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GWMR

09 / 28 / 2010

Enterprise Products

ENTERPRISE PRODUCTS PARTNERS L.P.
ENTERPRISE PRODUCTS GP, LLC
(General Partner)

ENTERPRISE PRODUCTS OPERATING LLC

September 28, 2010

Return Receipt Requested
7010 0290 0002 7763 9405

Mr. Glenn VanGonten
Environmental Bureau Chief
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Re: **Site Investigation Report**
K-51 Pipeline Release
County Road 537 Rio Arriba County, New Mexico

Enterprise Field Services, LLC (Enterprise) is submitting the enclosed *Site Investigation Report* for the Enterprise K-51 Pipeline Release. The release location is three miles east of Largo Canyon adjacent to Tapacito Creek in Sections 34 and 35 of Township 26 North and Range 6 West in Rio Arriba County, New Mexico. The objective of the site investigation was to determine the extent and magnitude of impacted soil and groundwater at the site due to the pipeline release.

On April 13, 2010 approximately 10 barrels of natural gas liquids were released from the Enterprise K-51 Pipeline. Upon discovery, emergency response actions were initiated to mitigate the source and included the over excavation of impacted soil and repair of the pipeline. During over excavation activities groundwater was encountered at approximately 7 feet below ground surface (bgs) and prevented complete removal of impacted soil. The excavation was subsequently backfilled pending further investigation. A *Release Notification and Corrective Action Form (Form C-141)* was submitted on April 26, 2010 to the New Mexico Oil Conservation Division (NMOCD) Aztec, New Mexico office. Site investigation activities were conducted in June of 2010, and included the advancement of eight (8) soil borings in the vicinity of the release location. Subsequent to advancement, four of the eight soil borings were converted to monitoring wells MW1, MW2, MW3, and MW4. Soil and groundwater samples were taken from each soil boring and monitoring well and were compared to applicable NMOCD and New Mexico Water Quality Control Commission (NMWQCC) standards. The soil sample taken from MW1 at a depth of 9-12 feet bgs located adjacent to the release location exhibited a total petroleum hydrocarbon (TPH) concentration of 2,760 milligrams per kilogram (mg/kg) and a total benzene, toluene, ethylbenzene and xylenes (BTEX) concentration of 112.3 mg/kg which exceeds the NMOCD Remediation Action Levels for TPH and BTEX. Analytical results were above NMWQCC standards for benzene in all monitoring wells.

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HOUSTON, TX 77210-4324
713.381.6500

1100 LOUISIANA STREET
HOUSTON, TX 77002-5227
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Based off of the results of the initial site investigation Enterprise plans to conduct an additional site investigation to delineate impacts to soil and groundwater. Following completion of the second site investigation, Enterprise will submit a report documenting our findings and our proposed remedial strategy. We plan to conduct this work during the fourth quarter of this year and will update the NMOCD once our schedule is finalized. Should you have any question or concerns or need additional information please contact me at (713) 381-8327 or Rodney Sartor at (713) 381-6629.

Sincerely,

Russell Gregg
Environmental Scientist

Rodney Sartor
Manager, Remediation

/bjm
Attachments

ec: Ashley Ager- LT Environmental, Inc
Rodney Sartor-Enterprise
Russell Gregg-Enterprise
Don Fernald- Enterprise

SITE INVESTIGATION REPORT

K-51 PIPELINE
COUNTY ROAD 537
T26N, R6W, SECTIONS 34 AND 35
RIO ARRIBA COUNTY, NEW MEXICO

August 9, 2010

Prepared for:

ENTERPRISE FIELD SERVICES, LLC
P.O. Box 4324
Houston, Texas 77210-4324

Prepared by:

LT ENVIRONMENTAL, INC.
2243 Main Avenue, Suite 3
Durango, Colorado 81301
(970) 385-1096

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EXECUTIVE SUMMARY

LT Environmental, Incorporated (LTE) has prepared this site investigation report for Enterprise Field Services, LLC (Enterprise) to document a subsurface investigation at the K-51 pipeline location (Site). The Site is located near Tapacito Creek, three miles east of Largo Canyon in Sections 34 and 35 of Township 26 North, Range 6 West in Rio Arriba County, New Mexico.

The scope of work for this project was to determine the extent and magnitude of soil and groundwater impacts following a pipeline release that occurred on April 13, 2010. Enterprise excavated impacted soils from the area immediately surrounding the pipeline release, but recharge of shallow groundwater within the excavation at approximately 7 feet below ground surface (bgs) prevented complete removal of affected soil. The excavation was backfilled, and additional investigation was recommended.

LTE used a Geoprobe™ 6620-DT track-mounted rig to complete eight boreholes and install four groundwater monitoring wells. A geologist described soil characteristics and field screened continuous cores collected in an acetate liner. The geologist also collected soil samples for laboratory analysis to document impacts to soil. Four boreholes were converted to groundwater monitoring wells, which were developed and sampled for laboratory analysis.

Results suggest that impacted soil remains in place near the pipeline at depths between 8 feet and 12 feet bgs, but impacts to soil are not extensive vertically. A clay layer occurs at approximately 8 feet bgs and limits the vertical migration of contaminants. Hydrocarbon impacted soil was not observed greater than 30 feet north or south of the pipeline. Shallow groundwater has been impacted and migration of dissolved-phase contaminants is likely to affect the soil smear zone laterally over time. Groundwater sampled from each of the four monitoring wells contains concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX) above New Mexico Water Quality Control Commission (NMWQCC) standards. LTE recommends installation and sampling of additional monitoring wells in order to evaluate the most effective remediation strategy for this remote site.

SECTION 1.0

INTRODUCTION

1.1 SITE DESCRIPTION

The K-51 pipeline location (Site) is operated by Enterprise Field Services, LLC (Enterprise). It is located approximately three miles east of Largo Canyon adjacent to Tapacito Creek in Sections 34 and 35 of Township 26 North and Range 6 West in Rio Arriba County, New Mexico (Figure 1). The K-51 pipeline is a buried natural gas gathering pipeline. The Site is approximately 38 miles down Largo Canyon from the town of Blanco, New Mexico.

1.2 SITE HISTORY

On April 13, 2010, approximately 10 barrels of natural gas liquids were released from the pipeline at the Site. Internal corrosion of the pipeline is suspected to have caused the release. Upon discovery, emergency response actions were initiated to mitigate the source of the release and remove visibly affected soils and recover free liquids. Groundwater pooling within the excavation was removed with a vacuum truck for transport to a disposal facility.

Souder, Miller and Associates were retained by Enterprise to collect confirmation soil samples from the excavation. The samples were collected on April 21, 2010, from the north, south, east, and west walls of the excavation. Laboratory results indicated the soils left in place on the north wall of the excavation contained concentrations of total petroleum hydrocarbons (TPH) that exceed New Mexico Oil Conservation Division (NMOCD) standards for soils (Table 1).

During excavation activities, groundwater was encountered at 7 feet bgs. A grab sample of groundwater in the excavation contained concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX) in excess of the New Mexico Water Quality Control Commission (NMWQCC) standards (Table 2). Groundwater was removed with a vacuum truck and disposed of at an NMOCD-approved facility, but continuous recharge of groundwater prevented additional soil removal. The excavation was backfilled pending further investigation and remedial actions. On April 26, 2010, a Release Notification and Corrective Action Form (Form C-141) was submitted to the Aztec, New Mexico field office of the NMOCD, which has regulatory authority over the Site.

1.3 SCOPE OF WORK

The purpose of the site investigation was to determine the extent and magnitude of impacted soil and groundwater at the Site. The scope of work included soil borings, field screening and soil sampling, and monitoring well installation.

SECTION 2.0

SITE INVESTIGATION

2.1 SOIL BORINGS

Prior to conducting field activities, LTE notified New Mexico One-Call. All buried utilities were clearly marked with spray paint or flags. Additionally, Enterprise representatives were present at the Site during the course of the work to ensure all buried lines had been marked and appropriate offsets were employed when siting borehole locations.

Eight boreholes were drilled with a Geoprobe™ 6620-DT track-mounted rig on June 8, 2010. LTE provided a geologist trained in conducting soil and groundwater investigations to oversee drilling activities at the Site. The geologist described continuous samples and determined which soil samples were to be retained for submittal to the laboratory for analysis. The samples were described in a field notebook and field screened with a photo ionization detector (PID) with a 10.6 electron-volt lamp according to NMOCD headspace techniques. Lithologic logs are included in Appendix A. Locations of soil borings and monitoring wells are shown on Figure 2.

All down-hole drilling equipment was thoroughly decontaminated prior to each use. Boreholes that were not converted to monitoring wells were grouted upon completion. Investigation derived waste, comprised of soil cuttings, was placed in drums for offsite disposal. The drums were delivered to Enterprise's Largo Compressor Station where they were picked up by Envirotech, Inc. and transported to Envirotech's landfarm near Hilltop, New Mexico.

The Site is located near Tapacito Creek, which is a tributary of Largo Canyon. Regional topography consists of mesas dissected by deep narrow canyons and arroyos. The more resistant cliff-forming sandstones of the San Jose Formation cap the interbedded siltstones, shales, and sandstones of the Nacimiento Formation. Accumulations of talus and eroded sands at the base of canyon walls form steep to gentle slopes that transition into flat-bottomed arroyos within the canyons. Deposits of Quaternary alluvial and aeolian sands occur prominently near the surface of streams and washes, such as Tapacito Creek. Site-specific geology is identified as Quaternary alluvium consisting of unconsolidated silty sands overlying clays that were most likely formed by fluvial processes in a flood plain environment.

