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QUARTERLY GROUNDWATER MONITORING REPORT
(December 2012 Event)

Property:

K-51 Pipeline Release
Sections 34 and 35, T26N, R6W
Rio Arriba County, New Mexico
SWG Project No. 0410003
January 9, 2013

Prepared for:
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QUARTERLY GROUNDWATER MONITORING REPORT
(December 2012 Event)

K-51 Pipeline Release
Sections 34 and 35, T26N, R6W
Rio Arriba County, New Mexico

SWG Project No. 0410003

1.0 INTRODUCTION

1.1 Site Description & Background

The K-51 pipeline release site is located at the boundary of Sections 34 and 35, Township 26 North, Range 6 West, in Rio Arriba County, New Mexico, referred to hereinafter as the "Site" or "subject Site". The Site consists of silty/sandy canyon bottomland with native grasses, and is crossed by a natural gas pipeline operated by Enterprise Field Services, LLC (Enterprise).

On April 13, 2010, approximately 10 barrels of natural gas condensate were released from the Enterprise natural gas gathering pipeline at the Site, due to internal corrosion. Subsequent to the completion of excavation and off-site disposal of petroleum hydrocarbon affected soils, confirmation soil samples were collected from the excavation by Souder, Miller and Associates (SMA). In addition, one (1) groundwater sample was collected from the groundwater which recharged into the excavation. The excavation was then backfilled with unaffected soils.

In June 2010, eight (8) soil borings (BH-1 through BH-8) were advanced on-site by LT Environmental (LTE). Subsequent to advancement, four (4) of the soil borings were converted to groundwater monitoring wells (MW-1 through MW-4) (*Subsurface Investigation Report, dated August 9, 2010 – LTE*). Based on the results of soil and groundwater sampling activities, constituent of concern (COC) concentrations were identified in soil above the New Mexico Energy, Minerals and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) *Remediation Action Levels* (RALs) and in groundwater above the New Mexico Water Quality Control Commission (WQCC) *Groundwater Quality Standards (GQSs).*

During April 2011, nine (9) soil borings (SB-9, SB-10, MW-11 through MW-14, SB-15, MW-16, and MW-17) were advanced by Southwest Geoscience (SWG) in and around the former K-51 release area to further evaluate the extent of dissolved phase COCs in groundwater. Additionally, fifteen (15) injection points were installed to allow In-Situ Chemical Oxidation (ISCO) of the COCs. ISCO activities were performed during May 2011 (*Supplemental Site Investigation and Corrective Action Report, dated October 5, 2011 - SWG*).

Based on the distribution of COCs in groundwater, a former drip valve may have been a historic source of petroleum hydrocarbon impact to groundwater in the vicinity of monitoring well MW-14. During March 2012, three (3) additional soil borings (MW-18,

MW-19 and MW-20) were advanced in and around the former drip valve area to further evaluate the extent COCs in groundwater as a result of the release (*Supplemental Site Investigation & Corrective Action Work Plan, dated April 23, 2012 – SWG*). Soil boring MW-18 was advanced to the west of the former drip valve, hydrogeologically cross-gradient, and soil borings MW-19 and MW-20 were advanced to the north and northwest of the drip valve, hydrogeologically down-gradient. Based on the results of quarterly groundwater monitoring from March 2012, the groundwater samples collected from monitoring wells MW-19 and MW-20 exhibited benzene concentrations at levels above the New Mexico WQCC GQSs.

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to condensate releases, the New Mexico OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the 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.

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.

1.2 Scope of Work

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

A Site Vicinity Map is included as Figure 2, and a Site Map, which indicates the approximate locations of the monitoring wells in relation to pertinent structures and general Site boundaries, is included as Figure 3 of Appendix A.

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 on December 17th, 2012 by SWG environmental professionals Jordan Dubuisson and Aaron Bentley.

SWG's groundwater sampling program consisted of the following:

- Collection of one groundwater sample from each monitoring well utilizing low-flow sampling techniques. MW-20 was purged and sampled utilizing a disposable bailer because the depth to water at this location exceeds the lift capability of the peristaltic pump.

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). LNAPL was not identified at any monitoring well locations during the December 2012 gauging activities.

Prior to sample collection, each of the monitoring wells (with the exception of monitoring well MW-20) were 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.

The low-flow groundwater samples were collected from each monitoring well once produced groundwater was consistent in color, clarity, pH, DO, ORP, temperature and conductivity.

Monitoring well MW-20 was purged of three (3) casing volumes utilizing a disposable bailer, and sampled following groundwater recharge.

Groundwater samples were collected in laboratory prepared $HgCl_2$ preserved containers, 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.

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

Analysis	Sample Type	No. of Samples	Method
TPH GRO/DRO	Groundwater	13	SW-846# 8015M
BTEX	Groundwater	13	SW-846# 8021B

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

The monitoring wells have been surveyed to determine 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 west-northwest. The observed gradient during this monitoring event was approximately 0.007 ft/ft across the Site.

Groundwater measurements collected during the most recent gauging event in December 2012 are presented with TOC elevations in Table 2, Appendix B. A groundwater gradient map depicting the most recent gauging data 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 December 2012 sampling event to the New Mexico WQCC *Groundwater Quality Standards*. The results of the groundwater sample analyses are summarized in Table 1 of Appendix B. A Groundwater Quality Exceedance Zone map is provided as Figure 5 of Appendix A.

Benzene, Toluene, Ethylbenzene, and Xylenes

The groundwater samples collected from monitoring wells MW-2, MW-3, MW-4, MW-11, MW-12, MW-13, MW-14, MW-16, MW-17, MW-18, and MW-20 during the December 2012 sampling event did not exhibit benzene, toluene, ethylbenzene or xylenes concentrations above the respective WQCC *Groundwater Quality Standards*.

The groundwater samples collected from monitoring wells MW-1and MW-19 during the December 2012 sampling event exhibited benzene concentrations of 34 µg/L and 180 µg/L respectively, which exceed the WQCC *Groundwater Quality Standard* of 10 µg/L.

TPH GRO/DRO

The groundwater samples collected from monitoring wells MW-2, MW-3, MW-11, MW-12, MW-13, MW-14, MW-17, MW-18, and MW-20 did not exhibit TPH GRO or TPH DRO concentrations above the laboratory RLs during the December 2012 sampling event.

The groundwater samples collected from monitoring wells MW-1, MW-4, and MW-19 exhibited TPH GRO concentrations ranging from 0.12 mg/L to 2.2 mg/L. The highest GRO concentration during the December 2012 sampling event was observed in the groundwater sample from monitoring well MW-19.

TPH DRO concentrations were not identified above the laboratory RLs in any of the sampled wells except monitoring well MW-19, which exhibited a TPH DRO concentration of 2.6 mg/L.

6.0 FINDINGS

During December 2012, SWG conducted a quarterly groundwater monitoring event at the K-51 Pipeline release site. The Site is located at the boundary of Sections 34 and 35, Township 26 North, Range 6 West, in Rio Arriba County, New Mexico. The Site consists of silty/sandy canyon bottomland with native grasses, and is crossed by a natural gas pipeline operated by Enterprise. The objective of the groundwater monitoring event was to further evaluate the concentrations of COCs in groundwater at the Site.

- During the completion of the sampling event, one (1) groundwater sample was collected from each monitoring well utilizing either low-flow sampling techniques or purge and sample (disposable bailer) sampling techniques.

