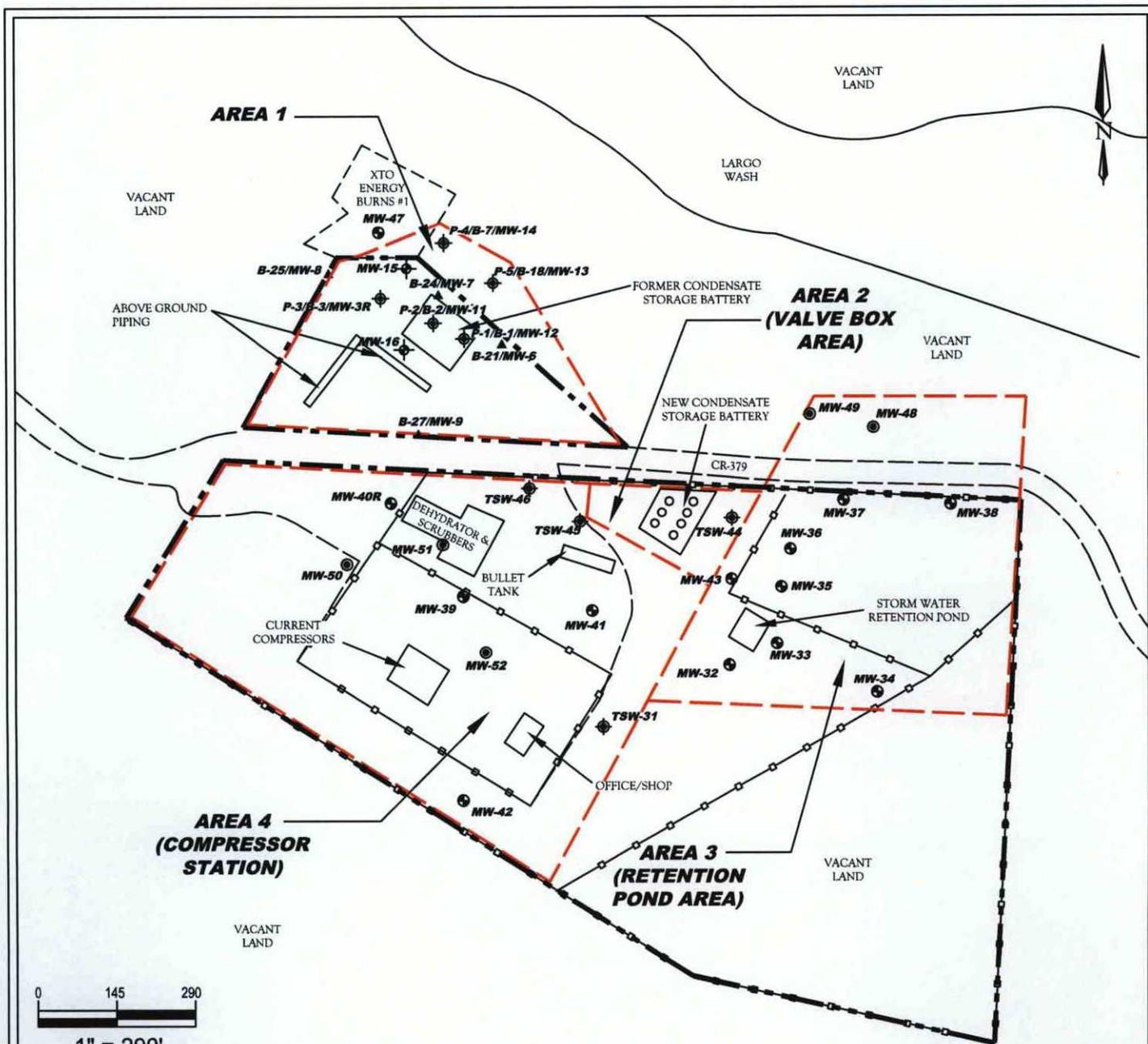
**FIGURE 1**  
 Topographic Map  
 Smouse Mesa & Gould Pass,  
 NM Quadrangle  
 Contour Interval - 20 Feet  
 1985



**Largo Compressor Station**  
 Condensate Storage Tank Battery  
 SE1/4 of NE1/4, S15 T26N R7W  
 Rio Arriba Co., New Mexico  
 N36° 29' 12.63"; W107° 33' 27.79"  
  
 SWG Project No. 0410002



**FIGURE 2**  
 Site Vicinity Map  
 2010 Google Earth



NOTE: MW-15 & MW-16 GAUGING DATA NOT USED TO GENERATE GROUNDWATER GRADIENT MAP DUE TO ERRANT GAUGING DATA

**LEGEND:**

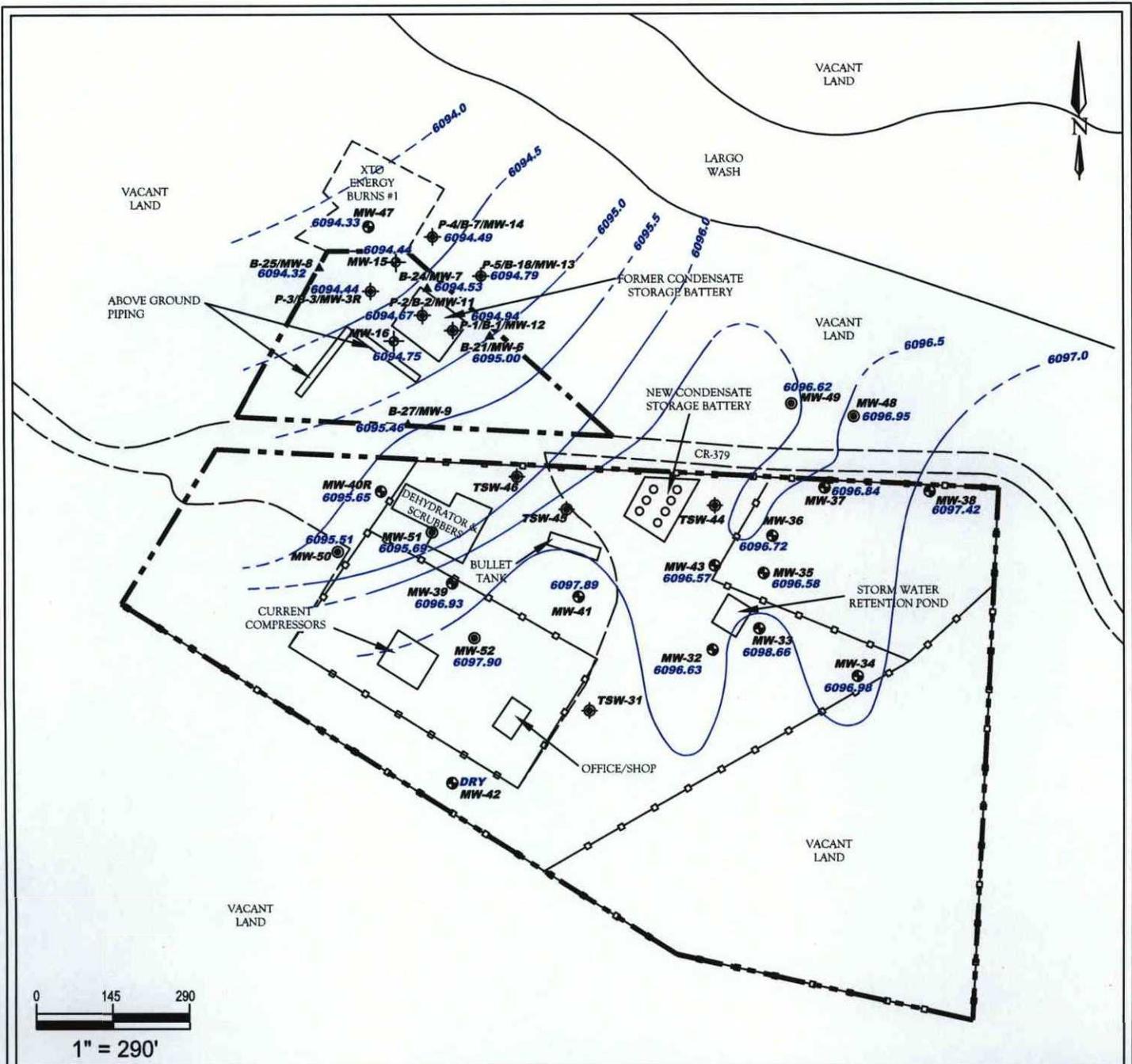
- |   |   |  |
|---|---|--|
| <ul style="list-style-type: none"> <li>--- SITE BOUNDARY</li> <li>--- GRAVEL</li> <li>--- FENCE</li> <li>● MONITORING WELL INSTALLED BY SWG (APRIL 2012)</li> <li>● MONITORING WELL INSTALLED BY SWG (NOVEMBER 2010)</li> </ul> | <ul style="list-style-type: none"> <li>▲ SOIL BORING/MONITORING WELL INSTALLED BY LT ENVIRONMENTAL (AUGUST 2009)</li> <li>◆ SOIL BORING/MONITORING WELL INSTALLED BY LT ENVIRONMENTAL (MARCH/APRIL 2008)</li> </ul> | <ul style="list-style-type: none"> <li>◆ MONITORING WELL INSTALLED BY LT ENVIRONMENTAL (MARCH 2010)</li> <li>◆ TEMPORARY SAMPLING WELL INSTALLED BY SWG (NOVEMBER 2010)</li> </ul> |
|---|---|--|

**Largo Compressor Station**  
 SE1/4 of NE1/4, S15 T26N R7W  
 Rio Arriba Co., New Mexico  
 N36° 29' 12.63"; W107° 33' 27.79"

SWG Project No. 0410002



**FIGURE 3**  
**SITE MAP**



1" = 290'

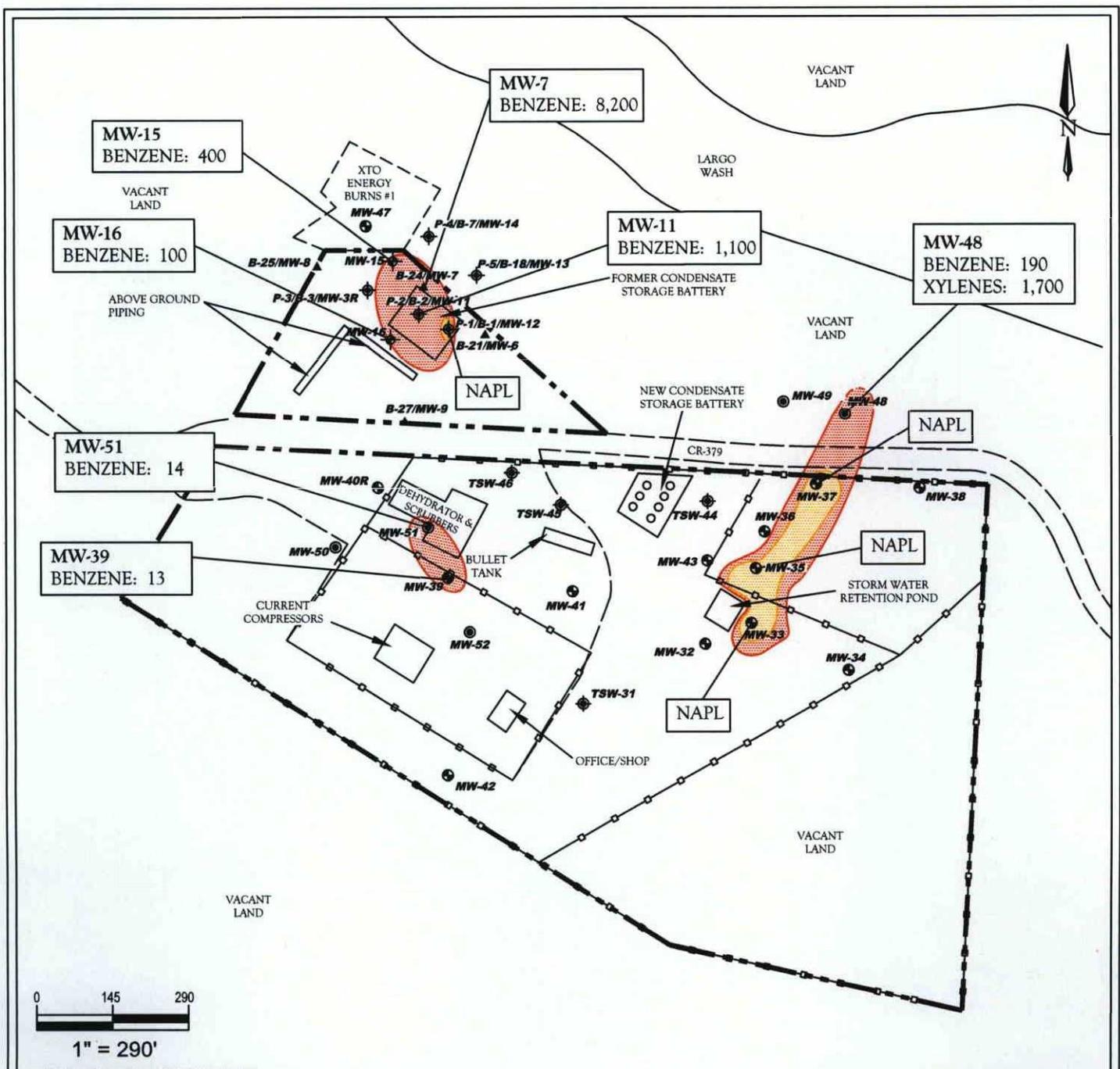
LEGEND:			
	SITE BOUNDARY		SOIL BORING/MONITORING WELL INSTALLED BY LT ENVIRONMENTAL (AUGUST 2009)
	GRAVEL		MONITORING WELL INSTALLED BY LT ENVIRONMENTAL (MARCH 2010)
	FENCE		TEMPORARY SAMPLING WELL INSTALLED BY SWG (NOVEMBER 2010)
	MONITORING WELL INSTALLED BY SWG (APRIL 2012)		SOIL BORING/MONITORING WELL INSTALLED BY LT ENVIRONMENTAL (MARCH/APRIL 2008)
	MONITORING WELL INSTALLED BY SWG (NOVEMBER 2010)		6096.63 GROUNDWATER ELEVATION (FEET AMSL)
			6095.0 GROUNDWATER ELEVATION CONTOUR (FEET AMSL) (CONTOUR INTERVAL = 0.5 FT)