Subsurface geology consists of a brown, unconsolidated silty sand that is 6 feet to 14 feet thick and contains minor gravel content near the surface. The silty sand is saturated near its base and overlies a clay unit that is 4 feet to 7 feet thick. The clay is brownish gray in color and varies from a true fat clay to a clayey sand. The high plasticity clays were observed in borings MW1, MW3, BH4, and BH8. The clay is often interrupted by a thin (1 foot to 2 feet thick) silty sand layer. A silty sand also exists beneath the clay.

Discoloration and hydrocarbon odor, when observed, were limited to the saturated portions of the upper silty sand.

2.2 GROUNDWATER MONITORING WELL INSTALLATION

Four of the eight boreholes were converted to groundwater monitoring wells. Groundwater monitoring wells were constructed of 2-inch diameter schedule 40 polyvinyl chloride (PVC) and included 10 feet of 0.01-inch machine slotted flush-threaded PVC well screen. At least five feet of screen was set beneath the water table and five feet above to allow for seasonal fluctuations. A clean 10-20 grade silica sand gravel pack was placed from the bottom of the boring to two feet above the top of the screen. Two feet of 3/8-inch bentonite chips were set above the gravel pack to the surface. Wells were completed with a locking protective steel casing. Well completion diagrams are included with the lithologic logs in Appendix A.

At least 24 hours after installation of monitoring wells, each new well was developed utilizing a clean, disposable PVC bailer. LTE purged fluid until the pH, specific conductivity, and temperature stabilized and turbidity was reduced to the greatest extent possible. The wells were allowed to recharge a minimum of 24 hours prior to collection of groundwater samples.

2.3 SAMPLING PROGRAM

Soil samples for laboratory analysis were collected from the bottom of each soil boring and from sections of core containing the highest field screening results. Samples were placed in jars supplied by the laboratory, stored on ice, and shipped to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico following strict chain-of-custody procedures. HEAL analyzed the soil samples for BTEX by U.S. Environmental Protection Agency (USEPA) Method 8021B, as well as gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO) by USEPA Method 8015B.

On June 21, 2010, LTE sampled groundwater from the groundwater monitoring wells. Depth to water and total depth of the wells were measured with a Keck® oil-water interface probe. Presence of any phase-separated hydrocarbon (PSH) was also investigated using the interface probe. The interface probe was decontaminated with Alconox™ soap and rinsed with de-ionized water prior to each measurement. At least three casing volumes of water were removed from each well while pH, specific conductivity, and temperature were monitored for stabilization. Once these parameters stabilized, the wells were sampled. Field parameters were recorded on the forms included in Appendix B.

Groundwater samples were collected by filling three 40 milliliter (ml) glass vials provided by the laboratory. Sample vials were filled as close to the top as possible to minimize headspace. Additionally, sample vials were pre-preserved by the laboratory

with mercuric chloride to prevent biodegradation. The groundwater samples were shipped on ice to HEAL and analyzed for BTEX according to USEPA Method 8021B.

2.4 SOIL SAMPLING RESULTS

Soil sampling results are presented in Table 1 and copies of the laboratory reports can be found in Appendix C. Figure 3 also shows soil laboratory results for each borehole. Soil samples analyzed by the laboratory correlate well with the field screening data. The highest levels of impact in soils at the Site were noted in boring BH1 from 8 feet to 9 feet bgs (Figure 3). This depth is just above a clay layer encountered at a depth of approximately 9 feet to 12 feet bgs. Boring BH1 is located immediately adjacent to the pipeline release location. Within boring BH1, the concentration of TPH was 2,760 milligrams per kilogram (mg/kg), which exceeds the NMOCD standard of 100 mg/kg. Additionally at this location, BTEX was detected at a level of 112.3 mg/kg, which exceeds the NMOCD recommended remediation action level of 50 mg/kg. BH4, located in the estimated downgradient direction of BH1 and the release contained up to 120 mg/kg of TPH. Soil samples collected from BH2, BH3, BH5, BH6, and BH8 did not contain any parameters in excess of NMOCD standards.

2.5 GROUNDWATER SAMPLING RESULTS

Laboratory results from groundwater sampling are listed in Table 2 and indicate that all wells contain BTEX concentrations above NMWQCC standards. Results are shown on a site map in Figure 4. The estimated groundwater flow direction is to the northwest toward Tapacito Creek. Groundwater sampled from monitoring well MW1 indicates a concentration of 8,400 micrograms per liter (ug/L) of benzene and 14,460 ug/L of total BTEX. Monitoring well MW4, located in the estimated upgradient direction of the release, had a benzene concentration of 3,600 ug/L and a total BTEX concentration of 20,800 ug/L. Monitoring well MW2 was above NWQCC standards for benzene at 200 ug/L benzene. Monitoring well MW3 exceeded NMWQCC standards for benzene and xylenes and contained a total BTEX concentration of 1,769 ug/L.

SECTION 3.0

SUMMARY AND CONCLUSIONS

Impacted soils located in the immediate vicinity of the K-51 pipeline release were excavated upon discovery. However, soil sampling data gathered during this investigation suggest impacted soil occurring between 8 feet and 12 feet bgs remain in place. Soils identified in MW1, which is directly adjacent to the release location, contain the highest concentrations of TPH and BTEX, while lower concentrations of TPH and BTEX in soils were detected in BH2, BH4, and MW4. The only location that exceeded NMOCD soil standards for TPH and BTEX was in MW1 at approximately 8 feet to 9 feet bgs. No impacts to soils were observed from boreholes that were greater than 35 feet away from the release location (MW2, MW5, BH7, and BH8).

Groundwater at the Site exceeds NMWQCC standards in all four groundwater monitoring wells. Two of the monitoring wells (MW2 and MW3) are estimated to be downgradient of the release; one is in the source area (MW1) and one is estimated to be upgradient (MW4). The groundwater appears to be present in the horizon above the tightest clays or near the top of a clayey sand unit when the tight clays are absent. The presence of elevated BTEX concentrations in the groundwater samples and the absence in soil samples suggests BTEX migration is occurring along the water table.

Due to the presence of soil impact in excess of the NMOCD standards in the vicinity of MW1, LTE recommends additional soil remediation in this area followed by confirmation soil samples. Additionally, groundwater impacts must be further defined. LTE recommends a preliminary top of casing elevation survey to measure groundwater flow direction to be followed by installation of new monitoring wells. Following installation of the new wells, a professional survey of well elevations should be conducted. Once groundwater impacts are completely delineated, the most effective remediation options can be evaluated.

FIGURES

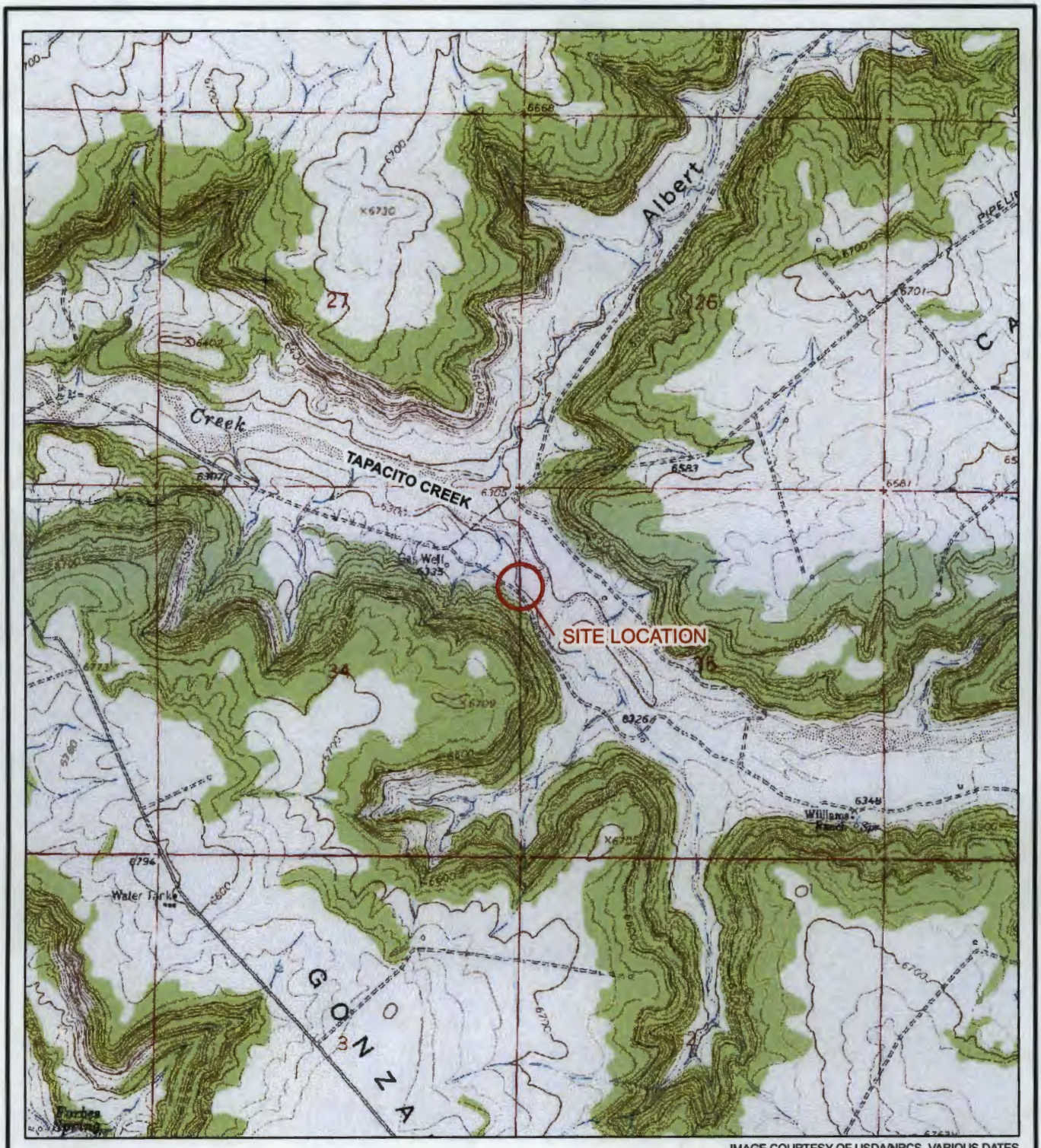

IMAGE COURTESY OF USDA/NRCS, VARIOUS DATES

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

FIGURE 1
SITE LOCATION MAP
SEC 34 AND 35-T26N-R6W, NMPM
K-51 PIPELINE
RIO ARRIBA COUNTY, NEW MEXICO
ENTERPRISE FIELD SERVICES