- The groundwater samples collected from monitoring wells MW-2, MW-3, MW-4, MW-11, MW-12, MW-13, MW-14, MW-16, MW-17, MW-18, and MW-20 during the December 2012 sampling event did not exhibit benzene, toluene, ethylbenzene or xylenes concentrations above the respective WQCC *Groundwater Quality Standards*.

- **The groundwater samples collected from monitoring wells MW-1and MW-19 during the December 2012 sampling event exhibited benzene concentrations of 34 µg/L and 180 µg/L respectively, which exceed the WQCC *Groundwater Quality Standard* of 10 µg/L.**

- Due to early winter precipitation events, the groundwater elevation has risen approximately 0.8 feet at the Site since the last sampling event. Monitoring well MW-19, possibly as a result of this rise in groundwater elevation, did not exhibit LNAPL during the December 2012 sampling event.

- Based on analytical results, the COCs in groundwater at the Site continue to demonstrate general decreases in concentrations.

7.0 RECOMMENDATIONS

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

- Report the groundwater monitoring results to the OCD,

- Continue monitoring groundwater at the site.

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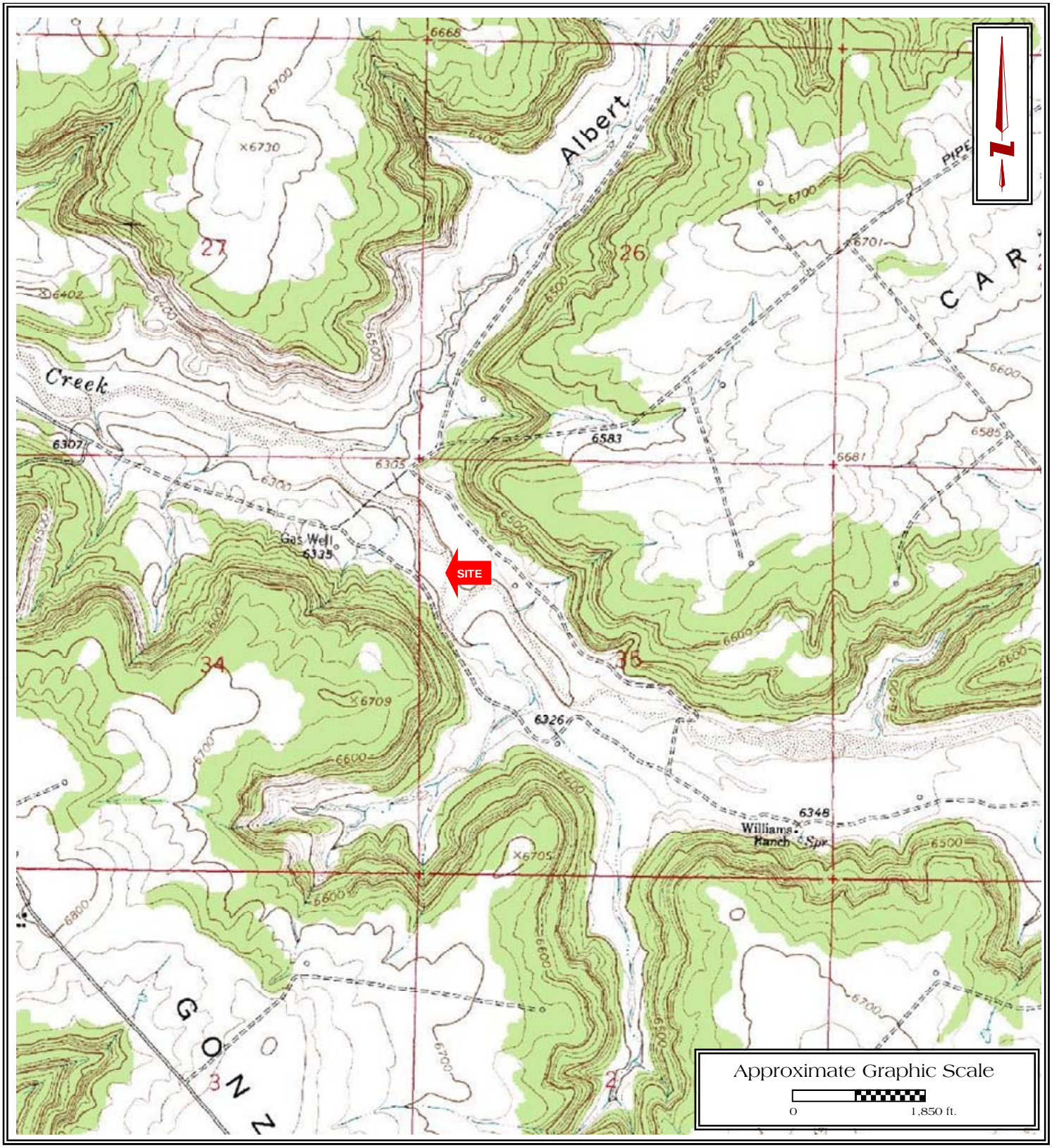
APPENDIX A

Figures



K-51 Pipeline Release

N36° 26' 47.77"; W107° 26' 46.04"

Off County Road 537

Rio Arriba, New Mexico

SWG Project No. 0410003

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FIGURE 1

Topographic Map

Gonzales Mesa, NM Quadrangle

Contour Interval - 10 Feet

K-51 Pipeline Release

N36° 26' 47.77"; W107° 26' 46.04"

Off County Road 537

Rio Arriba, New Mexico

SWG Project No. 0410003

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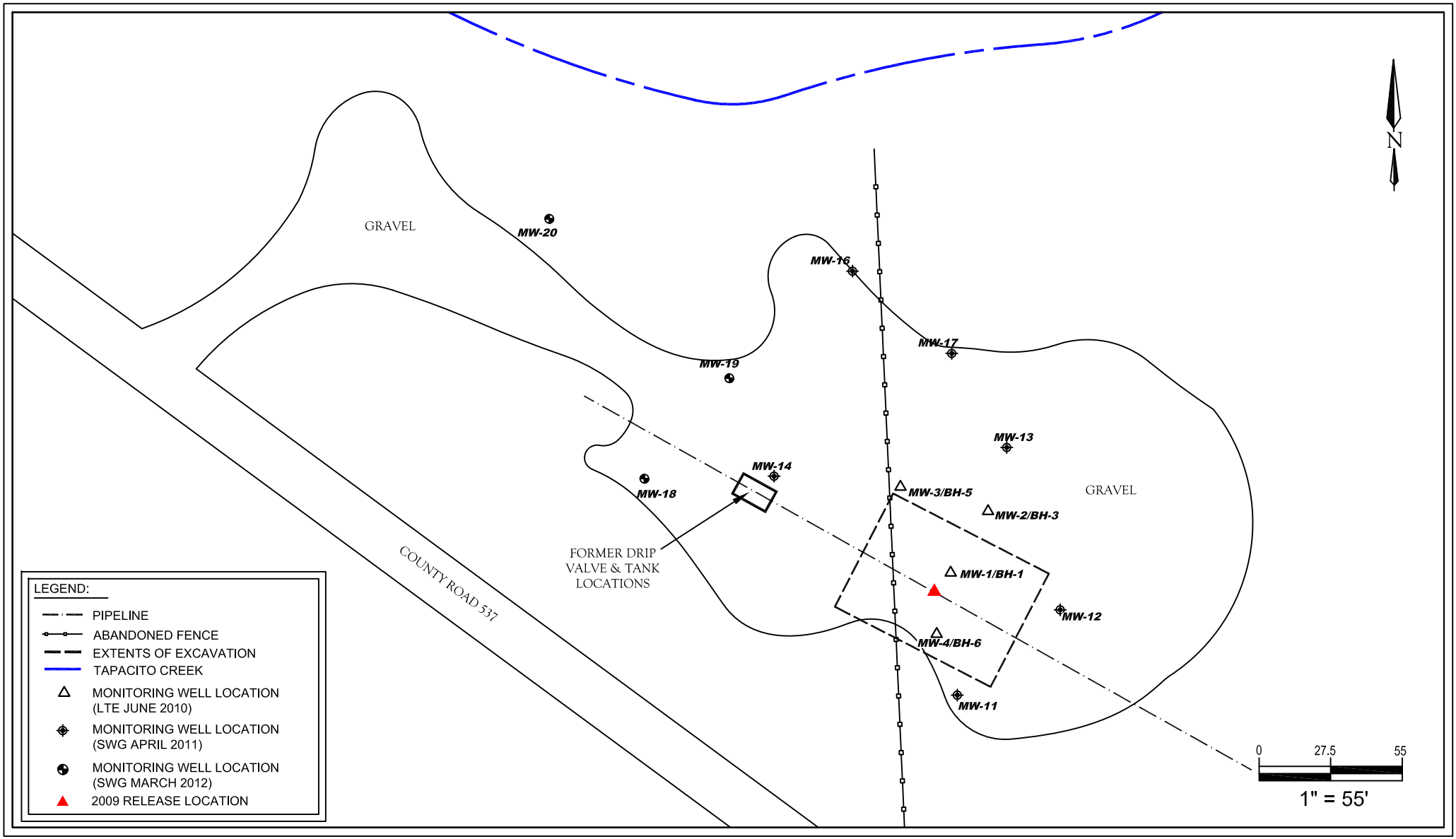
FIGURE 2