**Largo Compressor Station**  
 SE1/4 of NE1/4, S15 T26N R7W  
 Rio Arriba Co., New Mexico  
 N36° 29' 12.63"; W107° 33' 27.79"

SWG Project No. 0410002



**FIGURE 4**  
**GROUNDWATER GRADIENT MAP**  
 OCTOBER 2012



NOTE: ALL VALUES ARE REPORTED IN ug/L

**LEGEND:**

- |   |   |  |   |
|---|---|--|---|
| <ul style="list-style-type: none"> <li>--- SITE BOUNDARY</li> <li>--- GRAVEL</li> <li>-o- FENCE</li> <li>● MONITORING WELL INSTALLED BY SWG (APRIL 2012)</li> <li>⊙ MONITORING WELL INSTALLED BY SWG (NOVEMBER 2010)</li> </ul> | <ul style="list-style-type: none"> <li>▲ SOIL BORING/MONITORING WELL INSTALLED BY LT ENVIRONMENTAL (AUGUST 2009)</li> <li>◆ SOIL BORING/MONITORING WELL INSTALLED BY LT ENVIRONMENTAL (MARCH/APRIL 2008)</li> </ul> | <ul style="list-style-type: none"> <li>◆ MONITORING WELL INSTALLED BY LT ENVIRONMENTAL (MARCH 2010)</li> <li>◆ TEMPORARY SAMPLING WELL INSTALLED BY SWG (NOVEMBER 2010)</li> </ul> | <ul style="list-style-type: none"> <li>■ GQS EXCEEDANCE ZONE</li> <li>■ NAPL PLUME</li> </ul> |
|---|---|--|---|

**Largo Compressor Station**  
 SE1/4 of NE1/4, S15 T26N R7W  
 Rio Arriba Co., New Mexico  
 N36° 29' 12.63"; W107° 33' 27.79"

SWG Project No. 0410002

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**FIGURE 5**  
**GROUNDWATER (GQS)**  
**EXCEEDANCE ZONE**  
**IN GROUNDWATER**

OCTOBER 2012

TABLE 1  
Largo Compressor Station  
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	Total Dissolved Solids (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		NE	10	750	750	620	NE	NE
P-5	4.04.08	NA	<1.0	<1.0	<1.0	<2.0	0.1	<1.0
P-5	8.10.09	NA	<1.0	<1.0	<1.0	<2.0	NA	NA
P-5	11.24.09	NA	<1.0	<1.0	<1.0	<2.0	NA	NA
P-5	2.25.10	NA	1.8	6.1	<1.0	11	NA	NA
MW-13 (P-5*)	4.05.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-13 (P-5*)	5.27.10	NA	<1.0	<1.0	<1.0	<2.0	NA	NA
MW-13 (P-5*)	7.13.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-13 (P-5*)	8.26.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-13 (P-5*)	11.18.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-13 (P-5*)	2.3.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-13 (P-5*)	4.19.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-13 (P-5*)	7.28.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-13 (P-5*)	10.27.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-13 (P-5*)	1.30.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-13 (P-5*)	4.19.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-13 (P-5*)	7.31.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-13 (P-5*)	10.18.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-6	8.10.09	NA	<1.0	<1.0	<1.0	<2.0	NA	NA
MW-6	11.24.09	NA	<1.0	<1.0	<1.0	<2.0	NA	NA
MW-6	2.25.10	NA	<1.0	<1.0	<1.0	<2.0	NA	NA
MW-6	4.05.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-6	5.27.10	NA	<1.0	<1.0	<1.0	<2.0	NA	NA
MW-6	7.13.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-6	8.26.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-6	11.18.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-6	1.31.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-6	4.19.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-6	7.28.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-6	10.27.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-6	1.27.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-6	4.19.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-6	7.31.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-6	10.18.12	8,420	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-7	8.10.09	NA	15,000	<100	380	310	NA	NA
MW-7	11.24.09	NA	13,000	<100	150	<200	NA	NA
MW-7	2.25.10	NA	3,000	<10	40	31	NA	NA
MW-7	4.05.10	NA	940	<10	<10	<20	4.2	1.3
MW-7	5.27.10	NA	700	<10	11	<20	NA	NA
MW-7	7.13.10	NA	15,000	<10	130	25	51	4.6
MW-7	8.26.10	NA	5,300	<20	35	<40	18	1.7
MW-7	11.18.10	NA	3,700	<20	62	<40	11	1.2
MW-7	2.1.11	NA	1,800	<1.0	10	4.6	2.2	<1.0
MW-7	4.19.11	NA	250	<1.0	2.9	2.4	0.75	<1.0
MW-7	5.19.11	NA	1,400	<5.0	15.0	<10	4.0	<1.0
MW-7	7.28.11	NA	75	<5.0	200	62.0	45	2.7
MW-7	10.28.11	NA	1,300	<10	140	<20	32	6.1
MW-7	1.31.12	NA	9,000	<10	110	<20	21	4.5
MW-7	4.19.12	NA	790	<10	15	<20	2.7	<1.0
MW-7	7.31.12	NA	2,500	<10	35	<20	6.4	<1.0
MW-7	10.19.12	NA	8,200	<10	130	36.0	32	2.5
MW-8	8.10.09	NA	<1.0	<1.0	<1.0	<2.0	NA	NA
MW-8	11.24.09	NA	<1.0	<1.0	<1.0	<2.0	NA	NA
MW-8	2.25.10	NA	<1.0	<1.0	<1.0	<2.0	NA	NA
MW-8	4.05.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-8	5.27.10	NA	<1.0	<1.0	<1.0	<2.0	NA	NA
MW-8	7.13.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-8	8.26.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-8	11.18.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-8	1.31.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-8	4.18.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-8	7.28.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-8	10.27.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-8	1.27.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-8	4.19.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-8	7.31.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-8	10.18.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0

TABLE 1  
Largo Compressor Station  
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	Total Dissolved Solids (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		NE	10	750	750	620	NE	NE
MW-9	8.10.09	NA	<1.0	<1.0	<1.0	<2.0	NA	NA
MW-9	11.24.09	NA	<1.0	<1.0	<1.0	<2.0	NA	NA
MW-9	2.25.10	NA	<1.0	<1.0	<1.0	<2.0	NA	NA
MW-9	4.05.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-9	5.27.10	NA	<1.0	<1.0	<1.0	<2.0	NA	NA
MW-9	7.13.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-9	8.26.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-9	11.18.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-9	1.31.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-9	4.19.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-9	7.29.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-9	10.27.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-9	1.27.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-9	4.19.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-9	7.31.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-9	10.19.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-15	4.05.10	NA	1.1	<1.0	<1.0	<2.0	<0.05	<1.0
MW-15	5.27.10	NA	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
MW-15	7.13.10	NA	490	2.2	7.2	15	3.2	<1.0
MW-15	8.26.10	NA	20	<1.0	<1.0	<2.0	0.095	<1.0
MW-15	11.18.10	NA	8.9	<1.0	<1.0	<2.0	0.19	<1.0
MW-15	2.1.11	NA	16	<1.0	<1.0	<2.0	0.06	<1.0
MW-15	4.18.11	NA	13	<1.0	<1.0	<2.0	0.14	<1.0
MW-15	7.28.11	NA	1500	<1.0	19	20	6.7	<1.0
MW-15	10.28.11	NA	810	<1.0	<1.0	<20	2.2	1.0
MW-15	1.30.12	NA	150	<1.0	<1.0	<20	0.51	<1.0
MW-15	4.18.12	NA	23	<1.0	1.4	<2.0	0.21	<1.0
MW-15	7.31.12	NA	64	<1.0	1.1	<2.0	0.22	<1.0
MW-15	10.19.12	NA	400	<1.0	7.2	7.8	2.0	<1.0
MW-16	4.05.10	NA	3.8	1.5	1.4	11	0.36	<1.0
MW-16	5.27.10	NA	<1.0	<1.0	<1.0	<2.0	NA	NA
MW-16	7.13.10	NA	47	<1.0	<1.0	<2.0	0.3	<1.0
MW-16	8.26.10	NA	16	<1.0	<1.0	<2.0	0.095	<1.0
MW-16	11.18.10	NA	3.4	<1.0	<1.0	<2.0	0.11	<1.0
MW-16	2.1.11	NA	61	<1.0	1.3	2.1	0.20	<1.0
MW-16	4.18.11	NA	34	<1.0	3.7	4.4	0.16	<1.0
MW-16	7.28.11	NA	43	<1.0	1.9	<2.0	0.29	<1.0
MW-16	10.27.11	NA	21	<1.0	<1.0	<2.0	0.19	<1.0
MW-16	1.30.12	NA	10	<1.0	<1.0	<2.0	0.096	<1.0
MW-16	4.18.12	NA	20	<1.0	1.0	<2.0	0.14	<1.0
MW-16	7.31.12	NA	46	<1.0	1.9	<2.0	0.23	<1.0
MW-16	10.19.12	NA	100	<1.0	3.9	<2.0	0.38	<1.0
TSW-31	11.23.10	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-32	1.28.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-32	4.19.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-32	7.29.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-32	10.26.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-32	1.27.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-32	4.18.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-32	7.30.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-32	10.16.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-33	1.28.11	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-33	4.20.11	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-33	7.28.11	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-33	10.26.11	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-33	1.27.12	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-33	4.18.12	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-33	7.30.12	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-33	10.19.12	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-34	1.28.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-34	4.19.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-34	7.29.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-34	10.26.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-34	1.27.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-34	4.18.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-34	7.30.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-34	10.16.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0

TABLE 1  
Largo Compressor Station  
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	Total Dissolved Solids (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		NE	10	750	750	620	NE	NE
MW-35	1.28.11	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-35	4.20.11	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-35	7.28.11	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-35	10.26.11	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-35	1.27.12	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-35	4.18.12	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-35	7.30.12	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-35	10.19.12	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-36	1.31.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-36	4.20.11	NA	<1.0	2.1	<1.0	<2.0	<0.050	<1.0
MW-36	7.29.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-36	10.27.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-36	1.27.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-36	4.18.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-36	7.30.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-36	10.17.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-37	2.4.11	NA	3,100	6,200	700	7,000	38	3.9
MW-37	4.20.11	NA	2,500	3,600	500	5,100	34	4.2
MW-37	7.28.11	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-37	10.26.11	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-37	1.27.12	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-37	4.18.12	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-37	7.30.12	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-37	10.19.12	NA	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL
MW-38	1.26.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-38	4.20.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-38	7.29.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-38	10.27.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-38	1.27.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-38	4.18.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-38	7.30.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-38	10.17.12	3,000	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-39	1.26.11	NA	1,200	730	37	570	11	<1.0
MW-39	4.19.11	NA	120	<1.0	1.6	5.9	0.33	<1.0
MW-39	7.29.11	NA	27	14	1.9	18	0.80	<1.0
MW-39	10.27.11	NA	260	<1.0	1.2	3.5	0.44	<1.0
MW-39	1.27.12	NA	580	48	4.3	79	1.8	<1.0
MW-39	4.18.12	NA	1,500	620	36	860	12	112
MW-39	7.30.12	NA	170	<2.0	<2.0	8.6	0.58	<1.0
MW-39	10.17.12	NA	13	<2.0	<2.0	<4.0	<0.10	<1.0
MW-40	1.28.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-40	4.20.11	NA	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0
MW-40	7.28.11	NA	Dry	Dry	Dry	Dry	Dry	Dry
MW-40	10.26.11	NA	Dry	Dry	Dry	Dry	Dry	Dry
MW-40	1.27.12	NA	Dry	Dry	Dry	Dry	Dry	Dry
MW-40R	4.18.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-40R	7.30.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-40R	10.16.12	7,930	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-41	1.31.11	NA	<5.0	<5.0	<5.0	<10	<0.25	<1.0
MW-41	4.18.11	NA	<5.0	<5.0	<5.0	<10	<0.25	<1.0
MW-41	7.29.11	NA	<5.0	<5.0	<5.0	<10	<0.050	<1.0
MW-41	10.27.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-41	1.27.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-41	4.18.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-41	7.30.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-41	10.16.12	30,200	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-42	2.4.11	NA	<5.0	<5.0	<5.0	<10	<0.25	NA
MW-42	3.3.11	75,400	NA	NA	NA	NA	NA	NA
MW-42	4.19.11	NA	<5.0	<5.0	<5.0	<10	<0.25	<1.0
MW-42	7.28.11	NA	Dry	Dry	Dry	Dry	Dry	Dry
MW-42	10.26.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-42	1.30.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-42	4.18.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-42	7.30.12	NA	Dry	Dry	Dry	Dry	Dry	Dry
MW-42	10.16.12	NA	Dry	Dry	Dry	Dry	Dry	Dry
MW-43	1.28.11	NA	<1.0	<1.0	<1.0	<2.0	0.06	<1.0
MW-43	4.19.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-43	7.29.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-43	10.26.11	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-43	1.27.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-43	4.18.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0