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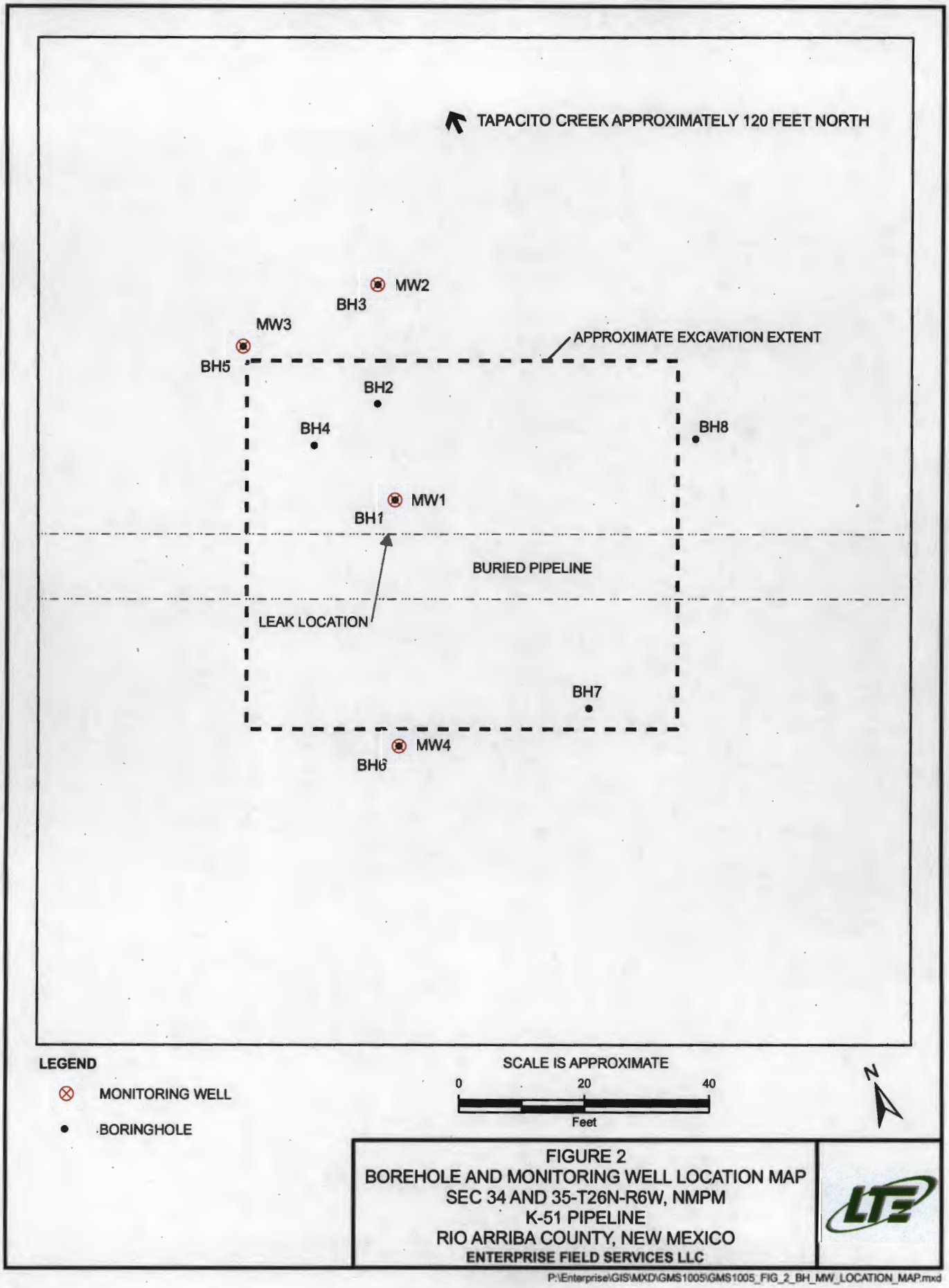

FIGURE 2
BOREHOLE AND MONITORING WELL LOCATION MAP
SEC 34 AND 35-T26N-R6W, NMPM
K-51 PIPELINE
RIO ARRIBA COUNTY, NEW MEXICO
ENTERPRISE FIELD SERVICES LLC

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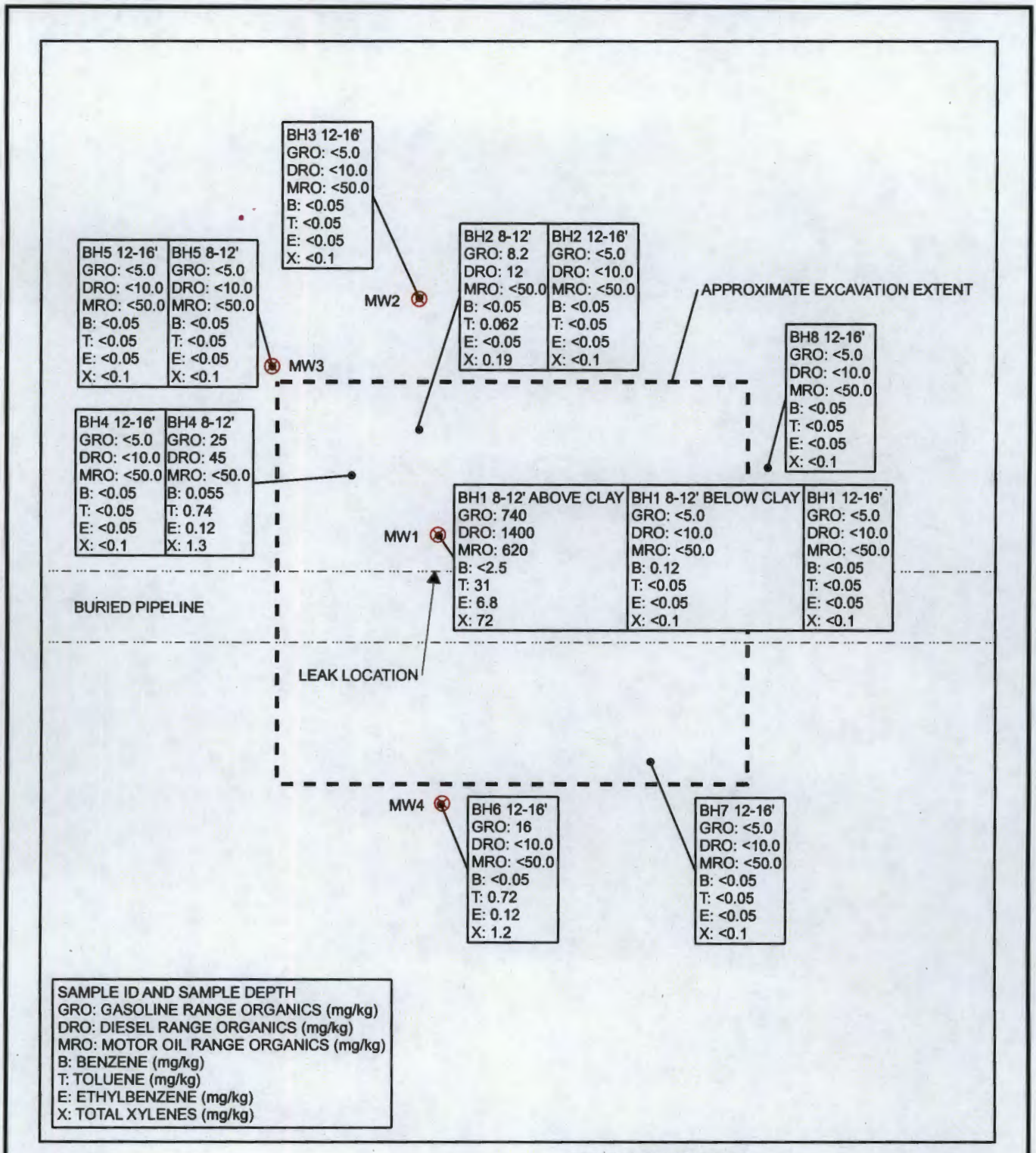


LEGEND

⊗ MONITORING WELL

• BORINGHOLE

NOTE: ALL SAMPLES COLLECTED ON 6/8/2010

SCALE IS APPROXIMATE

0 20 40

Feet

N

FIGURE 3
SOIL ANALYTICAL RESULTS MAP
SEC 34 AND 35-T26N-R6W, NMPM
K-51 PIPELINE
RIO ARRIBA COUNTY, NEW MEXICO
ENTERPRISE FIELD SERVICES LLC