Site Vicinity Map

2012 Aerial Photograph



K-51 Pipeline Release
N36° 26' 47.77"; W107° 26' 46.04"
Off County Road 537
Rio Ariba County, New Mexico

SWG Project No. 0410003

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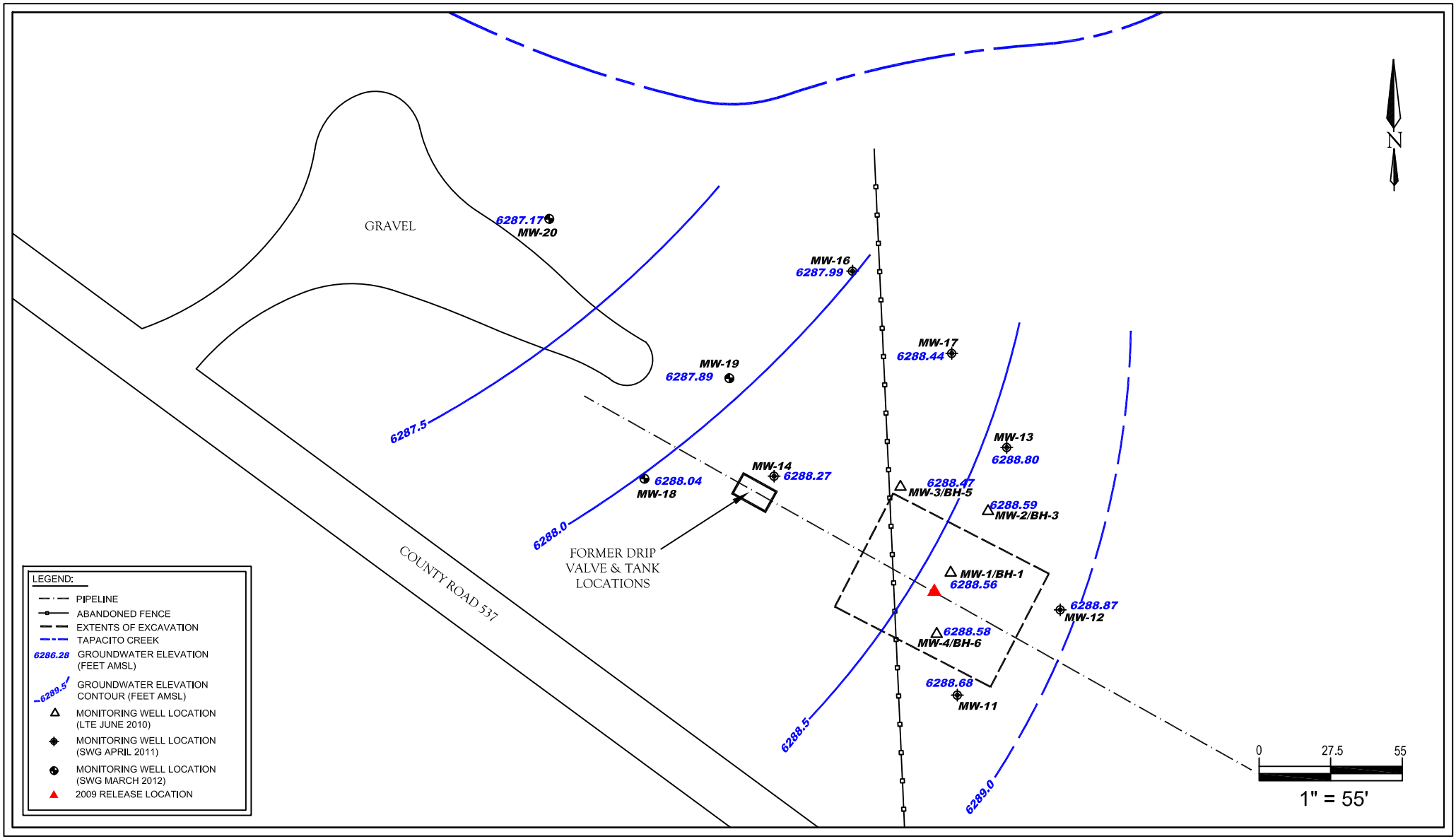
FIGURE 3

SITE MAP



K-51 Pipeline Release
N36° 26' 47.77"; W107° 26' 46.04"
Off County Road 537
Rio Ariba County, New Mexico