TABLE 1  
Largo Compressor Station  
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	Total Dissolved Solids (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		NE	10	750	750	620	NE	NE
MW-43	7.30.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-43	10.16.12	7,630	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0

TABLE 1  
Largo Compressor Station  
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	Total Dissolved Solids (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		NE	10	750	750	620	NE	NE
TSW-44	11.18.10	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
TSW-45	11.18.10	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
TSW-46	11.23.10	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-47	1.28.11	NA	<5.0	<5.0	<5.0	<10	1.3	2.5
MW-47	4.18.11	NA	<5.0	<5.0	<5.0	<10	2.0	1.2
MW-47	7.28.11	NA	<5.0	<5.0	<5.0	27.0	6.6	1.1
MW-47	10.28.11	NA	<5.0	<5.0	<5.0	<10	1.4	2.7
MW-47	1.30.12	NA	<5.0	<5.0	<5.0	<10	2.6	2.5
MW-47	4.18.12	NA	11	<5.0	16	38	5.5	2.9
MW-47	7.31.12	NA	<10	<10	<10	<20	4.5	2.9
MW-47	10.18.12	NA	<5.0	<5.0	<5.0	91	12	1.8
MW-48	4.18.12	NA	290	3,200	360	5,000	25	1.3
MW-48	7.30.12	NA	120	1,100	160	2,900	15	<1.0
MW-48	10.17.12	NA	190	580	150	1,700	8.5	<1.0
MW-49	4.18.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-49	7.30.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-49	10.17.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-50	4.18.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-50	7.30.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-50	10.17.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-51	4.18.12	NA	1,200	3,600	150	1,400	19	<1.0
MW-51	7.30.12	NA	51	5.5	17	78	1.3	<1.0
MW-51	10.16.12	NA	14	<1.0	4.8	21	0.16	<1.0
MW-52	4.18.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-52	7.30.12	NA	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-52	10.17.12	27,000	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0

Note: Concentrations in bold and yellow exceed the applicable OCD Remediation Action Level

NA = Not Analyzed

NE = Not Established

NAPL = Non-aqueous phase liquid

\* = piezometer well was replaced with associated monitoring well

**TABLE 2**  
**Largo Compressor Station**  
**Groundwater Elevations**

Monitoring Well ID	Measurement Date	Top-of-Casing Elevation (feet)	Depth to PSH (feet)	Depth to Water (feet)	PSH Thickness (feet)	Corrected Groundwater Elevation <sup>1</sup>
MW-3R	4.5.10	6117.48	None Observed	21.83	0.0	6095.65
	5.27.10		None Observed	21.82	0.0	6095.66
	6.25.10		None Observed	22.22	0.0	6095.26
	7.13.10		None Observed	22.47	0.0	6095.01
	8.26.10		None Observed	22.24	0.0	6095.24
	11.18.10		None Observed	22.32	0.0	6095.16
	1.25.11		None Observed	22.13	0.0	6095.35
	4.22.11		None Observed	21.99	0.0	6095.49
	7.27.11		None Observed	22.81	0.0	6094.67
	10.26.11		None Observed	22.91	0.0	6094.57
	1.26.12		None Observed	22.74	0.0	6094.74
	4.19.12		None Observed	22.61	0.0	6094.87
	7.31.12		None Observed	22.66	0.0	6094.82
10.18.12	None Observed	23.04	0.0	6094.44		
MW-6	8.10.09	6115.47	None Observed	20.28	0.0	6095.19
	11.24.09		None Observed	20.17	0.0	6095.30
	2.25.10		None Observed	19.54	0.0	6095.93
	4.5.10		None Observed	19.11	0.0	6096.36
	5.27.10		None Observed	19.28	0.0	6096.19
	6.25.10		None Observed	19.87	0.0	6095.60
	7.13.10		None Observed	20.09	0.0	6095.38
	8.26.10		None Observed	19.68	0.0	6095.79
	11.18.10		None Observed	19.72	0.0	6095.75
	1.25.11		None Observed	19.51	0.0	6095.96
	4.22.11		None Observed	19.42	0.0	6096.05
	7.27.11		None Observed	20.40	0.0	6095.07
	10.26.11		None Observed	20.43	0.0	6095.04
	1.26.12		None Observed	20.15	0.0	6095.32
	4.19.12		None Observed	Not Gauged	0.0	Not Gauged
7.31.12	None Observed	19.93	0.0	6095.54		
10.18.12	None Observed	20.47	0.0	6095.00		
MW-7	8.10.09	6116.65	None Observed	21.52	0.0	6095.13
	11.24.09		None Observed	21.73	0.0	6094.92
	2.25.10		None Observed	21.42	0.0	6095.23
	4.5.10		None Observed	20.96	0.0	6095.69
	5.27.10		None Observed	20.96	0.0	6095.69
	6.25.10		None Observed	21.32	0.0	6095.33
	7.13.10		None Observed	21.46	0.0	6095.19
	8.26.10		None Observed	21.36	0.0	6095.29
	11.18.10		None Observed	21.42	0.0	6095.23
	1.25.11		None Observed	21.24	0.0	6095.41
	4.22.11		None Observed	21.22	0.0	6095.43
	7.27.11		None Observed	21.80	0.0	6094.85
	10.26.11		None Observed	21.94	0.0	6094.71
	1.26.12		None Observed	21.82	0.0	6094.83
	4.19.12		None Observed	21.70	0.0	6094.95
7.31.12	None Observed	21.88	0.0	6094.77		
10.18.12	None Observed	22.12	0.0	6094.53		
MW-8	8.10.09	6118.28	None Observed	23.17	0.0	6095.11
	11.24.09		None Observed	23.43	0.0	6094.85
	2.25.10		None Observed	23.25	0.0	6095.03
	4.5.10		None Observed	22.97	0.0	6095.31
	5.27.10		None Observed	22.85	0.0	6095.43
	6.25.10		None Observed	23.01	0.0	6095.27
	7.13.10		None Observed	23.21	0.0	6095.07
	8.26.10		None Observed	23.23	0.0	6095.05
	11.18.10		None Observed	23.30	0.0	6094.98
	1.25.11		None Observed	23.10	0.0	6095.18
	4.22.11		None Observed	22.94	0.0	6095.34
	7.27.11		None Observed	23.56	0.0	6094.72
	10.26.11		None Observed	23.75	0.0	6094.53
	1.26.12		None Observed	23.64	0.0	6094.64
	4.19.12		None Observed	23.54	0.0	6094.74
7.31.12	None Observed	23.19	0.0	6095.09		
10.18.12	None Observed	23.96	0.0	6094.32		

**TABLE 2**  
**Largo Compressor Station**  
**Groundwater Elevations**

Monitoring Well ID	Measurement Date	Top-of-Casing Elevation (feet)	Depth to PSH (feet)	Depth to Water (feet)	PSH Thickness (feet)	Corrected Groundwater Elevation <sup>1</sup>
MW-9	8.10.09	6117.83	None Observed	21.95	0.0	6095.88
	11.24.09		None Observed	21.98	0.0	6095.85
	2.25.10		None Observed	21.51	0.0	6096.32
	4.5.10		None Observed	21.00	0.0	6096.83
	5.27.10		None Observed	21.10	0.0	6096.73
	6.25.10		None Observed	21.56	0.0	6096.27
	7.13.10		None Observed	21.77	0.0	6096.06
	8.26.10		None Observed	21.58	0.0	6096.25
	11.18.10		None Observed	21.61	0.0	6096.22
	1.25.11		None Observed	21.43	0.0	6096.40
	4.22.11		None Observed	21.30	0.0	6096.53
	7.27.11		None Observed	22.15	0.0	6095.68
	10.26.11		None Observed	22.25	0.0	6095.58
	1.26.12		None Observed	22.04	0.0	6095.79
4.19.12	None Observed	21.88	0.0	6095.95		
7.31.12	None Observed	21.98	0.0	6095.85		
10.18.12	None Observed	22.37	0.0	6095.46		
MW-11	4.5.10	6116.65	None Observed	20.57	0.0	6096.08
	5.27.10		None Observed	20.75	0.0	6095.90
	6.25.10		None Observed	21.33	0.0	6095.32
	7.13.10		None Observed	21.54	0.0	6095.11
	8.26.10		None Observed	21.17	0.0	6095.48
	11.18.10		None Observed	21.16	0.0	6095.49
	1.25.11		None Observed	21.02	0.0	6095.63
	4.22.11		None Observed	20.91	0.0	6095.74
	7.27.11		None Observed	21.89	0.0	6094.76
	10.26.11		None Observed	21.94	0.0	6094.71
	1.26.12		None Observed	21.64	0.0	6095.01
	4.19.12		None Observed	21.49	0.0	6095.16
	7.31.12		None Observed	21.49	0.0	6095.16
	10.18.12		None Observed	21.98	0.0	6094.67
MW-12	4.5.10	6111.24	None Observed	14.88	0.0	6096.36
	5.27.10		None Observed	15.11	0.0	6096.13
	6.25.10		None Observed	15.67	0.0	6095.57
	7.13.10		None Observed	15.91	0.0	6095.33
	8.26.10		None Observed	15.55	0.0	6095.69
	11.18.10		None Observed	16.58	0.0	6094.66
	1.25.11		None Observed	15.73	0.0	6095.51
	4.22.11		None Observed	15.30	0.0	6095.94
	7.27.11		None Observed	16.10	0.0	6095.14
	10.26.11		None Observed	16.21	0.0	6095.03
	1.26.12		None Observed	15.99	0.0	6095.25
	4.19.12		None Observed	15.83	0.0	6095.41
	7.31.12		None Observed	15.83	0.0	6095.41
	10.18.12		16.3	16.31	0.01	6094.94
MW-13	4.5.10	6115.46	None Observed	19.26	0.0	6096.20
	5.27.10		None Observed	19.47	0.0	6095.99
	6.25.10		None Observed	20.07	0.0	6095.39
	7.13.10		None Observed	20.28	0.0	6095.18
	8.26.10		None Observed	19.86	0.0	6095.60
	11.18.10		None Observed	19.91	0.0	6095.55
	1.25.11		None Observed	19.71	0.0	6095.75
	4.22.11		None Observed	19.65	0.0	6095.81
	7.27.11		None Observed	20.59	0.0	6094.87
	10.26.11		None Observed	20.62	0.0	6094.84
	1.26.12		None Observed	20.34	0.0	6095.12
	4.19.12		None Observed	20.19	0.0	6095.27
	7.31.12		None Observed	20.15	0.0	6095.31
	10.18.12		None Observed	20.67	0.0	6094.79
MW-14	4.5.10	6115.99	None Observed	20.09	0.0	6095.90
	5.27.10		None Observed	20.28	0.0	6095.71
	6.25.10		None Observed	20.94	0.0	6095.05
	7.13.10		None Observed	21.19	0.0	6094.80
	8.26.10		None Observed	20.70	0.0	6095.29
	11.18.10		None Observed	20.73	0.0	6095.26
	1.25.11		None Observed	20.52	0.0	6095.47
	4.22.11		None Observed	20.45	0.0	6095.54
	7.27.11		None Observed	21.47	0.0	6094.52
	10.26.11		None Observed	21.48	0.0	6094.51
	1.26.12		None Observed	21.15	0.0	6094.84
	4.19.12		None Observed	21.00	0.0	6094.99
	7.31.12		None Observed	21.00	0.0	6094.99
	10.18.12		None Observed	21.50	0.0	6094.49