P:\Enterprise\GIS\MXD\GMS1005\GMS1005_FIG_3_SOIL_RESULTS_MAP.mxd

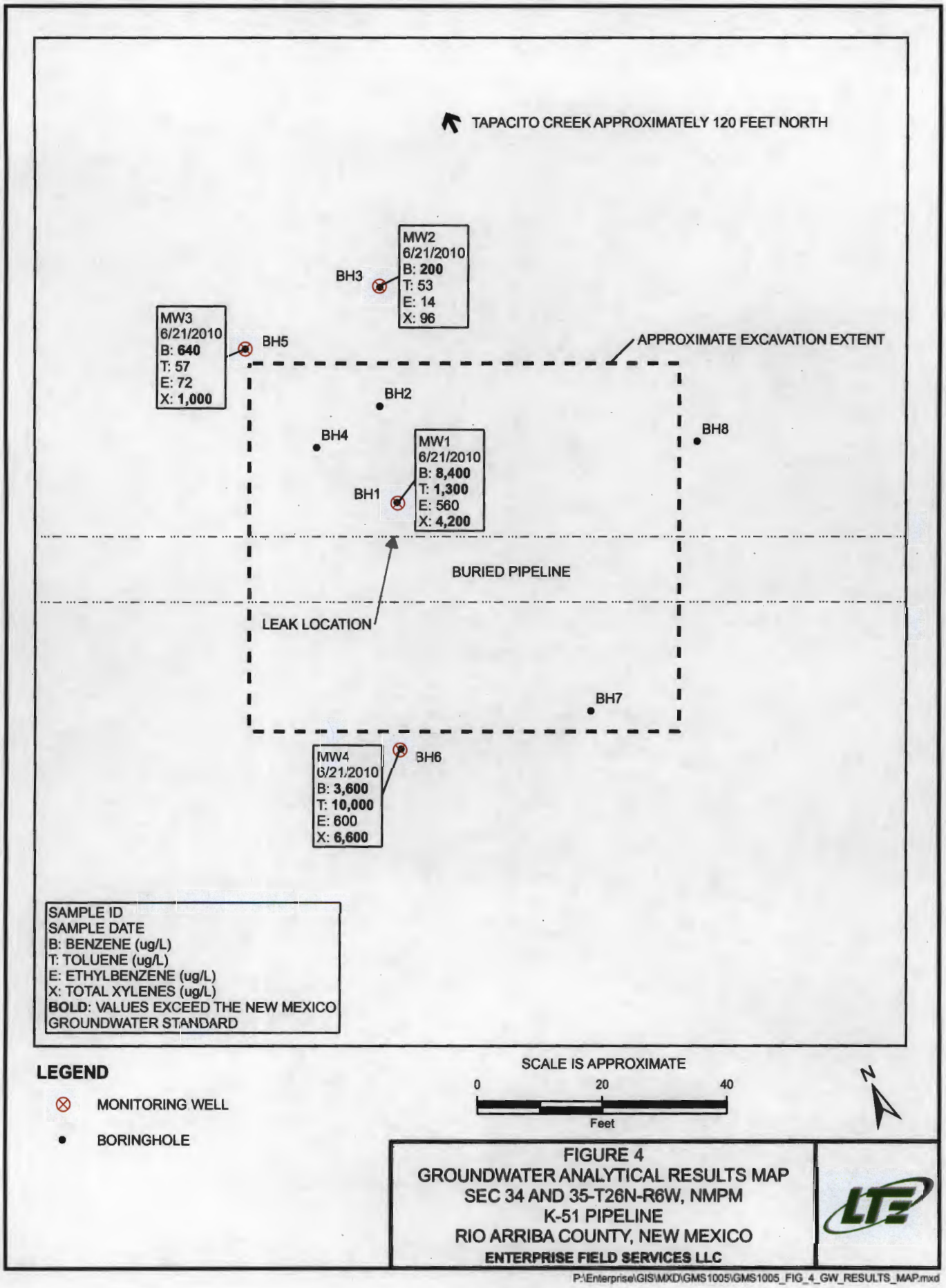


FIGURE 4
GROUNDWATER ANALYTICAL RESULTS MAP
SEC 34 AND 35-T26N-R6W, NMPM
K-51 PIPELINE
RIO ARRIBA COUNTY, NEW MEXICO
ENTERPRISE FIELD SERVICES LLC

P:\Enterprise\GIS\MXD\GMS1005\GMS1005_FIG_4_GW_RESULTS_MAP.mxd

TABLES

TABLE 1

SOIL SAMPLING ANALYTICAL RESULTS
K-51 PIPELINE
ENTERPRISE FIELD SERVICES LLC

Sample ID (Depth in feet)	Sample Location	Date Sampled	Field Headspace Reading (ppm)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)
North Wall	Excavation	4/21/2010		<5.0	49	71	**120-125**	<0.050	<0.050	<0.050	<0.10	0-0.25
South Wall	Excavation	4/23/2010		<5.0	10	68	78-83	<0.050	<0.050	<0.050	<0.10	0-0.25
East Wall	Excavation	4/23/2010		<5.0	26	68	94-99	<0.050	<0.050	<0.050	<0.10	0-0.25
West Wall	Excavation	4/24/2010		<5.0	<10	<50	0-65	<0.050	<0.050	<0.050	<0.10	0-0.25
BH1 8-12' Above Clay	BH1	6/8/2010	1,652	740	1400	620	**2760**	<2.5	31	6.8	72	**109.8 - 112.3**
BH1 8-12' Below Clay	BH1	6/8/2010	39	<5.0	<10.0	<50.0	0 - 65	0.12	<0.05	<0.05	<0.1	0.12-0.32
BH1 12-16'	BH1	6/8/2010	2	<5.0	<10.0	<50.0	0 - 65	<0.05	<0.05	<0.05	<0.1	0 - 0.25
BH2 8-12'	BH2	6/8/2010	37	8.5	12	<50.0	20.2 - 70.2	<0.05	0.062	<0.05	0.19	0.252 - 0.352
BH2 12-16'	BH2	6/8/2010	0	<5.0	<10.0	<50.0	0 - 65	<0.05	<0.05	<0.05	<0.1	0 - 0.25
BH3 12-16'	BH3	6/8/2010	0	<5.0	<10.0	<50.0	0 - 65	<0.05	<0.05	<0.05	<0.1	0 - 0.25
BH4 8-12'	BH4	6/8/2010	771	25	45	<50.0	**70 - 120**	0.055	**0.74**	0.12	1.3	2.215
BH4 12-16'	BH4	6/8/2010	1	<5.0	<10.0	<50.0	0 - 65	<0.05	<0.05	<0.05	<0.1	0 - 0.25
BH5 8-12'	BH5	6/8/2010	6	<5.0	<10.0	<50.0	0 - 65	<0.05	<0.05	<0.05	<0.1	0 - 0.25
BH5 12-16'	BH5	6/8/2010	0	<5.0	<10.0	<50.0	0 - 65	<0.05	<0.05	<0.05	<0.1	0 - 0.25
BH6 12-16'	BH6	6/8/2010	17	16	<10.0	<50.0	16-76	<0.05	0.72	0.12	1.2	2.04 - 2.09
BH7 12-16'	BH7	6/8/2010	0	<5.0	<10.0	<50.0	0 - 65	<0.05	<0.05	<0.05	<0.1	0 - 0.25
BH8 12-16'	BH8	6/8/2010	0	<5.0	<10.0	<50.0	0 - 65	<0.05	<0.05	<0.05	<0.1	0 - 0.25
NMOCD Standard							**100**	**10**				**50**

Notes:
ppm - parts per million
GRO - gasoline range organics
DRO - diesel range organics
MRO - motor oil range organics
TPH - total petroleum hydrocarbons
BTEX - benzene, toluene, ethylbenzene, and total xylenes
mg/kg - milligrams per kilogram
NMOCD - New Mexico Oil Conservation Commission
TPH analyzed by EPA Modified Method 8015
BTEX analyzed by EPA Method 8021.
< indicates result is less than the stated laboratory method detection limit
Bold font indicates values exceeding NMOCD standards

TABLE 2

GROUNDWATER SAMPLING LABORATORY ANALYTICAL RESULTS
K-51 PIPELINE
ENTERPRISE FIELD SERVICES LLC

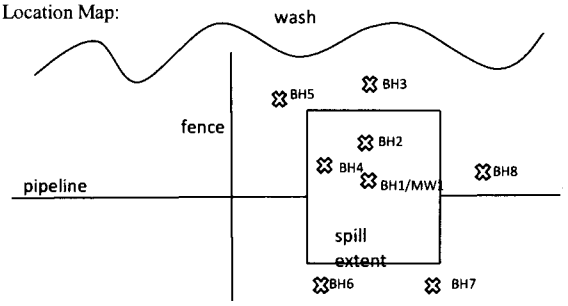
Sample ID	Date Sampled	Depth to Water (feet btoc)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)
Groundwater from Excavation	4/21/10	NA	**7,000**	**13,000**	**540**	**5,200**	25,740
MW1	6/21/2010	12.02	**8,400**	**1,300**	560	**4,200**	14,460
MW2	6/21/2010	10.93	**200**	53	14	96	363
MW3	6/21/2010	11.55	**640**	57	72	**1,000**	1,769
MW4	6/21/2010	12.16	**3,600**	**10,000**	600	**6,600**	20,800
NMWQCC Standard			**10**	**750**	**750**	**620**	