SWG Project No. 0410003

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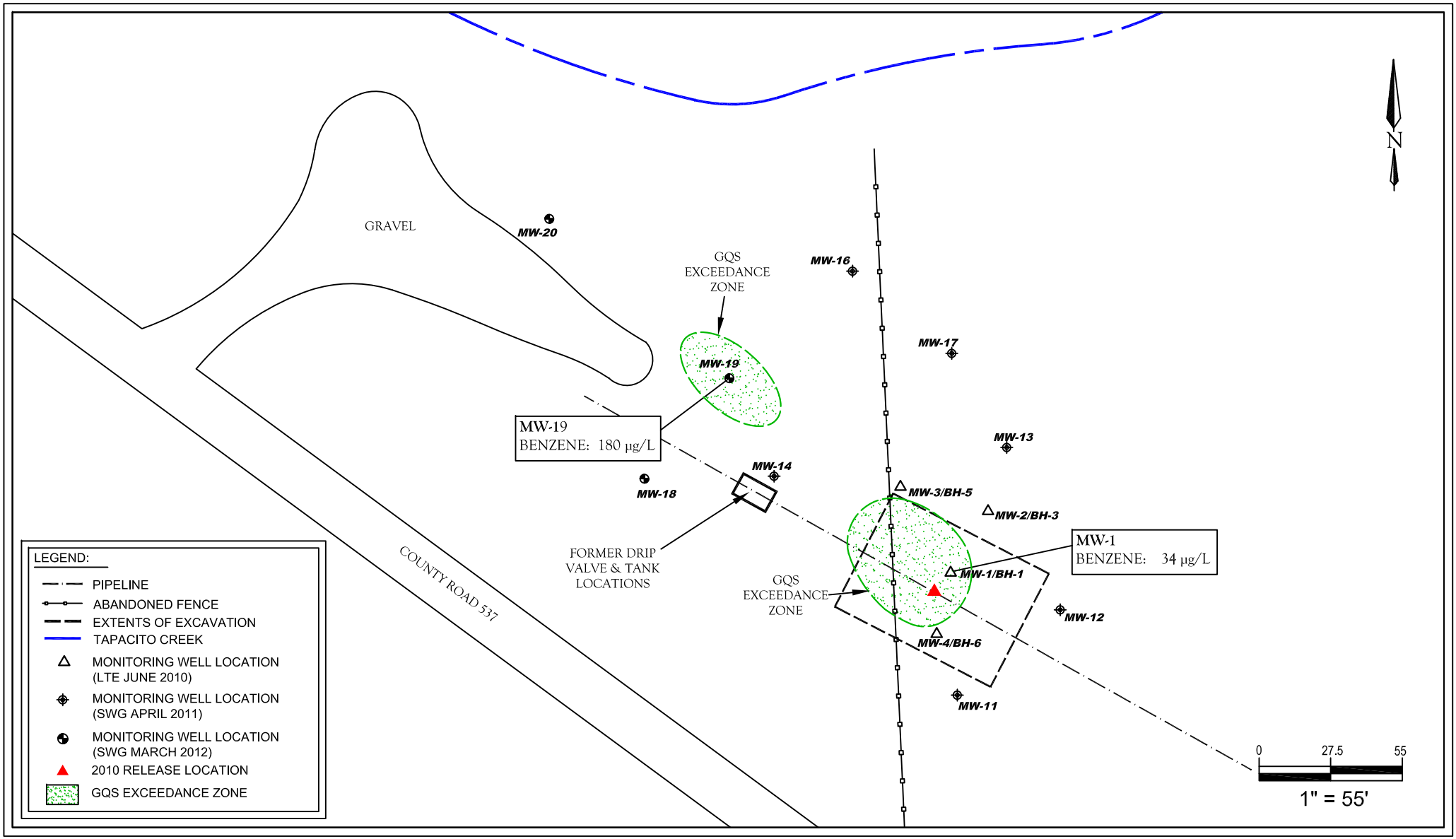
FIGURE 4

GROUNDWATER GRADIENT MAP

DECEMBER 2012



K-51 Pipeline Release
N36° 26' 47.77"; W107° 26' 46.04"
Off County Road 537
Rio Ariba County, New Mexico

SWG Project No. 0410003

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FIGURE 5

GROUNDWATER QUALITY
STANDARD EXCEEDANCE ZONE
DECEMBER 2012

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APPENDIX B

Tables

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TABLE 1
K-51 PIPELINE RELEASE
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	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 Commmission Groundwater Quality Standards		10	750	750	620	NE	NE
SMA Sample - Open Excavation							
Excavation	4.21.10	**7,000**	**13,000**	540	**5,200**	NA	NA
Monitoring Wells							
MW-1	6.21.10	**8,400**	**1,300**	560	**4,200**	NA	NA
	9.24.10	**2,300**	28	200	520	8.4	<1.0
	4.21.11	**430**	<20	120	60	2.1	<1.0
	6.21.11	**820**	370	33	140	5.1	130
	9.22.11	**690**	**1,200**	120	**1,200**	8.9	30
	12.13.11	**260**	250	54	**650**	3.4	<1.0
	3.20.12	**280**	230	94	550	3.5	<1.0
	6.19.12	**300**	<5.0	81	96	1.7	<1.0
	9.20.12*	**45**	3.4	15	23	0.45	<1.0
	12.17.12	**34**	<1.0	11	16	0.19	<1.0
MW-2	6.21.10	**200**	53	14	96	NA	NA
	9.24.10	2.3	<1.0	<1.0	<2.0	<0.050	<1.0
	4.21.11	3.3	<1.0	<1.0	<2.0	0.065	<1.0
	6.21.11	2.2	<1.0	<1.0	<2.0	<0.050	<1.0
	9.22.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	12.13.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	3.20.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	6.19.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	9.19.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	12.17.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-3	6.21.10	**640**	57	72	**1,000**	NA	NA
	9.24.10	**150**	<1.0	16	28	0.48	<1.0
	4.21.11	**52**	<1.0	17	10	0.25	<1.0
	6.21.11	**62**	14	13	160	0.67	<1.0
	9.22.11	3	<1.0	8.7	<2.0	0.066	<1.0
	12.13.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	3.20.12	1.3	<1.0	1.9	<2.0	<0.050	<1.0
	6.19.12	3.1	<1.0	1.4	<2.0	<0.050	<1.0
	9.19.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	12.17.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0

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TABLE 1
K-51 PIPELINE RELEASE
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	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 Commmission Groundwater Quality Standards		10	750	750	620	NE	NE
MW-4	6.21.10	**3,600**	**10,000**	600	**6,600**	NA	NA
	9.24.10	**870**	**870**	260	**1,600**	12	1
	4.21.11	**670**	<20	520	**790**	6.3	<1.0
	6.21.11	**17**	22	36	77	0.64	1.1
	9.22.11	**62**	140	220	**820**	3.8	1.2
	12.13.11	**84**	<20	430	490	2.6	<1.0
	3.20.12	**36**	<20	**1,100**	**1,400**	6.5	<1.0
	6.19.12	**37**	<5.0	250	350	2.2	<1.0
	9.19.12	9.4	1.4	74	97	0.84	<1.0
	12.17.12	<1.0	<1.0	6.2	9.7	0.12	<1.0
MW-11	4.21.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	6.21.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	9.22.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	12.13.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	3.20.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	6.19.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	9.19.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	12.17.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-12	4.21.11	1.9	<1.0	<1.0	<2.0	<0.050	<1.0
	6.21.11	4.6	<1.0	<1.0	<2.0	0.063	<1.0
	9.22.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	12.13.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	3.20.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	6.19.12	1.7	<1.0	<1.0	<2.0	<0.050	<1.0
	9.19.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	12.17.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-13	4.21.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	6.21.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	9.22.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	12.13.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	3.20.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	6.19.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	9.20.12	NS	NS	NS	NS	NS	NS
	12.17.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0

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TABLE 1
K-51 PIPELINE RELEASE
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	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 Commmission Groundwater Quality Standards		10	750	750	620	NE	NE
MW-14	4.21.11	**2,800**	<100	280	**720**	8.7	<1.0
	6.21.11	**470**	<10	37	210	1.9	<1.0
	9.22.11	**540**	<10	100	36	1.7	<1.0
	12.13.11	**220**	<10	110	<20	1.0	<1.0
	3.20.12	**660**	<5.0	240	15	2.9	<1.0
	6.19.12	**660**	<5.0	300	100	3.4	<1.0
	9.20.12*	7.3	<1.0	<1.0	<2.0	0.1	<1.0
	12.17.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-16	4.21.11	4.4	<2.0	<2.0	<4.0	<0.10	<1.0
	6.21.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	9.22.11	<1.0	<1.0	<1.0	<2.0	0.065	<1.0
	12.13.11	<1.0	<1.0	<1.0	<2.0	0.12	<1.0
	3.20.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	6.19.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	9.19.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	12.17.12	3.1	<1.0	2.1	14	0.19	<1.0
MW-17	4.21.11	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0
	6.21.11	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0
	9.22.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	12.13.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	3.20.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	6.19.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	9.19.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	12.17.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-18	3.20.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	6.19.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	9.20.12*	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
	12.17.12	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0
MW-19	3.20.12	**250**	56	310	**3,900**	16	5.3
	6.19.12	**NAPL**	**NAPL**	**NAPL**	**NAPL**	NA	NA
	9.19.12	**NAPL**	**NAPL**	**NAPL**	**NAPL**	NA	NA
	12.17.12	**180**	<5.0	5.4	23	2.2	2.6