**TABLE 2**  
**Largo Compressor Station**  
**Groundwater Elevations**

Monitoring Well ID	Measurement Date	Top-of-Casing Elevation (feet)	Depth to PSH (feet)	Depth to Water (feet)	PSH Thickness (feet)	Corrected Groundwater Elevation <sup>1</sup>
MW-15	4.5.10	6116.49	None Observed	20.66	0.0	6095.83
	5.27.10		None Observed	20.82	0.0	6095.67
	6.25.10		None Observed	21.43	0.0	6095.06
	7.13.10		None Observed	21.64	0.0	6094.85
	8.26.10		None Observed	21.25	0.0	6095.24
	11.18.10		None Observed	21.36	0.0	6095.13
	1.25.11		None Observed	21.07	0.0	6095.42
	4.22.11		None Observed	20.95	0.0	6095.54
	7.27.11		None Observed	21.95	0.0	6094.54
	10.26.11		None Observed	21.98	0.0	6094.51
	1.26.12		None Observed	21.70	0.0	6094.79
	4.19.12		None Observed	21.56	0.0	6094.93
	7.31.12		None Observed	Errant Gauge	0.0	Errant Gauge
10.18.12	None Observed	22.05	0.0	6094.44		
MW-16	4.5.10	6117.57	None Observed	21.51	0.0	6096.06
	5.27.10		None Observed	51.59	0.0	6065.98
	6.25.10		None Observed	22.10	0.0	6095.47
	7.13.10		None Observed	22.29	0.0	6095.28
	8.26.10		None Observed	22.05	0.0	6095.52
	11.18.10		None Observed	22.11	0.0	6095.46
	1.25.11		None Observed	21.87	0.0	6095.70
	4.22.11		None Observed	21.76	0.0	6095.81
	7.27.11		None Observed	22.66	0.0	6094.91
	10.26.11		None Observed	22.71	0.0	6094.86
	1.26.12		None Observed	22.50	0.0	6095.07
	4.19.12		None Observed	22.38	0.0	6095.19
	7.31.12		None Observed	Errant Gauge	0.0	Errant Gauge
10.18.12	None Observed	22.82	0.0	6094.75		
MW-32	1.25.11	6110.22	None Observed	12.67	0.0	6097.55
	4.22.11		None Observed	12.49	0.0	6097.73
	7.27.11		None Observed	13.47	0.0	6096.75
	10.26.11		None Observed	13.56	0.0	6096.66
	1.26.12		None Observed	13.23	0.0	6096.99
	4.18.12		None Observed	13.05	0.0	6097.17
	7.30.12		None Observed	14.10	0.0	6096.12
	10.18.12		None Observed	13.59	0.0	6096.63
MW-33	1.25.11*	6114.02	16.08	16.44	0.36	6097.83
	4.22.11		16.59	16.60	0.01	6097.43
	7.27.11		16.07	16.72	0.65	6097.75
	10.26.11		15.55	16.15	0.60	6098.28
	1.26.12		15.83	15.84	0.01	6098.19
	4.18.12		Not Gauged			Not Gauged
	8.31.12		15.4	17.29	1.89	6098.03
	10.18.12		14.39	17.51	3.12	6098.66
MW-34	1.25.11	6115.3	None Observed	17.38	0.0	6097.92
	4.22.11		None Observed	17.20	0.0	6098.10
	7.27.11		None Observed	18.23	0.0	6097.07
	10.26.11		None Observed	18.32	0.0	6096.98
	1.26.12		None Observed	17.98	0.0	6097.32
	4.18.12		None Observed	17.78	0.0	6097.52
	7.30.12		None Observed	17.80	0.0	6097.50
	10.18.12		None Observed	18.32	0.0	6096.98
MW-35	1.25.11*	6112.22	14.5	14.75	0.25	6097.64
	4.22.11		14.22	14.80	0.58	6097.82
	7.27.11		15.11	16.36	1.25	6096.72
	10.26.11		15.14	16.64	1.50	6096.62
	1.26.12		14.72	14.73	0.01	6097.50
	4.18.12		Not Gauged			Not Gauged
	8.31.12		14.43	17.49	3.06	6096.84
	10.18.12		14.65	17.84	3.19	6096.58
MW-36	1.25.11	6111.48	None Observed	13.80	0.0	6097.68
	4.22.11		None Observed	13.65	0.0	6097.83
	7.27.11		None Observed	14.69	0.0	6096.79
	10.26.11		None Observed	14.45	0.0	6097.03
	1.26.12		None Observed	14.41	0.0	6097.07
	4.18.12		None Observed	14.18	0.0	6097.30
	7.30.12		None Observed	14.10	0.0	6097.38
	10.18.12		None Observed	14.76	0.0	6096.72

**TABLE 2**  
**Largo Compressor Station**  
**Groundwater Elevations**

Monitoring Well ID	Measurement Date	Top-of-Casing Elevation (feet)	Depth to PSH (feet)	Depth to Water (feet)	PSH Thickness (feet)	Corrected Groundwater Elevation <sup>1</sup>
MW-37	1.25.11	6110.73	sheen	12.91	sheen	6097.88
	4.22.11		None Observed	12.78	0.0	6097.95
	7.27.11		13.81	13.84	0.03	6096.91
	10.26.11		13.88	13.92	0.04	6096.84
	1.26.12		13.54	13.54	0.01	6097.20
	4.18.12		Not Gauged			Not Gauged
	7.30.12		sheen	13.15	sheen	6097.64
10.18.12	13.89	13.90	0.01	6096.84		
MW-38	1.25.11	6110.43	None Observed	12.06	0.0	6098.37
	4.22.11		None Observed	11.87	0.0	6098.56
	7.27.11		None Observed	13.01	0.0	6097.42
	10.26.11		None Observed	13.10	0.0	6097.33
	1.26.12		None Observed	12.68	0.0	6097.75
	4.18.12		None Observed	12.11	0.0	6098.32
	7.30.12		None Observed	12.24	0.0	6098.19
10.18.12	None Observed	13.01	0.0	6097.42		
MW-39	1.25.11	6113.70	None Observed	16.21	0.0	6097.49
	4.22.11		None Observed	17.35	0.0	6096.35
	7.27.11		None Observed	16.43	0.0	6097.27
	10.26.11		None Observed	16.52	0.0	6097.18
	1.26.12		None Observed	16.57	0.0	6097.13
	4.18.12		None Observed	16.61	0.0	6097.09
	7.30.12		None Observed	16.69	0.0	6097.01
10.18.12	None Observed	16.77	0.0	6096.93		
MW-40	1.25.11	6115.69	None Observed	19.16	0.0	6096.53
	4.22.11		None Observed	dry	0.0	dry
	7.27.11		None Observed	dry	0.0	dry
	10.26.11		None Observed	dry	0.0	dry
	1.26.12		None Observed	dry	0.0	dry
MW-40R	4.18.12	6115.61	None Observed	19.58	0.0	6096.03
	7.30.12		None Observed	19.69	0.0	6095.92
	10.18.12		None Observed	19.96	0.0	6095.65
MW-41	1.25.11	6112.07	None Observed	14.14	0.0	6097.93
	4.22.11		None Observed	14.18	0.0	6097.89
	7.27.11		None Observed	14.08	0.0	6097.99
	10.26.11		None Observed	14.97	0.0	6097.10
	1.26.12		None Observed	14.20	0.0	6097.87
	4.18.12		None Observed	14.27	0.0	6097.80
	7.30.12		None Observed	14.21	0.0	6097.86
10.18.12	None Observed	14.18	0.0	6097.89		
MW-42	1.25.11	6121.53	None Observed	24.88	0.0	6096.65
	4.22.11**		None Observed	Errant Gauge	0.0	Errant Gauge
	7.27.11		None Observed	dry	0.0	dry
	10.26.11		None Observed	25.16	0.0	6096.37
	1.26.12		None Observed	24.92	0.0	6096.61
	4.18.12		Not Gauged			Not Gauged
	7.30.12		dry	dry	dry	dry
10.18.12	dry	dry	dry	dry		
MW-43	1.25.11	6112.92	None Observed	15.41	0.0	6097.51
	4.22.11		None Observed	15.30	0.0	6097.62
	7.27.11		None Observed	16.27	0.0	6096.65
	10.26.11		None Observed	16.35	0.0	6096.57
	1.26.12		None Observed	16.05	0.0	6096.87
	4.18.12		None Observed	15.87	0.0	6097.05
	7.30.12		None Observed	15.82	0.0	6097.10
10.18.12	None Observed	16.35	0.0	6096.57		
MW-47	1.25.11	6114.41	None Observed	19.22	0.0	6095.19
	4.22.11		None Observed	19.02	0.0	6095.39
	7.27.11		None Observed	19.69	0.0	6094.72
	10.26.11		None Observed	19.86	0.0	6094.55
	1.26.12		None Observed	19.79	0.0	6094.62
	4.19.12		None Observed	19.67	0.0	6094.74
	7.31.12		None Observed	19.87	0.0	6094.54
10.18.12	None Observed	20.08	0.0	6094.33		
MW-48	4.18.12	6109.21	Not Gauged			Not Gauged
	7.30.12		None Observed	11.90	0.0	6097.31
	10.18.12		None Observed	12.26	0.0	6096.95
MW-49	4.18.12	6109.54	None Observed	12.38	0.0	6097.16
	7.30.12		None Observed	12.22	0.0	6097.32
	10.18.12		None Observed	12.92	0.0	6096.62

**TABLE 2**  
**Largo Compressor Station**  
**Groundwater Elevations**

Monitoring Well ID	Measurement Date	Top-of-Casing Elevation (feet)	Depth to PSH (feet)	Depth to Water (feet)	PSH Thickness (feet)	Corrected Groundwater Elevation <sup>1</sup>
MW-50	4.18.12	6120.62	None Observed	24.64	0.0	6095.98
	7.30.12		None Observed	24.93	0.0	6095.69
	10.18.12		None Observed	25.11	0.0	6095.51
MW-51	4.18.12	6113.50	None Observed	18.33	0.0	6095.17
	7.30.12		None Observed	17.47	0.0	6096.03
	10.18.12		None Observed	17.81	0.0	6095.69
MW-52	4.18.12	6118.98	None Observed	21.11	0.0	6097.87
	7.30.12		None Observed	21.10	0.0	6097.88
	10.18.12		None Observed	21.08	0.0	6097.90

\* - Regauged 1.31.11 to confirm product thickness

\*\* - Aberrant gauging data

1 - On 11/02/2012, this table was adjusted to reflect July 2012 re-survey and a specific gravity of 0.69 for LNAPL



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

November 01, 2012

Kyle Summers

Southwest Geoscience  
606 S. Rio Grande Unit A  
Aztec, NM 87410  
TEL: (903) 821-5603  
FAX: (214) 350-2914

RE: Largo CS

OrderNo.: 1210928

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 18 sample(s) on 10/19/2012 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued November 1, 2012.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Southwest Geoscience

Client Sample ID: MW-41

Project: Largo CS

Collection Date: 10/16/2012 10:35:00 AM

Lab ID: 1210928-001

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 3:12:11 AM
Surr: DNOP	94.2	79.5-166		%REC	1	10/20/2012 3:12:11 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/24/2012 2:47:48 AM
Surr: BFB	89.6	69.8-119		%REC	1	10/24/2012 2:47:48 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	1.0		µg/L	1	10/24/2012 2:47:48 AM
Toluene	ND	1.0		µg/L	1	10/24/2012 2:47:48 AM
Ethylbenzene	ND	1.0		µg/L	1	10/24/2012 2:47:48 AM
Xylenes, Total	ND	2.0		µg/L	1	10/24/2012 2:47:48 AM
Surr: 4-Bromofluorobenzene	96.8	69.7-152		%REC	1	10/24/2012 2:47:48 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Southwest Geoscience  
**Project:** Largo CS  
**Lab ID:** 1210928-002

**Client Sample ID:** MW-32  
**Collection Date:** 10/16/2012 11:45:00 AM  
**Received Date:** 10/19/2012 10:00:00 AM

**Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 3:37:09 AM
Surr: DNOP	102	79.5-166		%REC	1	10/20/2012 3:37:09 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/24/2012 3:16:32 AM
Surr: BFB	90.6	69.8-119		%REC	1	10/24/2012 3:16:32 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	10/24/2012 3:16:32 AM
Toluene	ND	1.0		µg/L	1	10/24/2012 3:16:32 AM
Ethylbenzene	ND	1.0		µg/L	1	10/24/2012 3:16:32 AM
Xylenes, Total	ND	2.0		µg/L	1	10/24/2012 3:16:32 AM
Surr: 4-Bromofluorobenzene	97.6	69.7-152		%REC	1	10/24/2012 3:16:32 AM

**Qualifiers:**

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Southwest Geoscience

Client Sample ID: MW-34

Project: Largo CS

Collection Date: 10/16/2012 12:30:00 PM

Lab ID: 1210928-003

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 4:01:56 AM
Surr: DNOP	101	79.5-166		%REC	1	10/20/2012 4:01:56 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/24/2012 3:45:09 AM
Surr: BFB	89.4	69.8-119		%REC	1	10/24/2012 3:45:09 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	10/24/2012 3:45:09 AM
Toluene	ND	1.0		µg/L	1	10/24/2012 3:45:09 AM
Ethylbenzene	ND	1.0		µg/L	1	10/24/2012 3:45:09 AM
Xylenes, Total	ND	2.0		µg/L	1	10/24/2012 3:45:09 AM
Surr: 4-Bromofluorobenzene	96.5	69.7-152		%REC	1	10/24/2012 3:45:09 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Southwest Geoscience

Client Sample ID: MW-43

Project: Largo CS

Collection Date: 10/16/2012 1:25:00 PM

Lab ID: 1210928-004

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 4:26:46 AM
Surr: DNOP	100	79.5-166		%REC	1	10/20/2012 4:26:46 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/24/2012 4:13:55 AM
Surr: BFB	88.0	69.8-119		%REC	1	10/24/2012 4:13:55 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	10/24/2012 4:13:55 AM
Toluene	ND	1.0		µg/L	1	10/24/2012 4:13:55 AM
Ethylbenzene	ND	1.0		µg/L	1	10/24/2012 4:13:55 AM
Xylenes, Total	ND	2.0		µg/L	1	10/24/2012 4:13:55 AM
Surr: 4-Bromofluorobenzene	94.8	69.7-152		%REC	1	10/24/2012 4:13:55 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Southwest Geoscience

Client Sample ID: MW-51

Project: Largo CS

Collection Date: 10/16/2012 2:25:00 PM

Lab ID: 1210928-005

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 5:16:45 AM
Surr: DNOP	101	79.5-166		%REC	1	10/20/2012 5:16:45 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	0.16	0.050		mg/L	1	10/24/2012 4:42:41 AM
Surr: BFB	94.4	69.8-119		%REC	1	10/24/2012 4:42:41 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	14	1.0		µg/L	1	10/24/2012 4:42:41 AM
Toluene	ND	1.0		µg/L	1	10/24/2012 4:42:41 AM
Ethylbenzene	4.8	1.0		µg/L	1	10/24/2012 4:42:41 AM
Xylenes, Total	21	2.0		µg/L	1	10/24/2012 4:42:41 AM
Surr: 4-Bromofluorobenzene	99.7	69.7-152		%REC	1	10/24/2012 4:42:41 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Southwest Geoscience