Notes:
btoc - below top of casing
ug/L - micrograms per liter
BTEX - benzene, toluene, ethylbenzene, and total xylenes
NA - not applicable
NMWQCC - New Mexico Water Quality Control Commission
BTEX analyzed by EPA Method 8021.
Bold font indicates values exceeding NMWQCC standards

APPENDIX A

LITHOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

Location Map:



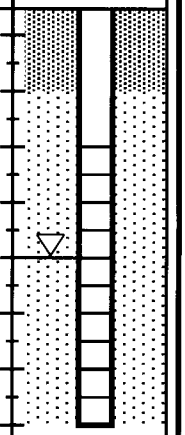
Compliance ⁄ Engineering ⁄ Remediation
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

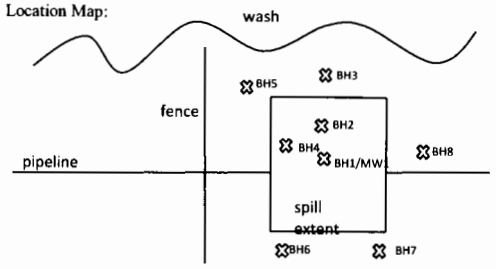
Boring/Well Number: BH1/MW1		Project: K-51 Pipeline	
Date: 6/8/2010		Project Number: GMS1005	
Logged By: TL		Drilled By: Earth Worx	
Elevation:	Detector: PID	Drilling Method: Geoprobe	Sampling Method: Push Core
Gravel Pack: 10/20 Colorado Silica Sand		Seal: 3/8" Bentonite	Grout: 3/8" Bentonite
Casing Type: PVC		Diameter: 2" Length: 5'	Hole Diameter: 2"
Screen Type: PVC Slot: 0.01"		Diameter: 2" Length: 10'	Total Depth: 14'
			Depth to Liquid:
			Depth to Water: 8'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks
	Dry	0	no		0	0 4'	SM	Brown (7.5YR 4/3) silty sand. med-cr. sand grains, unconsolidated, sub rounded.
					2			
					4			
	Dry	0	no		6	4 8'	SM	Brown (7.5YR 4/3) silty sand. med-cr. sand grains, unconsolidated, sub rounded.
	Damp: 6-7.5'			BH 1 8-12' above clay				
		1652 (above clay) staining			8	8 12'	SM 8-9'	Brown (7.5 YR 4/3) silty sand, med. sand gr. Sub rounded,
	Sat: 8'							
		39 (below clay) no staining			10		CH 9-11'	Brownish gray (7.5 YR 4/1) tight clay, high plasticity
				BH 1 8-12' below clay			SM 11-12'	Brown (7.5 YR 4/3) silty sand, med. sand gr
					12	12 16'	SM 12-13.75'	Brown (7.5 YR 4/3) silty sand, fine sand gr w/ minor clay, 90% sand, 10% clay
				BH 1 12-16'				
					14		CH 13.75-16'	Brownish gray (7.5 YR 4/1) tight clay, high plasticity
	Sat	2.3	slight		16			
					18			
					20			
					22			
					24			
					26			
					28			
					30			

Well Completion



Location Map:



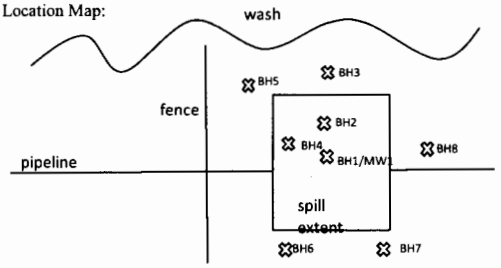
Compliance ▪ Engineering ▪ Remediation
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-2		Project: K-51 Pipeline	
Date: 6/8/2010		Project Number: GMS1005	
Logged By: TL		Drilled By: Earth Worx	
Elevation:	Detector: PID	Drilling Method: Geoprobe	Sampling Method: Push Core
Gravel Pack: n/a		Seal: n/a	Grout: n/a
Casing Type: n/a		Diameter: n/a	Length: n/a
Screen Type: n/a	Slot:	Diameter: n/a	Length: n/a
Hole Diameter:		Depth to Liquid:	
Total Depth: n/a		Depth to Water: 8'	

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	0	no		0	0 4'	SM 0-1'	Brown (7.5YR 4/3) silty sand; 20% gravel, 80% sand, unconsolidated, med-cr. Sand, sub-rounded	
					2		SM 1-4'	Brown (7.5 YR 4/3) silty sand, 20% silt, 80% fine sand, unconsolidated, sub rounded	
	Damp	0	no		4	4 8'	SM 4-8'	Brown (7.5 YR 4/3) silty sand, semi-consolidated, 80% fine sand, 20% silt, sub rounded	
					6				
	Sat: 8'	37	yes		8	8 12'	SM 8-8.5'	Brown (7.5 YR 4/3) silty sand, semi-consolidated, 80% fine sand, 20% silt, sub rounded	▽
				BH2 8-12'	10		SC 8.5-12'	Brownish gray (5 YR 5/1) clayey sand, low plascitity	
	Sat	0	no		12	12 16'	SC 12-13.75	Brownish gray (5 YR 5/1) clayey sand, low plascitity	
					14		SM 13.75-16	Brownish gray (5YR 5/1) silty sand, 80% fine sand, 20% silt	
				BH2 12-16'	16				
					18				
					20				
					22				
					24				
					26				
					28				
					30				

Location Map:



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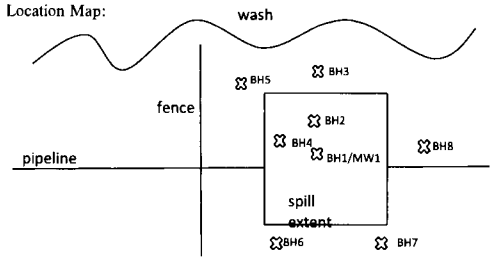
BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH3/MW2		Project: K-51 Pipeline	
Date: 6/8/2010		Project Number: GMS1005	
Logged By: TL		Drilled By: Earth Worx	
Elevation:	Detector: PID	Drilling Method: Geoprobe	Sampling Method: Push Core
Gravel Pack: 10/20 Colorado Silica Sand		Seal: 3/8" Bentonite	Grout: 3/8" Bentonite
Casing Type: PVC		Diameter: 2" Length: 5'	Hole Diameter: / Depth to Liquid:
Screen Type: PVC	Slot: 0.01"	Diameter: 2" Length: 10'	Total Depth: 15' / Depth to Water: 8'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					0	0 4'	SP 0-0.5'	(10 YR 7/1) light gray gravelly sand, unconsolidated, 10% gravel, 30% cr-sand, 60% med sand grains - grading into 80% fine sand, 20% silt	
	Dry 0-0.5'								
	Damp 0.5-4'				2		SM 0.5-4'	(10 YR 7/1) light gray silty sand, unconsolidated, 40% cr, 60% med	
	Damp 4-6	0	no		4	4 8'	SM 4-8'	(10 YR 7/1) light gray silty sand, unconsolidated, 40% cr-sand, 60% med sand grains - grading into 80% fine sand, 20%	
	Damp 6-8'				6				
	Sat: 8'	0	no		8	8 12'	SM 8-8.25'	silty sand - same as above	
							CH 8.25-10'	(10 YR 3/3) Dark brown, tight clay, high plasticity	
					10		SP 10-12'	(10 YR 7/1) light gray sand, poorly sorted with minor gravel, 90% fine, 10% gravel	
	Sat	0	no		12	12 16'	SP 12-14'	SP, light gray sand, same as above	
							CH 14-15.5'	7.5 YR 5/1 brownish gray, clay with minor sand, low plasticity	
					14		SM 15.5-16'	7.5 YR 4/3 brown silty sand, 80% fine sand, 20% silt, sub rounded	
				BH3 12-16'					
	Sat	0	no		16				
					18				
					20				
					22				
					24				
					26				
					28				
					30				

Location Map:



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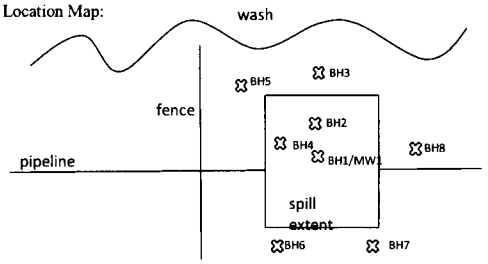
BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-4		Project: K-51 Pipeline	
Date: 6/8/2010		Project Number: GMS1005	
Logged By: TL		Drilled By: Earth Worx	
Elevation:	Detector: PID	Drilling Method: Geoprobe	Sampling Method: Push Core
Gravel Pack: n/a		Seal: n/a	Grout:
Casing Type: n/a	Diameter: n/a	Length: n/a	Hole Diameter: / Depth to Liquid:
Screen Type: n/a	Slot:	Diameter: n/a	Length: n/a / Total Depth: n/a / Depth to Water: 11.5'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry				0	0 4'	SM	Brown (7.5 YR 4/3) silty sand, med. sand gr, poorly sorted, unconsolidated, sub rounded	
	Damp 1.5-4'				2				
	Damp	0	no		4	4 8'	SM	Brown (7.5 YR 4/3) silty sand, med. Sand gr. Poorly sorted unconsolidated, sub rounded	
					6				
	Damp: 8-11.5'	0	no		8	8 12'	SM	Brown (7.5 YR 4/3) silty sand, med. Sand gr. Poorly sorted unconsolidated, sub-rounded	
					10				
	Sat: 11.5'	1770 (above clay)	minor		12	12 16'	SC 12-15.5	minor HC odor just at 11.5' 7.5 YR 5/1 brownish gray sandy clay with med. sand, low plasticity	▽
		52 (below clay)	no	BH4 8-12'	14				
	Sat	0.7	no	BH4 12-16	16		CH 15.5-16	7.5 YR 5/1 brownish gray fat clay, high plasticity	
					18				
					20				
					22				
					24				
					26				
					28				
					30				