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TABLE 1
K-51 PIPELINE RELEASE
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	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 Commmission Groundwater Quality Standards		10	750	750	620	NE	NE
MW-20	3.20.12	**35**	<1.0	1.1	3.3	0.14	<1.0
	6.19.12	3.4	<1.0	<1.0	<2.0	<0.050	<1.0
	9.20.12*	4.7	<1.0	<1.0	<2.0	<0.050	<1.0
	12.17.12*	<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

* = Monitoring well purged/sampled utilizing disposable bailer during this event

NA = Not Analyzed

NS = Not Sampled

NE = Not Established

NAPL = Non-aqueous phase liquid

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TABLE 2
K-51 Pipeline Release
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-1	4.21.11	ND	11.80	ND	6300.89	6289.09
	6.21.11	ND	12.16	ND		6288.73
	9.22.11	ND	12.92	ND		6287.97
	12.13.11	ND	12.45	ND		6288.44
	3.20.12	ND	12.13	ND		6288.76
	6.19.12	ND	12.76	ND		6288.13
	9.19.12	ND	13.10	ND		6287.79
	12.17.12	ND	12.33	ND		6288.56
MW-2	4.21.11	ND	10.55	ND	6299.82	6289.27
	6.21.11	ND	11.87	ND		6287.95
	9.22.11	ND	11.86	ND		6287.96
	12.13.11	ND	11.38	ND		6288.44
	3.20.12	ND	10.95	ND		6288.87
	6.19.12	ND	11.64	ND		6288.18
	9.19.12	ND	12.10	ND		6287.72
	12.17.12	ND	11.23	ND		6288.59
MW-3	4.21.11	ND	11.30	ND	6300.22	6288.92
	6.21.11	ND	11.64	ND		6288.58
	9.22.11	ND	12.45	ND		6287.77
	12.13.11	ND	11.89	ND		6288.33
	3.20.12	ND	11.60	ND		6288.62
	6.19.12	ND	12.22	ND		6288.00
	9.19.12	ND	12.53	ND		6287.69
	12.17.12	ND	11.75	ND		6288.47
MW-4	4.21.11	ND	11.90	ND	6300.91	6289.01
	6.21.11	ND	12.18	ND		6288.73
	9.22.11	ND	12.90	ND		6288.01
	12.13.11	ND	12.41	ND		6288.50
	3.20.12	ND	12.45	ND		6288.46
	6.19.12	ND	12.72	ND		6288.19
	9.19.12	ND	13.09	ND		6287.82
	12.17.12	ND	12.33	ND		6288.58
MW-11	4.21.11	ND	11.98	ND	6301.19	6289.21
	6.21.11	ND	12.40	ND		6288.79
	9.22.11	ND	13.07	ND		6288.12
	12.13.11	ND	12.55	ND		6288.64
	3.20.12	ND	12.26	ND		6288.93
	6.19.12	ND	12.93	ND		6288.26
	9.19.12	ND	13.27	ND		6287.92
	12.17.12	ND	12.51	ND		6288.68
MW-12	4.21.11	ND	8.96	ND	6299.08	6290.12
	6.21.11	ND	9.42	ND		6289.66
	9.22.11	ND	10.82	ND		6288.26
	12.13.11	ND	10.13	ND		6288.95
	3.20.12	ND	9.41	ND		6289.67
	6.19.12	ND	10.09	ND		6288.99
	9.19.12	ND	11.03	ND		6288.05
	12.17.12	ND	10.21	ND		6288.87

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TABLE 2
K-51 Pipeline Release
GROUNDWATER ELEVATIONS

MW-13	4.21.11	ND	9.07	ND	6298.27	6289.20
	6.21.11	ND	9.51	ND		6288.76
	9.22.11	ND	10.15	ND		6288.12
	12.13.11	ND	9.59	ND		6288.68
	3.20.12	ND	9.35	ND		6288.92
	6.19.12	ND	10.09	ND		6288.18
	9.19.12	ND	10.29	ND		6287.98
	12.17.12	ND	9.47	ND		6288.80
MW-14	4.21.11	ND	12.54	ND	6301.20	6288.66
	6.21.11	ND	12.88	ND		6288.32
	9.22.11	ND	13.53	ND		6287.67
	12.13.11	ND	13.11	ND		6288.09
	3.20.12	ND	12.80	ND		6288.40
	6.19.12	ND	13.42	ND		6287.78
	9.19.12	ND	13.70	ND		6287.50
	12.17.12	ND	12.93	ND		6288.27
MW-16	4.21.11	ND	12.06	ND	6299.89	6287.83
	6.21.11	ND	12.26	ND		6287.63
	9.22.11	ND	12.57	ND		6287.32
	12.13.11	ND	12.28	ND		6287.61
	3.20.12	ND	12.24	ND		6287.65
	6.19.12	ND	12.71	ND		6287.18
	9.19.12	ND	12.80	ND		6287.09
	12.17.12	ND	11.90	ND		6287.99
MW-17	4.21.11	ND	9.90	ND	6298.57	6288.67
	6.21.11	ND	9.56	ND		6289.01
	9.22.11	ND	10.83	ND		6287.74
	12.13.11	ND	10.31	ND		6288.26
	3.20.12	ND	10.12	ND		6288.45
	6.19.12	ND	10.81	ND		6287.76
	9.19.12	ND	10.95	ND		6287.62
	12.17.12	ND	10.13	ND		6288.44
MW-18	3.20.12	ND	16.60	ND	6304.77	6288.17
	6.19.12	ND	17.42	ND		6287.35
	9.19.12	ND	17.45	ND		6287.32
	12.17.12	ND	16.73	ND		6288.04
MW-19	3.20.12	ND	15.69	ND	6303.80	6288.11
	6.19.12	16.25	16.32	0.07		6287.52
	9.19.12	16.47	16.49	0.02		6287.32
	12.17.12	ND	15.91	ND		6287.89
MW-20	3.20.12	ND	25.82	ND	6312.59	6286.77
	6.19.12	ND	26.30	ND		6286.29
	9.19.12	ND	26.31	ND		6286.28
	12.17.12	ND	25.42	ND		6287.17

BTOC - below top of casing
AMSL - aboce mean sea level
TOC - top of casing
* - corrected for presence of phase-sepated hydrocarbon using a site-specific density correction factor of 0.63
ND - Not Detected

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APPENDIX C

Laboratory Data Reports & Chain-of-Custody Documentation

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

December 27, 2012

Kyle Summers

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

RE: K-51 Pipeline Release OrderNo.: 1212837

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 13 sample(s) on 12/19/2012 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 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-1
Project: K-51 Pipeline Release
Collection Date: 12/17/2012 4:00:00 PM
Lab ID: 1212837-001 **Matrix:** AQUEOUS **Received Date:** 12/19/2012 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/21/2012 12:19:31 PM
Surr: DNOP	109	79.5-166		%REC	1	12/21/2012 12:19:31 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.19	0.050		mg/L	1	12/19/2012 10:56:00 PM
Surr: BFB	99.9	51.9-148		%REC	1	12/19/2012 10:56:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	34	1.0		µg/L	1	12/19/2012 10:56:00 PM
Toluene	ND	1.0		µg/L	1	12/19/2012 10:56:00 PM
Ethylbenzene	11	1.0		µg/L	1	12/19/2012 10:56:00 PM
Xylenes, Total	16	2.0		µg/L	1	12/19/2012 10:56:00 PM
Surr: 4-Bromofluorobenzene	115	69.7-152		%REC	1	12/19/2012 10:56:00 PM