Client Sample ID: MW-40R

Project: Largo CS

Collection Date: 10/16/2012 3:15:00 PM

Lab ID: 1210928-006

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 5:41:52 AM
Surr: DNOP	102	79.5-166		%REC	1	10/20/2012 5:41:52 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/24/2012 5:11:20 AM
Surr: BFB	89.2	69.8-119		%REC	1	10/24/2012 5:11:20 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	10/24/2012 5:11:20 AM
Toluene	ND	1.0		µg/L	1	10/24/2012 5:11:20 AM
Ethylbenzene	ND	1.0		µg/L	1	10/24/2012 5:11:20 AM
Xylenes, Total	ND	2.0		µg/L	1	10/24/2012 5:11:20 AM
Surr: 4-Bromofluorobenzene	96.6	69.7-152		%REC	1	10/24/2012 5:11:20 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Southwest Geoscience

Client Sample ID: MW-50

Project: Largo CS

Collection Date: 10/17/2012 9:30:00 AM

Lab ID: 1210928-007

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 6:06:58 AM
Surr: DNOP	98.7	79.5-166		%REC	1	10/20/2012 6:06:58 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/25/2012 11:05:14 PM
Surr: BFB	117	51.9-148		%REC	1	10/25/2012 11:05:14 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	10/25/2012 11:05:14 PM
Toluene	ND	1.0		µg/L	1	10/25/2012 11:05:14 PM
Ethylbenzene	ND	1.0		µg/L	1	10/25/2012 11:05:14 PM
Xylenes, Total	ND	2.0		µg/L	1	10/25/2012 11:05:14 PM
Surr: 4-Bromofluorobenzene	105	69.7-152		%REC	1	10/25/2012 11:05:14 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience

Client Sample ID: MW-52

Project: Largo CS

Collection Date: 10/17/2012 10:50:00 AM

Lab ID: 1210928-008

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 6:32:05 AM
Surr: DNOP	97.7	79.5-166		%REC	1	10/20/2012 6:32:05 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/25/2012 11:35:26 PM
Surr: BFB	113	51.9-148		%REC	1	10/25/2012 11:35:26 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	10/25/2012 11:35:26 PM
Toluene	ND	1.0		µg/L	1	10/25/2012 11:35:26 PM
Ethylbenzene	ND	1.0		µg/L	1	10/25/2012 11:35:26 PM
Xylenes, Total	ND	2.0		µg/L	1	10/25/2012 11:35:26 PM
Surr: 4-Bromofluorobenzene	104	69.7-152		%REC	1	10/25/2012 11:35:26 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Southwest Geoscience

Client Sample ID: MW-39

Project: Largo CS

Collection Date: 10/17/2012 11:40:00 AM

Lab ID: 1210928-009

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JMB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 6:57:16 AM
Surr: DNOP	97.3	79.5-166		%REC	1	10/20/2012 6:57:16 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.10		mg/L	2	10/26/2012 12:05:37 AM
Surr: BFB	116	51.9-148		%REC	2	10/26/2012 12:05:37 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	13	2.0		µg/L	2	10/26/2012 12:05:37 AM
Toluene	ND	2.0		µg/L	2	10/26/2012 12:05:37 AM
Ethylbenzene	ND	2.0		µg/L	2	10/26/2012 12:05:37 AM
Xylenes, Total	ND	4.0		µg/L	2	10/26/2012 12:05:37 AM
Surr: 4-Bromofluorobenzene	102	69.7-152		%REC	2	10/26/2012 12:05:37 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience

Client Sample ID: MW-49

Project: Largo CS

Collection Date: 10/17/2012 12:55:00 PM

Lab ID: 1210928-010

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 7:22:07 AM
Surr: DNOP	100	79.5-166		%REC	1	10/20/2012 7:22:07 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/26/2012 1:06:01 AM
Surr: BFB	116	51.9-148		%REC	1	10/26/2012 1:06:01 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	10/26/2012 1:06:01 AM
Toluene	ND	1.0		µg/L	1	10/26/2012 1:06:01 AM
Ethylbenzene	ND	1.0		µg/L	1	10/26/2012 1:06:01 AM
Xylenes, Total	ND	2.0		µg/L	1	10/26/2012 1:06:01 AM
Surr: 4-Bromofluorobenzene	102	69.7-152		%REC	1	10/26/2012 1:06:01 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience

Client Sample ID: MW-48

Project: Largo CS

Collection Date: 10/17/2012 2:05:00 PM

Lab ID: 1210928-011

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 7:47:15 AM
Surr: DNOP	104	79.5-166		%REC	1	10/20/2012 7:47:15 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	8.5	1.0		mg/L	20	10/26/2012 1:36:30 AM
Surr: BFB	117	51.9-148		%REC	20	10/26/2012 1:36:30 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	190	20		µg/L	20	10/26/2012 1:36:30 AM
Toluene	580	20		µg/L	20	10/26/2012 1:36:30 AM
Ethylbenzene	150	20		µg/L	20	10/26/2012 1:36:30 AM
Xylenes, Total	1700	40		µg/L	20	10/26/2012 1:36:30 AM
Surr: 4-Bromofluorobenzene	110	69.7-152		%REC	20	10/26/2012 1:36:30 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Southwest Geoscience

Client Sample ID: MW-38

Project: Largo CS

Collection Date: 10/17/2012 3:05:00 PM

Lab ID: 1210928-012

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 8:12:23 AM
Surr: DNOP	102	79.5-166		%REC	1	10/20/2012 8:12:23 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/26/2012 2:37:09 AM
Surr: BFB	118	51.9-148		%REC	1	10/26/2012 2:37:09 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	10/26/2012 2:37:09 AM
Toluene	ND	1.0		µg/L	1	10/26/2012 2:37:09 AM
Ethylbenzene	ND	1.0		µg/L	1	10/26/2012 2:37:09 AM
Xylenes, Total	ND	2.0		µg/L	1	10/26/2012 2:37:09 AM
Surr: 4-Bromofluorobenzene	105	69.7-152		%REC	1	10/26/2012 2:37:09 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Southwest Geoscience

Client Sample ID: MW-36

Project: Largo CS

Collection Date: 10/17/2012 3:50:00 PM

Lab ID: 1210928-013

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 8:37:28 AM
Surr: DNOP	99.5	79.5-166		%REC	1	10/20/2012 8:37:28 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/26/2012 3:07:21 AM
Surr: BFB	119	51.9-148		%REC	1	10/26/2012 3:07:21 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	10/26/2012 3:07:21 AM
Toluene	ND	1.0		µg/L	1	10/26/2012 3:07:21 AM
Ethylbenzene	ND	1.0		µg/L	1	10/26/2012 3:07:21 AM
Xylenes, Total	ND	2.0		µg/L	1	10/26/2012 3:07:21 AM
Surr: 4-Bromofluorobenzene	107	69.7-152		%REC	1	10/26/2012 3:07:21 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience

Client Sample ID: MW-6

Project: Largo CS

Collection Date: 10/18/2012 9:00:00 AM

Lab ID: 1210928-014

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 9:02:52 AM
Surr: DNOP	101	79.5-166		%REC	1	10/20/2012 9:02:52 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/26/2012 3:37:27 AM
Surr: BFB	118	51.9-148		%REC	1	10/26/2012 3:37:27 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	10/26/2012 3:37:27 AM
Toluene	ND	1.0		µg/L	1	10/26/2012 3:37:27 AM
Ethylbenzene	ND	1.0		µg/L	1	10/26/2012 3:37:27 AM
Xylenes, Total	ND	2.0		µg/L	1	10/26/2012 3:37:27 AM
Surr: 4-Bromofluorobenzene	106	69.7-152		%REC	1	10/26/2012 3:37:27 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Southwest Geoscience

Client Sample ID: MW-13

Project: Largo CS

Collection Date: 10/18/2012 10:00:00 AM

Lab ID: 1210928-015

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 8:39:55 PM
Surr: DNOP	121	79.5-166		%REC	1	10/20/2012 8:39:55 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/26/2012 4:07:36 AM
Surr: BFB	118	51.9-148		%REC	1	10/26/2012 4:07:36 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	10/26/2012 4:07:36 AM
Toluene	ND	1.0		µg/L	1	10/26/2012 4:07:36 AM
Ethylbenzene	ND	1.0		µg/L	1	10/26/2012 4:07:36 AM
Xylenes, Total	ND	2.0		µg/L	1	10/26/2012 4:07:36 AM
Surr: 4-Bromofluorobenzene	104	69.7-152		%REC	1	10/26/2012 4:07:36 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience

Client Sample ID: MW-14

Project: Largo CS

Collection Date: 10/18/2012 10:50:00 AM

Lab ID: 1210928-016

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 9:05:02 PM
Surr: DNOP	121	79.5-166		%REC	1	10/20/2012 9:05:02 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/26/2012 4:37:42 AM
Surr: BFB	118	51.9-148		%REC	1	10/26/2012 4:37:42 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	10/26/2012 4:37:42 AM
Toluene	ND	1.0		µg/L	1	10/26/2012 4:37:42 AM
Ethylbenzene	ND	1.0		µg/L	1	10/26/2012 4:37:42 AM
Xylenes, Total	ND	2.0		µg/L	1	10/26/2012 4:37:42 AM
Surr: 4-Bromofluorobenzene	105	69.7-152		%REC	1	10/26/2012 4:37:42 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Southwest Geoscience

Client Sample ID: MW-47

Project: Largo CS

Collection Date: 10/18/2012 11:30:00 AM

Lab ID: 1210928-017

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	1.8	1.0		mg/L	1	10/20/2012 9:30:09 PM
Surr: DNOP	123	79.5-166		%REC	1	10/20/2012 9:30:09 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	12	0.25		mg/L	5	10/26/2012 9:58:38 PM
Surr: BFB	1040	51.9-148	S	%REC	5	10/26/2012 9:58:38 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	5.0		µg/L	5	10/26/2012 9:58:38 PM
Toluene	ND	5.0		µg/L	5	10/26/2012 9:58:38 PM
Ethylbenzene	ND	5.0		µg/L	5	10/26/2012 9:58:38 PM
Xylenes, Total	91	10		µg/L	5	10/26/2012 9:58:38 PM
Surr: 4-Bromofluorobenzene	253	69.7-152	S	%REC	5	10/26/2012 9:58:38 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Southwest Geoscience

Client Sample ID: MW-8

Project: Largo CS

Collection Date: 10/18/2012 12:25:00 PM

Lab ID: 1210928-018

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/20/2012 9:55:16 PM
Surr: DNOP	125	79.5-166		%REC	1	10/20/2012 9:55:16 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/26/2012 10:59:03 PM
Surr: BFB	114	51.9-148		%REC	1	10/26/2012 10:59:03 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	10/26/2012 10:59:03 PM
Toluene	ND	1.0		µg/L	1	10/26/2012 10:59:03 PM
Ethylbenzene	ND	1.0		µg/L	1	10/26/2012 10:59:03 PM
Xylenes, Total	ND	2.0		µg/L	1	10/26/2012 10:59:03 PM
Surr: 4-Bromofluorobenzene	98.2	69.7-152		%REC	1	10/26/2012 10:59:03 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1210928

02-Nov-12

Client: Southwest Geoscience

Project: Largo CS

Sample ID: <b>MB-4430</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015B: Diesel Range</b>								
Client ID: <b>PBW</b>	Batch ID: <b>4430</b>	RunNo: <b>6372</b>								
Prep Date: <b>10/19/2012</b>	Analysis Date: <b>10/20/2012</b>	SeqNo: <b>183215</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.98		1.000		98.2	79.5	166			

Sample ID: <b>LCS-4430</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015B: Diesel Range</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>4430</b>	RunNo: <b>6372</b>								
Prep Date: <b>10/19/2012</b>	Analysis Date: <b>10/20/2012</b>	SeqNo: <b>183216</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.5	1.0	5.000	0	90.1	74	157			
Surr: DNOP	0.60		0.5000		121	79.5	166			

Sample ID: <b>LCSD-4430</b>	SampType: <b>LCSD</b>	TestCode: <b>EPA Method 8015B: Diesel Range</b>								
Client ID: <b>LCSS02</b>	Batch ID: <b>4430</b>	RunNo: <b>6372</b>								
Prep Date: <b>10/19/2012</b>	Analysis Date: <b>10/20/2012</b>	SeqNo: <b>183217</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.6	1.0	5.000	0	91.2	74	157	1.18	23	
Surr: DNOP	0.61		0.5000		122	79.5	166	0	0	

Sample ID: <b>MB-4431</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015B: Diesel Range</b>								
Client ID: <b>PBW</b>	Batch ID: <b>4431</b>	RunNo: <b>6374</b>								
Prep Date: <b>10/19/2012</b>	Analysis Date: <b>10/20/2012</b>	SeqNo: <b>183289</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		120	79.5	166			

Sample ID: <b>LCS-4431</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015B: Diesel Range</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>4431</b>	RunNo: <b>6374</b>								
Prep Date: <b>10/19/2012</b>	Analysis Date: <b>10/20/2012</b>	SeqNo: <b>183290</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.3	1.0	5.000	0	85.1	74	157			
Surr: DNOP	0.58		0.5000		116	79.5	166			