Location Map:



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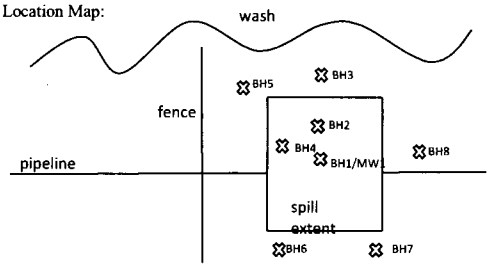
BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-5/MW-3			Project: K-51 Pipeline
Date: 6/8/2010			Project Number: GMS1005
Logged By: TL			Drilled By: Earth Worx
Elevation: 6314'	Detector: PID	Drilling Method: Geoprobe	Sampling Method: Push Core
Gravel Pack: 10/20 Colorado Silica Sand		Seal: 3/8" Bentonite	Grout: 3/8" Bentonite
Casing Type: PVC		Diameter: 2" Length: 5'	Hole Diameter:
Screen Type: PVC	Slot: 0.01"	Diameter: 2" Length: 10'	Total Depth: 15'
			Depth to Liquid:
			Depth to Water: 12'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					0	0 4'	SP 0-1'	7.5 YR 4/3 brown gravelly sand, unconsolidated, 40% cr. sand, 60% med. sand	
	Dry 0-2'								
	Dry				2		SM 1-4'	grading to 80% fine sand, 20% silt, poorly-sorted	
	Damp 2-4	0	no		4	4 8'	SM	7.5 YR 4/3 brown sand, 80% fine sand, 20% silt, unconsolidated med. sand	
					6				
	Damp	0	no		8	8 12'	SM	7.5 YR 4/3 brown sand, 80% fine sand, 20% silt, unconsolidated med. sand	
				BH5 8-12'					
					10				
	Sat	5.7	no		12	12 16'	SM 12-14'	7.5 YR 4/3 brown sand, 80% fine sand, 20% silt, unconsolidated med. sand	
					14		SC 14-16'	7.5 YR 5/1 brownish gray clayey sand; low plasticity, fine sand grains	
				BH5 12-16'					
	Sat	0	no		16				
					18				
					20				
					22				
					24				
					26				
					28				
					30				

Location Map:



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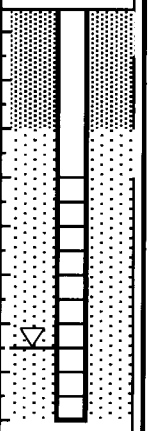
BORING LOG/MONITORING WELL COMPLETION DIAGRAM

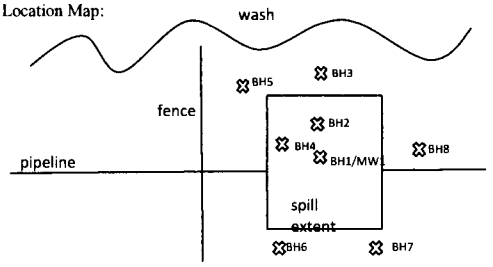
Boring/Well Number: BH-6/MW-4		Project: K-51 Pipeline	
Date: 6/8/2010		Project Number: GMS1005	
Logged By: TL		Drilled By: Earth Worx	
Elevation: 6314'	Detector: PID	Drilling Method: Geoprobe	Sampling Method: Push Core
Gravel Pack: 10/20 Colorado Silica Sand		Seal: 3/8" Bentonite	Grout: 3/8" Bentonite
Casing Type: PVC		Diameter: 2"	Length: 5'
Screen Type: PVC	Slot: 0.01"	Diameter: 2"	Length: 5'
Hole Diameter:		Total Depth: 15'	Depth to Liquid: / Depth to Water: 13'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks
	Dry 0-0.5'				0	0 4'	SP 0-0.5	Brown (7.5 YR 4/2) gravelly sand, 40% cr. Sand, 60% med. Sand
							SM 0.5-4'	grading into silty sand, 80% fine sand, 20 % silt, poorly-sorted
					2			unconsolidated
	Damp 0.5-4'							
		0	N		4	4 8'	SM 4-5.25'	Brown (7.5 YR 4/3) silty sand, 80% fine sand, 20% silty, poorly sorted
	Damp							same as above clayey sand, high plasticity, fine sand grains
					6		SC 5.25-8'	Light brown (7.5 YR 7/1) clayey sand, high plasticity, fine sand grains
					8	8 12'	SC	Light brown (7.5 YR 7/1) clayey sand, high plasticity, fine sand grains
	Damp							
					10			
		1.3	N		12	12 16'	SC 12-13.75	Light brown (7.5 YR 7/1) clayey sand, high plasticity fine sand grains
	Sat 13'			BH6 12-16'			SM 13.75-1	Brown (7.5 YR 4/3) silty sand, poorly sorted, unconsolidated, 80% fine
					14			sand, 20% silt
	Sat	16.8	N		16			
					18			
					20			
					22			
					24			
					26			
					28			
					30			

Well Completion



Location Map:



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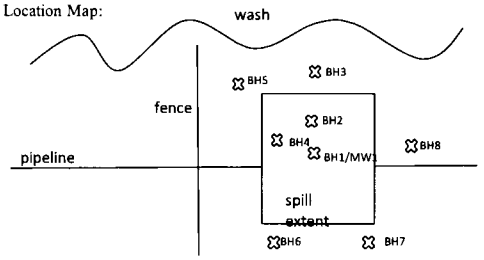
BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-7			Project: K-51 Pipeline
Date: 6/8/2010			Project Number: GMS1005
Logged By: TL			Drilled By: Earth Worx
Elevation: 6314'	Detector: PID	Drilling Method: Geoprobe	Sampling Method: Push Core
Gravel Pack: n/a		Seal: n/a	Grout:
Casing Type: n/a		Diameter: n/a	Length: n/a	Hole Diameter:	Depth to Liquid:
Screen Type: n/a	Slot:	Diameter: n/a	Length: n/a	Total Depth: n/a	Depth to Water: 12.75'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					0	0 4'	SP	7.5 YR 4/3 brown silty sand w/minor gravel, 80% fine sand, 15% silt, 5% gravel	
	Dry 0-0.75'				2				
	Damp 0.75-4'	0	no		4	4 8'	SM	7.5 YR 4/3 brown silty sand, 80% fine sand, 20% silt, unconsolidated sub rounded	
					6				
	Damp	0	no		8	8 12'	SM 8-8.5'	7.5 YR 4/3 brown silty sand, 80% fine sand, 20% silt, unconsolidated sub rounded	
					10		SC 8.5-12'	7.5 YR 5/1 brownish gray clayey sand; low plasticity, fine sand grains poorly sorted	
	Sat: 12.75	0	no		12	12 16'	SC	7.5 YR 5/1 brownish gray clayey sand; low plasticity, fine sand grains poorly sorted	▽
					14				
				BH7 12-16'					
	Sat	0	no		16				
					18				
					20				
					22				
					24				
					26				
					28				
					30				

Location Map:



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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-8			Project: K-51 Pipeline
Date: 6/8/2010			Project Number: GMS1005
Logged By: TL			Drilled By: Earth Worx
Elevation: 6314'	Detector: PID	Drilling Method: Geoprobe	Sampling Method: Push Core
Gravel Pack: n/a		Seal: n/a	Grout: n/a
Casing Type: n/a		Diameter: n/a Length:	Hole Diameter: / Depth to Liquid:
Screen Type: n/a	Slot:	Diameter: n/a Length:	Total Depth: n/a / Depth to Water: 8.25'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					0	0 4'	SM	Brown (7.5 YR 4/3) silty sand, minor gravel in top 7", 80% fine sand, 20% silt, poorly-sorted, unconsolidated	
	Dry 0-0.5'				2				
	Damp 0.5-4'								
		0	no		4	4 8'	SM 4-6'	Brown (7.5 YR 4/3) silty sand, minor gravel in top 7", 80% fine sand, 20% silt, poorly-sorted, unconsolidated, no gravel	
	Damp 4-8'								
					6		SC 6-8'	Brown (7.5 YR 4/3) clayey sand, high plasticity	
	Sat:8.25'	0	no		8	8 12'	SC 8-8.25'	7.5 YR 5/1 brownish gray clayey sand; low plasticity, fine sand grains	▽
							SM 8.25-9.5'	Brown (7.5 YR 4/3) silty sand, poorly sorted, unconsolidated, 80% fine sand, 20% silt	
					10				
							CH 9.5-12'	7.5 YR 5/1 brownish gray fat clay, high plasticity	
	Sat	0	no		12	12 16'	SM	Brown (7.5 YR 4/3) silty sand, poorly sorted, unconsolidated, 80% fine sand, 20% silt	
					14				
				BH8 12-16'					
	Sat	0	minor		16				
					18				
					20				
					22				
					24				
					26				
					28				
					30				