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-2
Project: K-51 Pipeline Release
Collection Date: 12/17/2012 1:30:00 PM
Lab ID: 1212837-002 **Matrix:** AQUEOUS **Received Date:** 12/19/2012 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/21/2012 12:41:09 PM
Surr: DNOP	111	79.5-166		%REC	1	12/21/2012 12:41:09 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/19/2012 11:25:59 PM
Surr: BFB	91.3	51.9-148		%REC	1	12/19/2012 11:25:59 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/19/2012 11:25:59 PM
Toluene	ND	1.0		µg/L	1	12/19/2012 11:25:59 PM
Ethylbenzene	ND	1.0		µg/L	1	12/19/2012 11:25:59 PM
Xylenes, Total	ND	2.0		µg/L	1	12/19/2012 11:25:59 PM
Surr: 4-Bromofluorobenzene	109	69.7-152		%REC	1	12/19/2012 11:25:59 PM

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-3
Project: K-51 Pipeline Release
Collection Date: 12/17/2012 1:50:00 PM
Lab ID: 1212837-003
Matrix: AQUEOUS
Received Date: 12/19/2012 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/21/2012 1:02:58 PM
Surr: DNOP	111	79.5-166		%REC	1	12/21/2012 1:02:58 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/19/2012 11:55:54 PM
Surr: BFB	87.8	51.9-148		%REC	1	12/19/2012 11:55:54 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/19/2012 11:55:54 PM
Toluene	ND	1.0		µg/L	1	12/19/2012 11:55:54 PM
Ethylbenzene	ND	1.0		µg/L	1	12/19/2012 11:55:54 PM
Xylenes, Total	ND	2.0		µg/L	1	12/19/2012 11:55:54 PM
Surr: 4-Bromofluorobenzene	108	69.7-152		%REC	1	12/19/2012 11:55:54 PM

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-4
Project: K-51 Pipeline Release
Collection Date: 12/17/2012 2:25:00 PM
Lab ID: 1212837-004 **Matrix:** AQUEOUS **Received Date:** 12/19/2012 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/21/2012 1:24:37 PM
Surr: DNOP	113	79.5-166		%REC	1	12/21/2012 1:24:37 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.12	0.050		mg/L	1	12/20/2012 12:25:55 AM
Surr: BFB	99.3	51.9-148		%REC	1	12/20/2012 12:25:55 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/20/2012 12:25:55 AM
Toluene	ND	1.0		µg/L	1	12/20/2012 12:25:55 AM
Ethylbenzene	6.2	1.0		µg/L	1	12/20/2012 12:25:55 AM
Xylenes, Total	9.7	2.0		µg/L	1	12/20/2012 12:25:55 AM
Surr: 4-Bromofluorobenzene	113	69.7-152		%REC	1	12/20/2012 12:25:55 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-11
Project: K-51 Pipeline Release
Collection Date: 12/17/2012 2:45:00 PM
Lab ID: 1212837-005 **Matrix:** AQUEOUS **Received Date:** 12/19/2012 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/21/2012 1:46:23 PM
Surr: DNOP	112	79.5-166		%REC	1	12/21/2012 1:46:23 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/20/2012 12:56:02 AM
Surr: BFB	88.3	51.9-148		%REC	1	12/20/2012 12:56:02 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/20/2012 12:56:02 AM
Toluene	ND	1.0		µg/L	1	12/20/2012 12:56:02 AM
Ethylbenzene	ND	1.0		µg/L	1	12/20/2012 12:56:02 AM
Xylenes, Total	ND	2.0		µg/L	1	12/20/2012 12:56:02 AM
Surr: 4-Bromofluorobenzene	108	69.7-152		%REC	1	12/20/2012 12:56:02 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-12
Project: K-51 Pipeline Release
Collection Date: 12/17/2012 2:05:00 PM
Lab ID: 1212837-006 **Matrix:** AQUEOUS **Received Date:** 12/19/2012 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/21/2012 2:08:06 PM
Surr: DNOP	114	79.5-166		%REC	1	12/21/2012 2:08:06 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/20/2012 1:26:06 AM
Surr: BFB	85.5	51.9-148		%REC	1	12/20/2012 1:26:06 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/20/2012 1:26:06 AM
Toluene	ND	1.0		µg/L	1	12/20/2012 1:26:06 AM
Ethylbenzene	ND	1.0		µg/L	1	12/20/2012 1:26:06 AM
Xylenes, Total	ND	2.0		µg/L	1	12/20/2012 1:26:06 AM
Surr: 4-Bromofluorobenzene	105	69.7-152		%REC	1	12/20/2012 1:26:06 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-13
Project: K-51 Pipeline Release
Collection Date: 12/17/2012 1:15:00 PM
Lab ID: 1212837-007 **Matrix:** AQUEOUS **Received Date:** 12/19/2012 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/21/2012 2:29:59 PM
Surr: DNOP	112	79.5-166		%REC	1	12/21/2012 2:29:59 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/20/2012 1:56:13 AM
Surr: BFB	88.2	51.9-148		%REC	1	12/20/2012 1:56:13 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/20/2012 1:56:13 AM
Toluene	ND	1.0		µg/L	1	12/20/2012 1:56:13 AM
Ethylbenzene	ND	1.0		µg/L	1	12/20/2012 1:56:13 AM
Xylenes, Total	ND	2.0		µg/L	1	12/20/2012 1:56:13 AM
Surr: 4-Bromofluorobenzene	107	69.7-152		%REC	1	12/20/2012 1:56:13 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-14
Project: K-51 Pipeline Release
Collection Date: 12/17/2012 3:40:00 PM
Lab ID: 1212837-008 **Matrix:** AQUEOUS **Received Date:** 12/19/2012 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/21/2012 2:51:45 PM
Surr: DNOP	115	79.5-166		%REC	1	12/21/2012 2:51:45 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/20/2012 2:26:15 AM
Surr: BFB	99.4	51.9-148		%REC	1	12/20/2012 2:26:15 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/20/2012 2:26:15 AM
Toluene	ND	1.0		µg/L	1	12/20/2012 2:26:15 AM
Ethylbenzene	ND	1.0		µg/L	1	12/20/2012 2:26:15 AM
Xylenes, Total	ND	2.0		µg/L	1	12/20/2012 2:26:15 AM
Surr: 4-Bromofluorobenzene	106	69.7-152		%REC	1	12/20/2012 2:26:15 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-16
Project: K-51 Pipeline Release
Collection Date: 12/17/2012 12:10:00 PM
Lab ID: 1212837-009 **Matrix:** AQUEOUS **Received Date:** 12/19/2012 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/21/2012 3:13:33 PM
Surr: DNOP	110	79.5-166		%REC	1	12/21/2012 3:13:33 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.19	0.050		mg/L	1	12/20/2012 2:56:16 AM
Surr: BFB	108	51.9-148		%REC	1	12/20/2012 2:56:16 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	3.1	1.0		µg/L	1	12/20/2012 2:56:16 AM
Toluene	ND	1.0		µg/L	1	12/20/2012 2:56:16 AM
Ethylbenzene	2.1	1.0		µg/L	1	12/20/2012 2:56:16 AM
Xylenes, Total	14	2.0		µg/L	1	12/20/2012 2:56:16 AM
Surr: 4-Bromofluorobenzene	116	69.7-152		%REC	1	12/20/2012 2:56:16 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-17
Project: K-51 Pipeline Release
Collection Date: 12/17/2012 12:45:00 PM
Lab ID: 1212837-010 **Matrix:** AQUEOUS **Received Date:** 12/19/2012 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/21/2012 3:35:09 PM
Surr: DNOP	109	79.5-166		%REC	1	12/21/2012 3:35:09 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/20/2012 1:41:30 PM
Surr: BFB	86.9	51.9-148		%REC	1	12/20/2012 1:41:30 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/20/2012 1:41:30 PM
Toluene	ND	1.0		µg/L	1	12/20/2012 1:41:30 PM
Ethylbenzene	ND	1.0		µg/L	1	12/20/2012 1:41:30 PM
Xylenes, Total	ND	2.0		µg/L	1	12/20/2012 1:41:30 PM
Surr: 4-Bromofluorobenzene	109	69.7-152		%REC	1	12/20/2012 1:41:30 PM