Sample ID: <b>LCSD-4431</b>	SampType: <b>LCSD</b>	TestCode: <b>EPA Method 8015B: Diesel Range</b>								
Client ID: <b>LCSS02</b>	Batch ID: <b>4431</b>	RunNo: <b>6374</b>								
Prep Date: <b>10/19/2012</b>	Analysis Date: <b>10/20/2012</b>	SeqNo: <b>183291</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

**QC SUMMARY REPORT**  
**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1210928  
 02-Nov-12

**Client:** Southwest Geoscience  
**Project:** Largo CS

Sample ID: <b>LCSD-4431</b>	SampType: <b>LCSD</b>	TestCode: <b>EPA Method 8015B: Diesel Range</b>								
Client ID: <b>LCSS02</b>	Batch ID: <b>4431</b>	RunNo: <b>6374</b>								
Prep Date: <b>10/19/2012</b>	Analysis Date: <b>10/20/2012</b>	SeqNo: <b>183291</b>	Units: <b>mg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.4	1.0	5.000	0	87.7	74	157	3.03	23	
Surr: DNOP	0.62		0.5000		124	79.5	166	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1210928

02-Nov-12

Client: Southwest Geoscience

Project: Largo CS

Sample ID: <b>5ML RB</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015B: Gasoline Range</b>								
Client ID: <b>PBW</b>	Batch ID: <b>R6438</b>	RunNo: <b>6438</b>								
Prep Date:	Analysis Date: <b>10/23/2012</b>	SeqNo: <b>185178</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		92.0	69.8	119			

Sample ID: <b>2.5UG GRO LCS</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015B: Gasoline Range</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>R6438</b>	RunNo: <b>6438</b>								
Prep Date:	Analysis Date: <b>10/23/2012</b>	SeqNo: <b>185179</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.39	0.050	0.5000	0	78.6	75.9	119			
Surr: BFB	17		20.00		84.5	69.8	119			

Sample ID: <b>1210928-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015B: Gasoline Range</b>								
Client ID: <b>MW-41</b>	Batch ID: <b>R6438</b>	RunNo: <b>6438</b>								
Prep Date:	Analysis Date: <b>10/23/2012</b>	SeqNo: <b>185184</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0.02000	87.9	63.5	131			
Surr: BFB	18		20.00		91.3	69.8	119			

Sample ID: <b>1210928-001AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015B: Gasoline Range</b>								
Client ID: <b>MW-41</b>	Batch ID: <b>R6438</b>	RunNo: <b>6438</b>								
Prep Date:	Analysis Date: <b>10/23/2012</b>	SeqNo: <b>185185</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0.02000	94.6	63.5	131	7.02	16.7	
Surr: BFB	19		20.00		94.7	69.8	119	0	0	

Sample ID: <b>5ML RB</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015B: Gasoline Range</b>								
Client ID: <b>PBW</b>	Batch ID: <b>R6507</b>	RunNo: <b>6507</b>								
Prep Date:	Analysis Date: <b>10/25/2012</b>	SeqNo: <b>187728</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	23		20.00		116	51.9	148			

Sample ID: <b>2.5UG GRO LCS</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015B: Gasoline Range</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>R6507</b>	RunNo: <b>6507</b>								
Prep Date:	Analysis Date: <b>10/25/2012</b>	SeqNo: <b>187729</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	96.3	75.9	119			
Surr: BFB	21		20.00		107	51.9	148			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1210928

02-Nov-12

Client: Southwest Geoscience

Project: Largo CS

Sample ID: <b>1210928-007AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015B: Gasoline Range</b>								
Client ID: <b>MW-50</b>	Batch ID: <b>R6507</b>	RunNo: <b>6507</b>								
Prep Date:	Analysis Date: <b>10/25/2012</b>	SeqNo: <b>187749</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.53	0.050	0.5000	0	105	63.5	131			
Surr: BFB	23		20.00		114	51.9	148			

Sample ID: <b>1210928-007AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015B: Gasoline Range</b>								
Client ID: <b>MW-50</b>	Batch ID: <b>R6507</b>	RunNo: <b>6507</b>								
Prep Date:	Analysis Date: <b>10/25/2012</b>	SeqNo: <b>187750</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	95.8	63.5	131	9.35	16.7	
Surr: BFB	22		20.00		110	51.9	148	0	0	

Sample ID: <b>5ML RB</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015B: Gasoline Range</b>								
Client ID: <b>PBW</b>	Batch ID: <b>R6515</b>	RunNo: <b>6515</b>								
Prep Date:	Analysis Date: <b>10/26/2012</b>	SeqNo: <b>187941</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	23		20.00		115	51.9	148			

Sample ID: <b>2.5UG GRO LCS</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015B: Gasoline Range</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>R6515</b>	RunNo: <b>6515</b>								
Prep Date:	Analysis Date: <b>10/26/2012</b>	SeqNo: <b>187942</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.44	0.050	0.5000	0	88.8	75.9	119			
Surr: BFB	24		20.00		118	51.9	148			

Sample ID: <b>1210928-017AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015B: Gasoline Range</b>								
Client ID: <b>MW-47</b>	Batch ID: <b>R6515</b>	RunNo: <b>6515</b>								
Prep Date:	Analysis Date: <b>10/26/2012</b>	SeqNo: <b>187956</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	13	0.25	2.500	11.67	51.2	63.5	131			S
Surr: BFB	900		100.0		902	51.9	148			S

Sample ID: <b>1210928-017AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015B: Gasoline Range</b>								
Client ID: <b>MW-47</b>	Batch ID: <b>R6515</b>	RunNo: <b>6515</b>								
Prep Date:	Analysis Date: <b>10/26/2012</b>	SeqNo: <b>187957</b>			Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	13	0.25	2.500	11.67	65.1	63.5	131	2.64	16.7	
Surr: BFB	880		100.0		885	51.9	148	0	0	S

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1210928

02-Nov-12

Client: Southwest Geoscience

Project: Largo CS

Sample ID: <b>5ML RB</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBW</b>	Batch ID: <b>R6438</b>	RunNo: <b>6438</b>								
Prep Date:	Analysis Date: <b>10/23/2012</b>	SeqNo: <b>185212</b>	Units: <b>µg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	20		20.00		102	69.7	152			

Sample ID: <b>100NG BTEX LCS</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>R6438</b>	RunNo: <b>6438</b>								
Prep Date:	Analysis Date: <b>10/23/2012</b>	SeqNo: <b>185213</b>	Units: <b>µg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	19	2.5	20.00	0	95.3	66.9	136			
Benzene	20	1.0	20.00	0	102	80	120			
Toluene	21	1.0	20.00	0	103	80	120			
Ethylbenzene	21	1.0	20.00	0	104	80	120			
Xylenes, Total	63	2.0	60.00	0	105	80	120			
1,2,4-Trimethylbenzene	21	1.0	20.00	0	103	74.3	117			
1,3,5-Trimethylbenzene	21	1.0	20.00	0	106	75.8	117			
Surr: 4-Bromofluorobenzene	22		20.00		109	69.7	152			

Sample ID: <b>5ML RB</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBW</b>	Batch ID: <b>R6507</b>	RunNo: <b>6507</b>								
Prep Date:	Analysis Date: <b>10/25/2012</b>	SeqNo: <b>187773</b>	Units: <b>µg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	21		20.00		105	69.7	152			

Sample ID: <b>100NG BTEX LCS</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>R6507</b>	RunNo: <b>6507</b>								
Prep Date:	Analysis Date: <b>10/25/2012</b>	SeqNo: <b>187774</b>	Units: <b>µg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1210928

02-Nov-12

Client: Southwest Geoscience

Project: Largo CS

Sample ID: <b>100NG BTEX LCS</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>R6507</b>	RunNo: <b>6507</b>								
Prep Date:	Analysis Date: <b>10/25/2012</b>	SeqNo: <b>187774</b>							Units: <b>µg/L</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	21	2.5	20.00	0	106	66.9	136			
Benzene	21	1.0	20.00	0	103	80	120			
Toluene	21	1.0	20.00	0	104	80	120			
Ethylbenzene	21	1.0	20.00	0	104	80	120			
Xylenes, Total	64	2.0	60.00	0	107	80	120			
1,2,4-Trimethylbenzene	21	1.0	20.00	0	104	74.3	117			
1,3,5-Trimethylbenzene	21	1.0	20.00	0	106	75.8	117			
Surr: 4-Bromofluorobenzene	22		20.00		110	69.7	152			

Sample ID: <b>1210928-008AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>MW-52</b>	Batch ID: <b>R6507</b>	RunNo: <b>6507</b>								
Prep Date:	Analysis Date: <b>10/25/2012</b>	SeqNo: <b>187776</b>							Units: <b>µg/L</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	23	2.5	20.00	0	115	45.1	137			
Benzene	21	1.0	20.00	0.2600	104	74.1	124			
Toluene	21	1.0	20.00	0.1200	104	75.2	124			
Ethylbenzene	20	1.0	20.00	0.1580	102	69	125			
Xylenes, Total	63	2.0	60.00	0	105	73.1	126			
1,2,4-Trimethylbenzene	20	1.0	20.00	0.1560	98.5	63.1	121			
1,3,5-Trimethylbenzene	20	1.0	20.00	0	102	60	133			
Surr: 4-Bromofluorobenzene	22		20.00		110	69.7	152			

Sample ID: <b>1210928-008AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>MW-52</b>	Batch ID: <b>R6507</b>	RunNo: <b>6507</b>								
Prep Date:	Analysis Date: <b>10/25/2012</b>	SeqNo: <b>187777</b>							Units: <b>µg/L</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	21	2.5	20.00	0	106	45.1	137	8.61	13.6	
Benzene	19	1.0	20.00	0.2600	93.0	74.1	124	10.7	11.2	
Toluene	19	1.0	20.00	0.1200	93.8	75.2	124	9.80	11.9	
Ethylbenzene	19	1.0	20.00	0.1580	92.0	69	125	9.72	13.5	
Xylenes, Total	57	2.0	60.00	0	95.4	73.1	126	9.32	13	
1,2,4-Trimethylbenzene	18	1.0	20.00	0.1560	89.2	63.1	121	9.85	14.7	
1,3,5-Trimethylbenzene	19	1.0	20.00	0	93.1	60	133	8.74	14	
Surr: 4-Bromofluorobenzene	22		20.00		109	69.7	152	0	0	

Sample ID: <b>5ML RB</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBW</b>	Batch ID: <b>R6515</b>	RunNo: <b>6515</b>								
Prep Date:	Analysis Date: <b>10/26/2012</b>	SeqNo: <b>187969</b>							Units: <b>µg/L</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1210928  
02-Nov-12

Client: Southwest Geoscience  
Project: Largo CS

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: <b>5ML RB</b> SampType: <b>MBLK</b> TestCode: <b>EPA Method 8021B: Volatiles</b>										
Client ID: <b>PBW</b> Batch ID: <b>R6515</b> RunNo: <b>6515</b>										
Prep Date: Analysis Date: <b>10/26/2012</b> SeqNo: <b>187969</b> Units: <b>µg/L</b>										
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	21		20.00		107	69.7	152			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: <b>100NG BTEX LCS</b> SampType: <b>LCS</b> TestCode: <b>EPA Method 8021B: Volatiles</b>										
Client ID: <b>LCSW</b> Batch ID: <b>R6515</b> RunNo: <b>6515</b>										
Prep Date: Analysis Date: <b>10/26/2012</b> SeqNo: <b>187970</b> Units: <b>µg/L</b>										
Methyl tert-butyl ether (MTBE)	20	2.5	20.00	0	99.8	66.9	136			
Benzene	19	1.0	20.00	0	96.3	80	120			
Toluene	20	1.0	20.00	0	97.6	80	120			
Ethylbenzene	20	1.0	20.00	0	99.3	80	120			
Xylenes, Total	62	2.0	60.00	0	103	80	120			
1,2,4-Trimethylbenzene	20	1.0	20.00	0	99.8	74.3	117			
1,3,5-Trimethylbenzene	21	1.0	20.00	0	103	75.8	117			
Surr: 4-Bromofluorobenzene	22		20.00		112	69.7	152			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: <b>1210928-018AMS</b> SampType: <b>MS</b> TestCode: <b>EPA Method 8021B: Volatiles</b>										
Client ID: <b>MW-8</b> Batch ID: <b>R6515</b> RunNo: <b>6515</b>										
Prep Date: Analysis Date: <b>10/26/2012</b> SeqNo: <b>187982</b> Units: <b>µg/L</b>										
Methyl tert-butyl ether (MTBE)	17	2.5	20.00	0	85.0	45.1	137			
Benzene	16	1.0	20.00	0.2500	79.8	74.1	124			
Toluene	17	1.0	20.00	0.2340	85.3	75.2	124			
Ethylbenzene	17	1.0	20.00	0.1960	83.2	69	125			
Xylenes, Total	54	2.0	60.00	0	89.6	73.1	126			
1,2,4-Trimethylbenzene	17	1.0	20.00	0	84.6	63.1	121			
1,3,5-Trimethylbenzene	17	1.0	20.00	0	86.7	60	133			
Surr: 4-Bromofluorobenzene	21		20.00		105	69.7	152			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: <b>1210928-018AMSD</b> SampType: <b>MSD</b> TestCode: <b>EPA Method 8021B: Volatiles</b>										
Client ID: <b>MW-8</b> Batch ID: <b>R6515</b> RunNo: <b>6515</b>										
Prep Date: Analysis Date: <b>10/26/2012</b> SeqNo: <b>187983</b> Units: <b>µg/L</b>										