APPENDIX B

GROUNDWATER DEVELOPMENT AND SAMPLING FORMS

WELL DEVELOPMENT LOG

Project Name: K-51 Pipeline | Location: K-51 Pipeline | Well No: MW-1
Client: Enterprise | Date: 6/16/2010 | Time: 12:25
Project Manager: Ashley Ager | Sampler's Name: Brooke Herb

Measuring Point: TOC | Depth to Water: 11.93 ft | Depth to Product: 0 ft
Well Diameter: 2" | Total Depth: 17.28 ft | Product Thickness: 0 ft
Water Column Height: 5.35 ft

Sampling Method: ☐ Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other _____
☑ Bottom Valve Bailer ☐ Double Check Valve Bailer

Criteria: ☑ 3 to 5 Casing Volumes of Water Removal ☑ Stabilization of Indicator Parameters ☐ Other _____

Water Volume in Well			
Gal/ft x ft of water	Gallons	Ounces	Volume to be removed
0.16 x 5.35	0.87	111.69	2.62 gal

Time (military)	pH (su)	SC (us)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Total Vol gal	Comments/Flow Rate
12:29	7.18	3200	60.8				0.25	Slightly silty, light brown, slight odor
	7.34	3260	59.7				1.5	More silt, bailing down
	7.35	1190	64.2				2.25	less silt, clear to light brown
	7.38	3370	67.8				3.25	less silt, clear to light brown
12:52	7.39	3310	67.1				4.25	bailed dry
14:06	7.20	3280	64.1				4.75	Allowed to recharge, bailed dry again
Final:	7.2	3.28	64.1				4.75	

COMMENTS: Well bailed dry after 3.25 gallons. After almost one hour, recharged 1/2 gallon.

Instrumentation: ☑ pH Meter ☐ DO Monitor ☑ Conductivity Meter ☑ Temperature Meter ☐ Other _____

Water Disposal: Largo Compressor Station Sump

Sample ID: _____ Sample Time: _____

Analysis Requested: ☐ BTEX ☐ VOCs ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☐ Nitrate ☐ Nitrite ☐ Metals
☐ Other _____

Trip Blank: _____ Duplicate Sample: _____

WELL DEVELOPMENT LOG

Project Name: K-51 Pipeline | Location: K-51 Pipeline | Well No: MW-2
Client: Enterprise | Date: 6/16/2010 | Time: 11:30
Project Manager: Ashley Ager | Sampler's Name: Brooke Herb

Measuring Point: TOC | Depth to Water: 10.75 ft | Depth to Product: 0 ft
Well Diameter: 2" | Total Depth: 18.37 ft | Product Thickness: 0 ft
Water Column Height: 7.62 ft

Sampling Method: ☐ Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other
☑ Bottom Valve Bailer ☐ Double Check Valve Bailer

Criteria: ☑ 3 to 5 Casing Volumes of Water Removal ☑ Stabilization of Indicator Parameters ☐ Other

Water Volume in Well			
Gal/ft x ft of water	Gallons	Ounces	Volume to be removed
0.16 x 7.62	1.24	159.08	3.73 gal

Time (military)	pH (su)	SC (us)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Total Vol gal	Comments/Flow Rate
11:30	7.37	1772	59.5				0.25	light brown, slight odor
	7.53	1728	55.9				1	Dark brown, very silty
	7.72	1341	62.4				2	Bailing down
	7.79	880	65.3				2.5	less silt, bailing down
	7.86	864	63.5				3	clear, bailing down
11:50	7.88	860	63.2				3.9	bailed dry
14:04	7.77	851	62.5				4.4	Allowed to recharge, bailed dry again
Final:	7.77	851	62.5				4.4	

COMMENTS: Well bailed dry. After almost two hours, recharged 1/2 gallon.

Instrumentation: ☑ pH Meter ☐ DO Monitor ☑ Conductivity Meter ☑ Temperature Meter ☐ Other

Water Disposal: Largo Compressor Station Sump

Sample ID: _____ Sample Time: _____

Analysis Requested: ☐ BTEX ☐ VOCs ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☐ Nitrate ☐ Nitrite ☐ Metals
☐ Other

Trip Blank: _____ Duplicate Sample: _____

WELL DEVELOPMENT LOG

Project Name: K-51 Pipeline | Location: K-51 Pipeline | Well No: MW-3
Client: Enterprise | Date: 6/16/2010 | Time: 13:22
Project Manager: Ashley Ager | Sampler's Name: Brooke Herb

Measuring Point: TOC | Depth to Water: 11.43 ft | Depth to Product: 0 ft
Well Diameter: 2" | Total Depth: 17.32 ft | Product Thickness: 0 ft
Water Column Height: 5.89 ft

Sampling Method: ☐ Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other _____
☑ Bottom Valve Bailer ☐ Double Check Valve Bailer

Criteria: ☑ 3 to 5 Casing Volumes of Water Removal ☑ Stabilization of Indicator Parameters ☐ Other _____

Water Volume in Well			
Gal/ft x ft of water	Gallons	Ounces	Volume to be removed
0.16 x 5.89	0.96	122.96	2.88 gal

Time (military)	pH (su)	SC (us)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Total Vol gal	Comments/Flow Rate
13:25	7.68	1250	61.2				0.25	light brown, some silt
	7.66	1250	56.7				1.25	dark brown, high turbidity, slight
	7.72	1260	55.6				2.25	dark brown, high turbidity, slight
	7.70	1220	57.0				3.25	dark brown, high turbidity, slight
	7.74	1250	57.2				4.25	Less silt, light brown
	7.74	1210	57.0				5.25	Less silt, light brown
	7.70	1220	59.2				6.25	Less silt, light brown
	7.72	1200	57.9				7.25	low turbidity, clear
13:58	7.72	1210	57.6				8.25	low turbidity, clear
Final:	7.72	1.21	57.6				8.25	

COMMENTS:

Instrumentation: ☑ pH Meter ☐ DO Monitor ☑ Conductivity Meter ☑ Temperature Meter ☐ Other _____

Water Disposal: Largo Compressor Station Sump

Sample ID: _____ Sample Time: _____

Analysis Requested: ☐ BTEX ☐ VOCs ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☐ Nitrate ☐ Nitrite ☐ Metals
☐ Other _____

Trip Blank: _____ Duplicate Sample: _____

WELL DEVELOPMENT LOG

Project Name: K-51 Pipeline | Location: K-51 Pipeline | Well No: MW-4
Client: Enterprise | Date: 6/16/2010 | Time: 13:00
Project Manager: Ashley Ager | Sampler's Name: Brooke Herb

Measuring Point: TOC | Depth to Water: 12.07 ft | Depth to Product: 0 ft
Well Diameter: 2" | Total Depth: 17.35 ft | Product Thickness: 0 ft
Water Column Height: 5.28 ft

Sampling Method: ☐ Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other _____
☑ Bottom Valve Bailer ☐ Double Check Valve Bailer

Criteria: ☑ 3 to 5 Casing Volumes of Water Removal ☑ Stabilization of Indicator Parameters ☐ Other _____

Water Volume in Well			
Gal/ft x ft of water	Gallons	Ounces	Volume to be removed
0.16 x 5.28	0.86	110.23	2.58 gal

Time (military)	pH (su)	SC (us)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Total Vol gal	Comments/Flow Rate
13:02	7.55	1680	59.4				0.25	medium turbidity, light brown
	7.62	1170	65.8				1.25	very silty, dark brown, bailing down
	7.76	2360	66.9				1.6	Less silt, bailing down
13:21	7.79	2330	66.1				2	Bailed dry
14:08	7.70	2220	65.3				2.25	Allowed to recharge, bailed dry again
Final:	7.7	2.22	65.3				2.25	

COMMENTS: Well bailed dry. After 40 mins, recharged 1/4 gallon.

Instrumentation: ☑ pH Meter ☐ DO Monitor ☑ Conductivity Meter ☑ Temperature Meter ☐ Other _____

Water Disposal: Largo Compressor Station Sump

Sample ID: _____ Sample Time: _____

Analysis Requested: ☐ BTEX ☐ VOCs ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☐ Nitrate ☐ Nitrite ☐ Metals
☐ Other _____

Trip Blank: _____ Duplicate Sample: _____

WELL PURGING AND SAMPLING LOG

Project Name: K-51 Pipeline | Location: K-51 Pipeline | Well No: MW-1
Client: Enterprise | Date: 6/21/2010 | Time: 12:57
Project Manager: Ashley Ager | Sampler's Name: Brooke Herb

Measuring Point: TOC | Depth to Water: 12.02 ft | Depth to Product: 0 ft
Well Diameter: 2" | Total Depth: 17.27 ft | Product Thickness: 0 ft
Water Column Height: 5.25 ft

Sampling Method: ☐ Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other
☑ Bottom Valve Bailer ☐ Double Check Valve Bailer

Criteria: ☑ 3 to 5 Casing Volumes of Water Removal ☑ Stabilization of Indicator Parameters ☐ Other

Water Volume in Well			
Gal/ft x ft of water	Gallons	Ounces	Volume to be removed
0.16 x 5.25	0.86	109.60	2.57 gal

Time (military)	pH (su)	SC (us)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Total Vol gal	Comments/Flow Rate
13:06	7.23	3280	51.5				0.25	clear, no sheen, very slight odor
	7.30	3400	58.6				0.5	slightly silty
	7.31	3450	60.0				0.75	cloudy, medium turbidity
	7.14	3460	57.9				1	more turbid
	7.29	3560	57.7				1.25	medium turbidity
	7.19	3550	57.7				1.5	bailing down
	7.30	3630	57.9				1.75	bailing down
	7.30	3600	59.4				2	less silt, bailing down
	7.30	3570	61.0				2.3	less silt, bailing down
	7.34	3610	60.6				2.5	low turbidity
	7.33	3600	59.5				2.7	low turbidity, minor silt
Final:	7.33	3.6	59.5				349	