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-18
Project: K-51 Pipeline Release
Collection Date: 12/17/2012 3:10:00 PM
Lab ID: 1212837-011
Matrix: AQUEOUS
Received Date: 12/19/2012 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/21/2012 3:56:58 PM
Surr: DNOP	112	79.5-166		%REC	1	12/21/2012 3:56:58 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.10		mg/L	2	12/20/2012 2:11:30 PM
Surr: BFB	86.3	51.9-148		%REC	2	12/20/2012 2:11:30 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	2.0		µg/L	2	12/20/2012 2:11:30 PM
Toluene	ND	2.0		µg/L	2	12/20/2012 2:11:30 PM
Ethylbenzene	ND	2.0		µg/L	2	12/20/2012 2:11:30 PM
Xylenes, Total	ND	4.0		µg/L	2	12/20/2012 2:11:30 PM
Surr: 4-Bromofluorobenzene	106	69.7-152		%REC	2	12/20/2012 2:11:30 PM

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-19
Project: K-51 Pipeline Release
Collection Date: 12/17/2012 4:20:00 PM
Lab ID: 1212837-012
Matrix: AQUEOUS
Received Date: 12/19/2012 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	2.6	1.0		mg/L	1	12/21/2012 4:25:02 PM
Surr: DNOP	125	79.5-166		%REC	1	12/21/2012 4:25:02 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	2.2	0.25		mg/L	5	12/21/2012 5:31:36 PM
Surr: BFB	89.6	51.9-148		%REC	5	12/21/2012 5:31:36 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	180	5.0		µg/L	5	12/21/2012 5:31:36 PM
Toluene	ND	5.0		µg/L	5	12/21/2012 5:31:36 PM
Ethylbenzene	5.4	5.0		µg/L	5	12/21/2012 5:31:36 PM
Xylenes, Total	23	10		µg/L	5	12/21/2012 5:31:36 PM
Surr: 4-Bromofluorobenzene	119	69.7-152		%REC	5	12/21/2012 5:31:36 PM

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-20
Project: K-51 Pipeline Release
Collection Date: 12/17/2012 4:40:00 PM
Lab ID: 1212837-013 **Matrix:** AQUEOUS **Received Date:** 12/19/2012 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/21/2012 4:46:37 PM
Surr: DNOP	107	79.5-166		%REC	1	12/21/2012 4:46:37 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/20/2012 3:41:42 PM
Surr: BFB	87.6	51.9-148		%REC	1	12/20/2012 3:41:42 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/20/2012 3:41:42 PM
Toluene	ND	1.0		µg/L	1	12/20/2012 3:41:42 PM
Ethylbenzene	ND	1.0		µg/L	1	12/20/2012 3:41:42 PM
Xylenes, Total	ND	2.0		µg/L	1	12/20/2012 3:41:42 PM
Surr: 4-Bromofluorobenzene	106	69.7-152		%REC	1	12/20/2012 3:41:42 PM

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1212837**

27-Dec-12

Client: Southwest Geoscience

Project: K-51 Pipeline Release

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **PBW**	Batch ID: **R7617**	RunNo: **7617**
Prep Date:	Analysis Date: **12/19/2012**	SeqNo: **221232** Units: **mg/L**

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		89.6	51.9	148			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R7617**	RunNo: **7617**
Prep Date:	Analysis Date: **12/19/2012**	SeqNo: **221233** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.51	0.050	0.5000	0	101	75.9	119			
Surr: BFB	19		20.00		94.5	51.9	148			

Sample ID **1212687-014AMS**	SampType: **MS**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **BatchQC**	Batch ID: **R7617**	RunNo: **7617**
Prep Date:	Analysis Date: **12/19/2012**	SeqNo: **221237** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	3.9	0.25	2.500	1.277	104	63.5	131			
Surr: BFB	93		100.0		92.5	51.9	148			

Sample ID **1212687-014AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **BatchQC**	Batch ID: **R7617**	RunNo: **7617**
Prep Date:	Analysis Date: **12/19/2012**	SeqNo: **221238** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	3.7	0.25	2.500	1.277	96.9	63.5	131	4.49	16.7	
Surr: BFB	93		100.0		93.0	51.9	148	0	0	

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **PBW**	Batch ID: **R7658**	RunNo: **7658**
Prep Date:	Analysis Date: **12/20/2012**	SeqNo: **222429** Units: **mg/L**

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		89.3	51.9	148			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R7658**	RunNo: **7658**
Prep Date:	Analysis Date: **12/20/2012**	SeqNo: **222430** Units: **mg/L**

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	95.9	75.9	119			
Surr: BFB	18		20.00		92.4	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#: **1212837**

27-Dec-12

Client: Southwest Geoscience

Project: K-51 Pipeline Release

Sample ID	**1212837-011AMS**	SampType:	**MS**		TestCode:	**EPA Method 8015B: Gasoline Range**				
Client ID:	**MW-18**	Batch ID:	**R7658**		RunNo:	**7658**				
Prep Date:		Analysis Date:	**12/20/2012**		SeqNo:	**222445**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	1.0	0.10	1.000	0	103	63.5	131			
Surr: BFB	38		40.00		94.6	51.9	148			

Sample ID	**1212837-011AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8015B: Gasoline Range**				
Client ID:	**MW-18**	Batch ID:	**R7658**		RunNo:	**7658**				
Prep Date:		Analysis Date:	**12/20/2012**		SeqNo:	**222446**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.98	0.10	1.000	0	98.4	63.5	131	4.80	16.7	
Surr: BFB	38		40.00		94.4	51.9	148	0	0	

Sample ID	**5ML RB**	SampType:	**MBLK**		TestCode:	**EPA Method 8015B: Gasoline Range**				
Client ID:	**PBW**	Batch ID:	**R7697**		RunNo:	**7697**				
Prep Date:		Analysis Date:	**12/21/2012**		SeqNo:	**223623**	Units:	**mg/L**		
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		90.3	51.9	148			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**		TestCode:	**EPA Method 8015B: Gasoline Range**				
Client ID:	**LCSW**	Batch ID:	**R7697**		RunNo:	**7697**				
Prep Date:		Analysis Date:	**12/21/2012**		SeqNo:	**223624**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.54	0.050	0.5000	0	108	75.9	119			
Surr: BFB	19		20.00		93.2	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#: **1212837**