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1210928

02-Nov-12

Client: Southwest Geoscience

Project: Largo CS

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	16	2.5	20.00	0	81.8	45.1	137	3.96	13.6	
Benzene	16	1.0	20.00	0.2500	76.6	74.1	124	4.00	11.2	
Toluene	16	1.0	20.00	0.2340	81.0	75.2	124	5.21	11.9	
Ethylbenzene	16	1.0	20.00	0.1960	79.1	69	125	4.96	13.5	
Xylenes, Total	52	2.0	60.00	0	86.1	73.1	126	3.91	13	
1,2,4-Trimethylbenzene	17	1.0	20.00	0	82.6	63.1	121	2.38	14.7	
1,3,5-Trimethylbenzene	17	1.0	20.00	0	84.6	60	133	2.51	14	
Surr: 4-Bromofluorobenzene	21		20.00		105	69.7	152	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

**Sample Log-In Check List**

Client Name: Southwest Geoscience Work Order Number: 1210928  
 Received by/date: mg 10/19/12  
 Logged By: Michelle Garcia 10/19/2012 10:00:00 AM *Michelle Garcia*  
 Completed By: Michelle Garcia 10/19/2012 10:48:13 AM *Michelle Garcia*  
 Reviewed By: mg 10/19/12

**Chain of Custody**

- 1. Were seals intact? Yes  No  Not Present
- 2. Is Chain of Custody complete? Yes  No  Not Present
- 3. How was the sample delivered? Courier

**Log In**

- 4. Coolers are present? (see 19. for cooler specific information) Yes  No  NA
- 5. Was an attempt made to cool the samples? Yes  No  NA
- 6. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- 7. Sample(s) in proper container(s)? Yes  No
- 8. Sufficient sample volume for indicated test(s)? Yes  No
- 9. Are samples (except VOA and ONG) properly preserved? Yes  No
- 10. Was preservative added to bottles? Yes  No  NA
- 11. VOA vials have zero headspace? Yes  No  No VOA Vials
- 12. Were any sample containers received broken? Yes  No
- 13. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes  No
- 14. Are matrices correctly identified on Chain of Custody? Yes  No
- 15. Is it clear what analyses were requested? Yes  No
- 16. Were all holding times able to be met? (if no, notify customer for authorization.) Yes  No

# of preserved bottles checked for pH: \_\_\_\_\_  
 (<2 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: \_\_\_\_\_

**Special Handling (if applicable)**

- 17. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

18. Additional remarks:

**19. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

CHAIN OF CUSTODY RECORD

<h1 style="margin: 0;">Southwest</h1> <h2 style="margin: 0;">GEOSCIENCE</h2> <p style="margin: 0; font-size: small;">Environmental &amp; Hydrogeologic Consultants</p>		Laboratory: <u>Hall</u> Address: <u>AKR</u>		ANALYSIS REQUESTED <div style="font-size: 2em; transform: rotate(-90deg); position: absolute; top: 50%; left: 50%; opacity: 0.5;">                     TPH SADIARA 8015                      GTEX 8021                 </div>										Lab use only Due Date:							
		Office Location: <u>Astec</u> Project Manager: <u>Summers</u>												Contact: <u>Andy Freeman</u> Phone: _____ PO/SO #: <u>0410002</u>		Temp. of coolers when received (C°): <u>1.0</u> 1 2 3 4 5 Page <u>1</u> of <u>2</u>					
Sampler's Name: <u>Ryle Summers</u> Sampler's Signature: <u>[Signature]</u>				Proj. No: <u>0410002</u> Project Name: <u>Largo CS</u> No/Type of Containers: _____		1210928 Lab Sample ID (Lab Use Only)															
Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)											Start Depth	End Depth	VOA	A/G 1L	250 ml	P/O
W	10/16/12	1035		X	MW-41													5			
		1145			MW-32																
		1230			MW-34																
		1325			MW-43																
		1425			MW-51																
		1515			MW-40R																
	10/17/12	0930			MW-50																
		1050			MW-52																
		1140			MW-39																
		1255			MW-49																
Turn around time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input type="checkbox"/> 100% Rush																					
Relinquished by (Signature): <u>[Signature]</u>		Date: <u>10/16/12</u>		Time: <u>1600</u>		Received by (Signature): <u>[Signature]</u>		Date: <u>10/18/12</u>		Time: <u>1600</u>		NOTES:									
Relinquished by (Signature): <u>[Signature]</u>		Date: <u>10/18/12</u>		Time: <u>18:18</u>		Received by (Signature): <u>[Signature]</u>		Date: <u>10/19/12</u>		Time: <u>1000</u>											
Relinquished by (Signature): _____		Date: _____		Time: _____		Received by (Signature): _____		Date: _____		Time: _____											
Relinquished by (Signature): _____		Date: _____		Time: _____		Received by (Signature): _____		Date: _____		Time: _____											

Matrix Container: WW - Wastewater VOA - 40 ml vial    W - Water A/G - Amber / Or Glass 1 Liter    S - Soil SD - Solid L - Liquid 250 ml - Glass wide mouth    A - Air Bag P/O - Plastic or other    C - Charcoal tube SL - sludge O - Oil





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

November 01, 2012

Kyle Summers  
Southwest Geoscience  
606 S. Rio Grande Unit A  
Aztec, NM 87410  
TEL: (903) 821-5603  
FAX (214) 350-2914

RE: Largo CS

OrderNo.: 1210969

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 10/20/2012 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Southwest Geoscience

Client Sample ID: MW-9

Project: Largo CS

Collection Date: 10/19/2012 8:45:00 AM

Lab ID: 1210969-001

Matrix: AQUEOUS

Received Date: 10/20/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>SCC</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/22/2012 3:16:18 PM
Surr: DNOP	122	79.5-166		%REC	1	10/22/2012 3:16:18 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/26/2012 11:29:18 PM
Surr: BFB	118	51.9-148		%REC	1	10/26/2012 11:29:18 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	10/26/2012 11:29:18 PM
Toluene	ND	1.0		µg/L	1	10/26/2012 11:29:18 PM
Ethylbenzene	ND	1.0		µg/L	1	10/26/2012 11:29:18 PM
Xylenes, Total	ND	2.0		µg/L	1	10/26/2012 11:29:18 PM
Surr: 4-Bromofluorobenzene	97.0	69.7-152		%REC	1	10/26/2012 11:29:18 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Southwest Geoscience

Client Sample ID: MW-3R

Project: Largo CS

Collection Date: 10/19/2012 9:30:00 AM

Lab ID: 1210969-002

Matrix: AQUEOUS

Received Date: 10/20/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>SCC</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/22/2012 3:41:41 PM
Surr: DNOP	126	79.5-166		%REC	1	10/22/2012 3:41:41 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	0.48	0.050		mg/L	1	10/26/2012 11:59:36 PM
Surr: BFB	318	51.9-148	S	%REC	1	10/26/2012 11:59:36 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	10/26/2012 11:59:36 PM
Toluene	ND	1.0		µg/L	1	10/26/2012 11:59:36 PM
Ethylbenzene	1.2	1.0		µg/L	1	10/26/2012 11:59:36 PM
Xylenes, Total	2.8	2.0		µg/L	1	10/26/2012 11:59:36 PM
Surr: 4-Bromofluorobenzene	129	69.7-152		%REC	1	10/26/2012 11:59:36 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

**Analytical Report**  
 Lab Order 1210969  
 Date Reported: 11/1/2012

**CLIENT:** Southwest Geoscience

**Client Sample ID:** MW-16

**Project:** Largo CS

**Collection Date:** 10/19/2012 10:20:00 AM

**Lab ID:** 1210969-003

**Matrix:** AQUEOUS

**Received Date:** 10/20/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>SCC</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/22/2012 4:07:05 PM
Surr: DNOP	127	79.5-166		%REC	1	10/22/2012 4:07:05 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	0.38	0.050		mg/L	1	10/27/2012 12:29:42 AM
Surr: BFB	154	51.9-148	S	%REC	1	10/27/2012 12:29:42 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	100	10		µg/L	10	10/27/2012 5:58:55 PM
Toluene	ND	1.0		µg/L	1	10/27/2012 12:29:42 AM
Ethylbenzene	3.9	1.0		µg/L	1	10/27/2012 12:29:42 AM
Xylenes, Total	ND	2.0		µg/L	1	10/27/2012 12:29:42 AM
Surr: 4-Bromofluorobenzene	111	69.7-152		%REC	1	10/27/2012 12:29:42 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience

Client Sample ID: MW-15

Project: Largo CS

Collection Date: 10/19/2012 11:10:00 AM

Lab ID: 1210969-004

Matrix: AQUEOUS

Received Date: 10/20/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>SCC</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/22/2012 4:32:29 PM
Surr: DNOP	124	79.5-166		%REC	1	10/22/2012 4:32:29 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	2.0	0.050		mg/L	1	10/27/2012 12:59:59 AM
Surr: BFB	558	51.9-148	S	%REC	1	10/27/2012 12:59:59 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	400	10		µg/L	10	10/27/2012 11:31:28 PM
Toluene	ND	1.0		µg/L	1	10/27/2012 12:59:59 AM
Ethylbenzene	7.2	1.0		µg/L	1	10/27/2012 12:59:59 AM
Xylenes, Total	7.8	2.0		µg/L	1	10/27/2012 12:59:59 AM
Surr: 4-Bromofluorobenzene	180	69.7-152	S	%REC	1	10/27/2012 12:59:59 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience

Client Sample ID: MW-7

Project: Largo CS

Collection Date: 10/19/2012 11:55:00 AM

Lab ID: 1210969-005

Matrix: AQUEOUS

Received Date: 10/20/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>SCC</b>
Diesel Range Organics (DRO)	2.5	1.0		mg/L	1	10/22/2012 4:57:51 PM
Surr: DNOP	118	79.5-166		%REC	1	10/22/2012 4:57:51 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	32	0.50		mg/L	10	10/27/2012 1:30:10 AM
Surr: BFB	294	51.9-148	S	%REC	10	10/27/2012 1:30:10 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	8200	500		µg/L	500	10/28/2012 12:01:44 AM
Toluene	ND	10		µg/L	10	10/27/2012 1:30:10 AM
Ethylbenzene	130	10		µg/L	10	10/27/2012 1:30:10 AM
Xylenes, Total	36	20		µg/L	10	10/27/2012 1:30:10 AM
Surr: 4-Bromofluorobenzene	133	69.7-152		%REC	10	10/27/2012 1:30:10 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience

Client Sample ID: MW-11

Project: Largo CS

Collection Date: 10/19/2012 12:35:00 PM

Lab ID: 1210969-006

Matrix: AQUEOUS

Received Date: 10/20/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>SCC</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/22/2012 5:23:12 PM
Surr: DNOP	127	79.5-166		%REC	1	10/22/2012 5:23:12 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	5.3	0.050		mg/L	1	10/27/2012 2:31:41 AM
Surr: BFB	692	51.9-148	S	%REC	1	10/27/2012 2:31:41 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	1100	50		µg/L	50	10/28/2012 12:31:59 AM
Toluene	ND	1.0		µg/L	1	10/27/2012 2:31:41 AM
Ethylbenzene	11	1.0		µg/L	1	10/27/2012 2:31:41 AM
Xylenes, Total	41	2.0		µg/L	1	10/27/2012 2:31:41 AM
Surr: 4-Bromofluorobenzene	181	69.7-152	S	%REC	1	10/27/2012 2:31:41 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1210969

01-Nov-12

Client: Southwest Geoscience

Project: Largo CS

Sample ID	<b>MB-4458</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015B: Diesel Range</b>					
Client ID:	<b>PBW</b>	Batch ID:	<b>4458</b>	RunNo:	<b>6379</b>					
Prep Date:	<b>10/22/2012</b>	Analysis Date:	<b>10/22/2012</b>	SeqNo:	<b>184274</b>	Units:	<b>mg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Surr: DNOP	1.3		1.000		128	79.5	166			

Sample ID	<b>LCS-4458</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015B: Diesel Range</b>					
Client ID:	<b>LCSW</b>	Batch ID:	<b>4458</b>	RunNo:	<b>6379</b>					
Prep Date:	<b>10/22/2012</b>	Analysis Date:	<b>10/22/2012</b>	SeqNo:	<b>184275</b>	Units:	<b>mg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.0	1.0	5.000	0	80.7	74	157			
Surr: DNOP	0.63		0.5000		125	79.5	166			

Sample ID	<b>LCSD-4458</b>	SampType:	<b>LCSD</b>	TestCode:	<b>EPA Method 8015B: Diesel Range</b>					
Client ID:	<b>LCSS02</b>	Batch ID:	<b>4458</b>	RunNo:	<b>6379</b>					
Prep Date:	<b>10/22/2012</b>	Analysis Date:	<b>10/22/2012</b>	SeqNo:	<b>184276</b>	Units:	<b>mg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.0	1.0	5.000	0	80.5	74	157	0.253	23	
Surr: DNOP	0.60		0.5000		120	79.5	166	0	0	

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1210969

01-Nov-12

**Client:** Southwest Geoscience  
**Project:** Largo CS

Sample ID: <b>5ML RB</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015B: Gasoline Range</b>								
Client ID: <b>PBW</b>	Batch ID: <b>R6515</b>	RunNo: <b>6515</b>								
Prep Date:	Analysis Date: <b>10/26/2012</b>	SeqNo: <b>187941</b>	Units: <b>mg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	23		20.00		115	51.9	148			

Sample ID: <b>2.5UG GRO LCS</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015B: Gasoline Range</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>R6515</b>	RunNo: <b>6515</b>								
Prep Date:	Analysis Date: <b>10/26/2012</b>	SeqNo: <b>187942</b>	Units: <b>mg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.44	0.050	0.5000	0	88.8	75.9	119			
Surr: BFB	24		20.00		118	51.9	148			

Sample ID: <b>5ML RB</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015B: Gasoline Range</b>								
Client ID: <b>PBW</b>	Batch ID: <b>R6519</b>	RunNo: <b>6519</b>								
Prep Date:	Analysis Date: <b>10/27/2012</b>	SeqNo: <b>188138</b>	Units: <b>%REC</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	22		20.00		112	51.9	148			

Sample ID: <b>2.5UG GRO LCS</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015B: Gasoline Range</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>R6519</b>	RunNo: <b>6519</b>								
Prep Date:	Analysis Date: <b>10/27/2012</b>	SeqNo: <b>188139</b>	Units: <b>%REC</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	23		20.00		114	51.9	148			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1210969

01-Nov-12

Client: Southwest Geoscience

Project: Largo CS

Sample ID	<b>5ML RB</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBW</b>	Batch ID:	<b>R6515</b>	RunNo:	<b>6515</b>					
Prep Date:		Analysis Date:	<b>10/26/2012</b>	SeqNo:	<b>187969</b>	Units:	<b>µg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	21		20.00		107	69.7	152			

Sample ID	<b>100NG BTEX LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSW</b>	Batch ID:	<b>R6515</b>	RunNo:	<b>6515</b>					
Prep Date:		Analysis Date:	<b>10/26/2012</b>	SeqNo:	<b>187970</b>	Units:	<b>µg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.3	80	120			
Toluene	20	1.0	20.00	0	97.6	80	120			
Ethylbenzene	20	1.0	20.00	0	99.3	80	120			
Xylenes, Total	62	2.0	60.00	0	103	80	120			
Surr: 4-Bromofluorobenzene	22		20.00		112	69.7	152			

Sample ID	<b>5ML RB</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBW</b>	Batch ID:	<b>R6519</b>	RunNo:	<b>6519</b>					
Prep Date:		Analysis Date:	<b>10/27/2012</b>	SeqNo:	<b>188183</b>	Units:	<b>µg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Surr: 4-Bromofluorobenzene	21		20.00		105	69.7	152			

Sample ID	<b>100NG BTEX LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSW</b>	Batch ID:	<b>R6519</b>	RunNo:	<b>6519</b>					
Prep Date:		Analysis Date:	<b>10/27/2012</b>	SeqNo:	<b>188184</b>	Units:	<b>µg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	92.3	80	120			
Surr: 4-Bromofluorobenzene	23		20.00		113	69.7	152			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

**Sample Log-In Check List**

Client Name: Southwest Geoscience Work Order Number: 1210969  
 Received by/date: AF 10/20/12  
 Logged By: Michelle Garcia 10/20/2012 10:00:00 AM *Michelle Garcia*  
 Completed By: Michelle Garcia 10/22/2012 8:35:28 AM *Michelle Garcia*  
 Reviewed By: IC 10/22/2012

**Chain of Custody**

1. Were seals intact? Yes  No  Not Present
2. Is Chain of Custody complete? Yes  No  Not Present
3. How was the sample delivered? Courier

**Log In**

4. Coolers are present? (see 19. for cooler specific information) Yes  No  NA
5. Was an attempt made to cool the samples? Yes  No  NA
6. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
7. Sample(s) in proper container(s)? Yes  No
8. Sufficient sample volume for indicated test(s)? Yes  No
9. Are samples (except VOA and ONG) properly preserved? Yes  No
10. Was preservative added to bottles? Yes  No  NA
11. VOA vials have zero headspace? Yes  No  No VOA Vials
12. Were any sample containers received broken? Yes  No
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes  No
14. Are matrices correctly identified on Chain of Custody? Yes  No
15. Is it clear what analyses were requested? Yes  No
16. Were all holding times able to be met? (If no, notify customer for authorization.) Yes  No

# of preserved bottles checked for pH: \_\_\_\_\_  
 (<2 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: \_\_\_\_\_

**Special Handling (if applicable)**

17. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

18. Additional remarks:

**19. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.8	Good	Yes			

CHAIN OF CUSTODY RECORD

**Southwest**  
GEOSCIENCE  
Environmental & Hydrogeologic Consultants

Office Location: Artec

Project Manager: Summers

Sampler's Name: Ryle Summers

Proj. No: 0410002

Laboratory: Hall

Address: ABQ

Contact: Andy Freeman

Phone: \_\_\_\_\_

PO/SO #: 0410002

Project Name: Largo CS

No/Type of Containers: \_\_\_\_\_

ANALYSIS REQUESTED

TPH GRAB / PRO 8001  
KATEX 8021

Lab use only

Due Date: \_\_\_\_\_

Temp. of coolers when received (C°): 2.8

1	2	3	4	5
---	---	---	---	---

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1L	250 ml	P/O	Lab Sample ID (Lab Use Only)
W	10/19/12	0845	X	X	MW-9			5				1210969 -001
		0930			MW-3 R							-002
		1020			MW-16							-003
		1110			MW-15							-004
		1155			MW-7							-005
		1235			MW-11							-006
NFS MS.												

Turn around time:  Normal  25% Rush  50% Rush  100% Rush

Relinquished by (Signature): <u>[Signature]</u>	Date: <u>10/19/12</u> Time: <u>1525</u>	Received by (Signature): <u>[Signature]</u>	Date: <u>10-19-12</u> Time: <u>1525</u>	NOTES:
Relinquished by (Signature): <u>[Signature]</u>	Date: <u>10/19/12</u> Time: <u>1720</u>	Received by (Signature): <u>[Signature]</u>	Date: <u>10/24/12</u> Time: <u>10:00</u>	
Relinquished by (Signature): _____	Date: _____ Time: _____	Received by (Signature): _____	Date: _____ Time: _____	
Relinquished by (Signature): _____	Date: _____ Time: _____	Received by (Signature): _____	Date: _____ Time: _____	

Matrix Container: WW - Wastewater VOA - 40 ml vial W - Water A/G - Amber / Or Glass 1 Liter S - Soil SD - Solid L - Liquid 250 ml - Glass wide mouth A - Air Bag C - Charcoal tube SL - sludge O - Oil P/O - Plastic or other



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

October 31, 2012

Kyle Summers

Southwest Geoscience  
606 S. Rio Grande Unit A  
Aztec, NM 87410  
TEL: (903) 821-5603  
FAX (214) 350-2914

RE: Largo CS

OrderNo.: 1210935

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 10/19/2012 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue rectangular background.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order 1210935

Date Reported: 10/31/2012

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Southwest Geoscience

**Client Sample ID:** MW-41

**Project:** Largo CS

**Collection Date:** 10/16/2012 10:35:00 AM

**Lab ID:** 1210935-001

**Matrix:** AQUEOUS

**Received Date:** 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: <b>KS</b>
Total Dissolved Solids	30200	1000		mg/L	1	10/25/2012 7:55:00 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Analytical Report**

Lab Order 1210935

Date Reported: 10/31/2012

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Southwest Geoscience

**Client Sample ID:** MW-43

**Project:** Largo CS

**Collection Date:** 10/16/2012 1:25:00 PM

**Lab ID:** 1210935-002

**Matrix:** AQUEOUS

**Received Date:** 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: <b>KS</b>
Total Dissolved Solids	7630	200		mg/L	1	10/25/2012 7:55:00 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Analytical Report**

Lab Order 1210935

Date Reported: 10/31/2012

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Southwest Geoscience

**Client Sample ID:** MW-40R

**Project:** Largo CS

**Collection Date:** 10/16/2012 3:15:00 PM

**Lab ID:** 1210935-003

**Matrix:** AQUEOUS

**Received Date:** 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: <b>KS</b>
Total Dissolved Solids	7930	200		mg/L	1	10/25/2012 7:55:00 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Analytical Report**

Lab Order 1210935

Date Reported: 10/31/2012

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Southwest Geoscience

**Client Sample ID:** MW-52

**Project:** Largo CS

**Collection Date:** 10/17/2012 10:50:00 AM

**Lab ID:** 1210935-004

**Matrix:** AQUEOUS

**Received Date:** 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: KS
Total Dissolved Solids	27000	1000		mg/L	1	10/25/2012 7:55:00 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Analytical Report**

Lab Order 1210935

Date Reported: 10/31/2012

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Southwest Geoscience

**Client Sample ID:** MW-38

**Project:** Largo CS

**Collection Date:** 10/17/2012 3:05:00 PM

**Lab ID:** 1210935-005

**Matrix:** AQUEOUS

**Received Date:** 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: <b>KS</b>
Total Dissolved Solids	3000	40.0		mg/L	1	10/25/2012 7:55:00 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Southwest Geoscience

Client Sample ID: MW-6

Project: Largo CS

Collection Date: 10/18/2012 9:00:00 AM

Lab ID: 1210935-006

Matrix: AQUEOUS

Received Date: 10/19/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: KS
Total Dissolved Solids	8420	200		mg/L	1	10/25/2012 7:55:00 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1210935

31-Oct-12

Client: Southwest Geoscience

Project: Largo CS

Sample ID	MB-4469	SampType:	MBLK	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW	Batch ID:	4469	RunNo:	6465					
Prep Date:	10/23/2012	Analysis Date:	10/25/2012	SeqNo:	185898	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	LCS-4469	SampType:	LCS	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW	Batch ID:	4469	RunNo:	6465					
Prep Date:	10/23/2012	Analysis Date:	10/25/2012	SeqNo:	185899	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

**Sample Log-In Check List**

Client Name: **Southwest Geoscience**

Work Order Number: **1210935**

Received by/date: **MG 10/19/12**

Logged By: **Lindsay Mangin 10/19/2012 10:00:00 AM**

*[Signature]*

Completed By: **Lindsay Mangin 10/19/2012 2:00:27 PM**

*[Signature]*

Reviewed By: *[Signature]* **10/19/12**

**Chain of Custody**

- 1. Were seals intact? Yes  No  Not Present
- 2. Is Chain of Custody complete? Yes  No  Not Present
- 3. How was the sample delivered? Courier

**Log In**

- 4. Coolers are present? (see 19. for cooler specific information) Yes  No  NA
- 5. Was an attempt made to cool the samples? Yes  No  NA
- 6. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- 7. Sample(s) in proper container(s)? Yes  No
- 8. Sufficient sample volume for indicated test(s)? Yes  No
- 9. Are samples (except VOA and ONG) properly preserved? Yes  No
- 10. Was preservative added to bottles? Yes  No  NA
- 11. VOA vials have zero headspace? Yes  No  No VOA Vials
- 12. Were any sample containers received broken? Yes  No
- 13. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes  No  # of preserved bottles checked for pH:
- 14. Are matrices correctly identified on Chain of Custody? Yes  No  (2 or >12 unless noted)
- 15. Is it clear what analyses were requested? Yes  No  Adjusted?
- 16. Were all holding times able to be met? (If no, notify customer for authorization.) Yes  No  Checked by:

**Special Handling (if applicable)**

- 17. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

18. Additional remarks:

**19. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

CHAIN OF CUSTODY RECORD

<h1 style="margin: 0;">Southwest</h1> <h2 style="margin: 0;">GEOSCIENCE</h2> <p style="margin: 0; font-size: small;">Environmental &amp; Hydrogeologic Consultants</p>		Laboratory: <u>Hall</u> Address: <u>ABQ</u>		ANALYSIS REQUESTED										Lab use only Due Date:				
		Office Location: <u>Ateco</u>												Contact: <u>Andy Freeman</u> Phone: _____ PO/SO #: <u>0410002</u>		Temp. of coolers when received (C°): <u>1.0</u> 1 2 3 4 5 Page <u>1</u> of <u>1</u>		
Project Manager: <u>Summers</u>		Sampler's Name: <u>Ryle Summers</u> Sampler's Signature: <u>[Signature]</u>		TDS										35 1210928 Lab Sample ID (Lab Use Only)				
Proj. No.: <u>0410002</u>		Project Name: <u>Largo CS</u>																
Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1L	250 ml	P/O							
W	10/16/12	1035		X	MW-41						X	X						
		1325			MW-43													
		1515			MW-40 R													
	10/17/12	1050			MW-52													
		1505			MW-38													
	10/18/12	0900			MW-6													
NFS KS																		
Turn around time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input type="checkbox"/> 100% Rush																		
Relinquished by (Signature): <u>[Signature]</u>			Date: <u>10/18/12</u>		Time: <u>1600</u>		Received by (Signature): <u>Christine Labeles</u>			Date: <u>10/18/12</u>		Time: <u>1600</u>		NOTES:				
Relinquished by (Signature): <u>Christine Labeles</u>			Date: <u>10/18/12</u>		Time: <u>1718</u>		Received by (Signature): <u>[Signature]</u>			Date: <u>10/19/12</u>		Time: <u>1000</u>						
Relinquished by (Signature): _____			Date: _____		Time: _____		Received by (Signature): _____			Date: _____		Time: _____						
Relinquished by (Signature): _____			Date: _____		Time: _____		Received by (Signature): _____			Date: _____		Time: _____						

Matrix Container: WW - Wastewater VOA - 40 ml vial    W - Water A/G - Amber / Or Glass 1 Liter    S - Soil SD - Solid L - Liquid 250 ml - Glass wide mouth    A - Air Bag C - Charcoal tube SL - sludge O - Oil    P/O - Plastic or other