27-Dec-12

Client: Southwest Geoscience

Project: K-51 Pipeline Release

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**R7617**	RunNo:	**7617**					
Prep Date:		Analysis Date:	**12/19/2012**	SeqNo:	**221253**	Units:	**µg/L**			
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	22		20.00		108	69.7	152			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSW**	Batch ID:	**R7617**	RunNo:	**7617**					
Prep Date:		Analysis Date:	**12/19/2012**	SeqNo:	**221254**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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	105	80	120			
Xylenes, Total	64	2.0	60.00	0	107	80	120			
Surr: 4-Bromofluorobenzene	24		20.00		118	69.7	152			

Sample ID	**1212825-002AMS**	SampType:	**MS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**BatchQC**	Batch ID:	**R7617**	RunNo:	**7617**					
Prep Date:		Analysis Date:	**12/19/2012**	SeqNo:	**221277**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.2	74.1	124			
Toluene	20	1.0	20.00	0	102	75.2	124			
Ethylbenzene	21	1.0	20.00	0	103	69	125			
Xylenes, Total	64	2.0	60.00	0	106	73.1	126			
Surr: 4-Bromofluorobenzene	24		20.00		119	69.7	152			

Sample ID	**1212825-002AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**BatchQC**	Batch ID:	**R7617**	RunNo:	**7617**					
Prep Date:		Analysis Date:	**12/19/2012**	SeqNo:	**221278**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.7	74.1	124	7.83	11.2	
Toluene	19	1.0	20.00	0	92.8	75.2	124	9.41	11.9	
Ethylbenzene	19	1.0	20.00	0	94.3	69	125	8.88	13.5	
Xylenes, Total	58	2.0	60.00	0	96.9	73.1	126	8.83	13	
Surr: 4-Bromofluorobenzene	24		20.00		119	69.7	152	0	0	

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1212837**

27-Dec-12

Client: Southwest Geoscience

Project: K-51 Pipeline Release

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**R7658**	RunNo:	**7658**					
Prep Date:		Analysis Date:	**12/20/2012**	SeqNo:	**222471**	Units:	**µg/L**			
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	23		20.00		115	69.7	152			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSW**	Batch ID:	**R7658**	RunNo:	**7658**					
Prep Date:		Analysis Date:	**12/20/2012**	SeqNo:	**222472**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.6	80	120			
Toluene	20	1.0	20.00	0	101	80	120			
Ethylbenzene	21	1.0	20.00	0	103	80	120			
Xylenes, Total	63	2.0	60.00	0	105	80	120			
Surr: 4-Bromofluorobenzene	24		20.00		121	69.7	152			

Sample ID	**1212837-010AMS**	SampType:	**MS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**MW-17**	Batch ID:	**R7658**	RunNo:	**7658**					
Prep Date:		Analysis Date:	**12/20/2012**	SeqNo:	**222481**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	74.1	124			
Toluene	21	1.0	20.00	0.2000	104	75.2	124			
Ethylbenzene	21	1.0	20.00	0.2480	104	69	125			
Xylenes, Total	65	2.0	60.00	0.5700	107	73.1	126			
Surr: 4-Bromofluorobenzene	24		20.00		120	69.7	152			

Sample ID	**1212837-010AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**MW-17**	Batch ID:	**R7658**	RunNo:	**7658**					
Prep Date:		Analysis Date:	**12/20/2012**	SeqNo:	**222486**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.5	74.1	124	8.32	11.2	
Toluene	19	1.0	20.00	0.2000	94.7	75.2	124	9.56	11.9	
Ethylbenzene	19	1.0	20.00	0.2480	95.3	69	125	8.89	13.5	
Xylenes, Total	60	2.0	60.00	0.5700	98.3	73.1	126	8.15	13	
Surr: 4-Bromofluorobenzene	24		20.00		120	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1212837**

27-Dec-12

Client: Southwest Geoscience

Project: K-51 Pipeline Release

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**R7697**	RunNo:	**7697**					
Prep Date:		Analysis Date:	**12/21/2012**	SeqNo:	**223647**	Units:	**µg/L**			
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	23		20.00		113	69.7	152			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSW**	Batch ID:	**R7697**	RunNo:	**7697**					
Prep Date:		Analysis Date:	**12/21/2012**	SeqNo:	**223648**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	80	120			
Toluene	21	1.0	20.00	0	104	80	120			
Ethylbenzene	21	1.0	20.00	0	105	80	120			
Xylenes, Total	65	2.0	60.00	0	108	80	120			
Surr: 4-Bromofluorobenzene	24		20.00		120	69.7	152			

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Southwest Geoscience** Work Order Number: **1212837**

Received by/date: 12/19/12

Logged By: **Ashley Gallegos** 12/19/2012 11:10:00 AM

Completed By: **Ashley Gallegos** 12/19/2012 11:57:07 AM

Reviewed By: 12/19/12

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

Southwest GEOSCIENCE
Environmental & Hydrogeologic Consultants

Office Location: Aztec, NM
Project Manager: K. Summers

Laboratory: Hall
Address: ABQ
Contact: Andy Freeman
Phone:
PO/SO #: 0410003

Sampler's Name: Aaron Bentley
Sampler's Signature: Aaron Bentley

Proj. No.: 0410003
Project Name: K-51 Pipeline Release

ANALYSIS REQUESTED: BTEX 8021B; TPH GRO/DRO 8015

Lab use only
Due Date:

Temp. of coolers when received (C°): 1.0

1	2	3	4	5

Page 1 of 2

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No/Type of Containers: VOA	A/G 1 Lt.	250 ml	P/O	BTEX 8021B	TPH GRO/DRO 8015	Lab Sample ID (Lab Use Only)
W	12/17/12	1600		✓	MW-1			5				X	X	1212837-001
		1330		✓	MW-2									-002
		1350		✓	MW-3									-003
		1425		✓	MW-4									-004
		1445		✓	MW-11									-005
		1405		✓	MW-12									-006
		1315		✓	MW-13									-007
		1540		✓	MW-14									-008
		1210		✓	MW-16									-009
		1245		✓	MW-17									-010

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

Relinquished by (Signature)	Date	Time	Received by: (Signature)	Date	Time
Aaron Bentley	12/18	0650		12/18/12	0650
	12/18/12	1455	Christine Walters	12/18/12	1455
Christine Walters	12/18/12	1757		12/19/12	1110

NOTES:

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

Southwest GEOSCIENCE
Environmental & Hydrogeologic Consultants

Office Location: Aztec, NM
Project Manager: K. Summers

Laboratory: Hall
Address: ABQ
Contact: Andy Freeman
Phone:
PO/SO #: 0410003

Lab use only
Due Date:
Temp. of coolers when received (C°): 1.0
1 | 2 | 3 | 4 | 5
Page 2 of 2

Sampler's Name: Aaron Bentley
Sampler's Signature: [signature]

Proj. No.: 0410003
Project Name: K-51 Pipeline Release

ANALYSIS REQUESTED: BTEX 8021B; TPH GRO/DRO 8015

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	P/O	BTEX 8021B	TPH GRO/DRO 8015	Lab Sample ID (Lab Use Only)
W	12/17/12	1510		✓	MW-18			5				X	X	1212837-011
↓	↓	1620		✓	MW-19			↓				↓	↓	-012
↓	↓	1640		✓	MW-20			↓				↓	↓	-013

NFS

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

Relinquished by (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	12/18	0650	[signature]	12/18/12	0650
[signature]	12/18/12	1455	Christie Walters	12/18/12	1455
Christie Walters	12/18/12	1757	[signature]	12/19/12	11:10

NOTES:

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