COMMENTS: Fill three 40 ml VOAs pre-preserved with HgCl2

Instrumentation: ☑ pH Meter ☐ DO Monitor ☑ Conductivity Meter ☑ Temperature Meter ☐ Other

Water Disposal: Largo Compressor Station Sump

Sample ID: MW-1 | Sample Time: 13:33

Analysis Requested: ☑ BTEX ☐ VOCs ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☐ Nitrate ☐ Nitrite ☐ Metals
☐ Other

Trip Blank: | Duplicate Sample:

WELL PURGING AND SAMPLING LOG

Project Name: K-51 Pipeline | Location: K-51 Pipeline | Well No: MW-2
Client: Enterprise | Date: 6/21/2010 | Time: 12:02
Project Manager: Ashley Ager | Sampler's Name: Brooke Herb

Measuring Point: TOC | Depth to Water: 10.93 ft | Depth to Product: 0 ft
Well Diameter: 2" | Total Depth: 18.37 ft | Product Thickness: 0 ft
Water Column Height: 7.44 ft

Sampling Method: ☐ Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other
☑ Bottom Valve Bailer ☐ Double Check Valve Bailer

Criteria: ☑ 3 to 5 Casing Volumes of Water Removal ☑ Stabilization of Indicator Parameters ☐ Other

Water Volume in Well			
Gal/ft x ft of water	Gallons	Ounces	Volume to be removed
7.44 x 0.16	1.21	155.26	3.64 gal

Time (military)	pH (su)	SC (us)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Total Vol gal	Comments/Flow Rate
12:20	7.50	1794	60.8				0.25	clear, no odor or sheen
	7.56	1788	57.9				0.5	slightly turbid
	7.52	1812	57.2				0.75	cloudy, light brown
	7.59	1799	56.7				1	cloudy, light brown
	7.54	1829	55.9				1.25	cloudy, light brown
	7.63	1792	55.9				1.5	slightly more silty
	7.71	1825	56.3				1.75	slightly more silty
	7.72	1790	58.6				2	bailing down
	7.68	1792	57.6				2.25	bailing down
	7.69	1799	57.4				2.5	less silty
	7.72	1778	58.4				3	bailing down
	7.77	1751	59.0				3.5	bailing down
	7.77	1760	60.1				3.75	bailing down
	7.76	1708	60.4				4	less silty
Final:	7.76	1708	60.4				4	

COMMENTS: Fill three 40 ml VOAs pre-preserved with HgCl2

Instrumentation: ☑ pH Meter ☐ DO Monitor ☑ Conductivity Meter ☑ Temperature Meter ☐ Other

Water Disposal: Largo Compressor Station Sump

Sample ID: MW-2 | Sample Time: 12:57

Analysis Requested: ☑ BTEX ☐ VOCs ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☐ Nitrate ☐ Nitrite ☐ Metals
☐ Other

Trip Blank: | Duplicate Sample:

WELL PURGING AND SAMPLING LOG

Project Name: K-51 Pipeline | Location: K-51 Pipeline | Well No: MW-3
Client: Enterprise | Date: 6/21/2010 | Time: 14:02
Project Manager: Ashley Ager | Sampler's Name: Brooke Herb

Measuring Point: TOC | Depth to Water: 11.55 ft | Depth to Product: 0 ft
Well Diameter: 2" | Total Depth: 17.33 ft | Product Thickness: 0 ft
Water Column Height: 5.78 ft

Sampling Method: ☐ Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other _____
☑ Bottom Valve Bailer ☐ Double Check Valve Bailer

Criteria: ☑ 3 to 5 Casing Volumes of Water Removal ☑ Stabilization of Indicator Parameters ☐ Other _____

Water Volume in Well			
Gal/ft x ft of water	Gallons	Ounces	Volume to be removed
5.78 x 0.16	0.94	120.67	2.83 gal

Time (military)	pH (su)	SC (us)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Total Vol gal	Comments/Flow Rate
14:10	7.84	1506	60.6				25	very clear, no sheen, no odor
	7.86	1518	59.0				0.5	slightly silty
	7.83	1511	57.0				0.75	medium silt & turbid, light brown
	7.90	1512	57.6				1	medium silt & turbid, light brown
	7.82	1501	56.8				1.25	medium silt & turbid, light brown
	7.86	1509	57.0				1.5	medium silt & turbid, light brown
	7.81	1493	56.8				2.25	increasing siltiness
	7.84	1501	57.7				2.5	moderate silt
	7.82	1503	56.8				2.75	moderate silt
	7.86	1498	57.0				3	less turbid
Final:	7.86	1498	57				3	

COMMENTS: Fill three 40 ml VOAs pre-preserved with HgCl2

Instrumentation: ☑ pH Meter ☐ DO Monitor ☑ Conductivity Meter ☑ Temperature Meter ☐ Other _____

Water Disposal: Largo Compressor Station Sump

Sample ID: MW-3 | Sample Time: 14:32

Analysis Requested: ☑ BTEX ☐ VOCs ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☐ Nitrate ☐ Nitrite ☐ Metals
☐ Other _____

Trip Blank: _____ | Duplicate Sample: _____

WELL PURGING AND SAMPLING LOG

Project Name: K-51 Pipeline | Location: K-51 Pipeline | Well No: MW-4
Client: Enterprise | Date: 6/21/2010 | Time: 13:42
Project Manager: Ashley Ager | Sampler's Name: Brooke Herb

Measuring Point: TOC | Depth to Water: 12.16 ft | Depth to Product: 0 ft
Well Diameter: 2" | Total Depth: 17.35 ft | Product Thickness: 0 ft
Water Column Height: 5.19 ft

Sampling Method: ☐ Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other
☑ Bottom Valve Bailer ☐ Double Check Valve Bailer

Criteria: ☑ 3 to 5 Casing Volumes of Water Removal ☑ Stabilization of Indicator Parameters ☐ Other

Water Volume in Well			
Gal/ft x ft of water	Gallons	Ounces	Volume to be removed
5.19 x .16	0.85	108.35	2.54 gal

Time (military)	pH (su)	SC (us)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Total Vol gal	Comments/Flow Rate
13:45	7.68	2440	61.5				0.25	clear, no odor, no sheen
	7.66	2500	59.7				9.5	minor light brown silt
	7.68	2500	59.2				0.75	low turbidity
	7.65	2560	59.5				1	low turbidity, bailing down
13:58	7.52	2520	64.0				1.2	bail dry, leave well to recover
14:36	7.47	2620	57.7				1.5	clear, no odor, no sheen
	7.70	2580	60.1				1.7	minor silt, bailing dry
14:42	7.65	2530	59.2				1.8	minor silt, bailed dry, leave well to recover
Final:	7.65	2.53	59.2				1.8	

COMMENTS: Well bailed dry. Allowed to recover, then sampled. Fill three 40 ml VOAs pre-preserved with HgCl2

Instrumentation: ☑ pH Meter ☐ DO Monitor ☑ Conductivity Meter ☑ Temperature Meter ☐ Other

Water Disposal: Largo Compressor Station Sumps

Sample ID: MW-4 | Sample Time: 14:52

Analysis Requested: ☑ BTEX ☐ VOCs ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☐ Nitrate ☐ Nitrite ☐ Metals
☐ Other

Trip Blank: | Duplicate Sample:

APPENDIX C

LABORATORY REPORT

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Wednesday, May 05, 2010

Cindy Gray
Souder, Miller and Associates
612 E Murray Dr.
Farmington, NM 87401

TEL: (505) 325-5667
FAX (505) 327-1496

RE: Enterprise Field Services K-51 Pipeline Leak

Order No.: 1004622

Dear Cindy Gray:

Hall Environmental Analysis Laboratory, Inc. received 5 sample(s) on 4/27/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX

Hall Environmental Analysis Laboratory, Inc.

Date: *05-May-10*

CLIENT:	Souder, Miller and Associates	**Client Sample ID:**	Water From Excavation
Lab Order:	1004622	**Collection Date:**	4/21/2010 11:10:00 AM
Project:	Enterprise Field Services K-51 Pipeline Leak	**Date Received:**	4/27/2010
Lab ID:	1004622-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	7000	100		µg/L	100	4/30/2010 11:17:20 PM
Toluene	13000	500		µg/L	500	5/3/2010 2:22:36 PM
Ethylbenzene	540	100		µg/L	100	4/30/2010 11:17:20 PM
Xylenes, Total	5200	200		µg/L	100	4/30/2010 11:17:20 PM
Surr: 4-Bromofluorobenzene	114	65.9-130		%REC	100	4/30/2010 11:17:20 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *05-May-10*

CLIENT:	Souder, Miller and Associates	**Client Sample ID:**	North Wall
Lab Order:	1004622	**Collection Date:**	4/21/2010 11:30:00 AM
Project:	Enterprise Field Services K-51 Pipeline Leak	**Date Received:**	4/27/2010
Lab ID:	1004622-02	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	49	10		mg/Kg	1	4/28/2010 6:13:51 PM
Motor Oil Range Organics (MRO)	71	50		mg/Kg	1	4/28/2010 6:13:51 PM
Surr: DNOP	93.4	61.7-135		%REC	1	4/28/2010 6:13:51 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/29/2010 12:08:49 AM
Surr: BFB	91.7	65.9-118		%REC	1	4/29/2010 12:08:49 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	4/29/2010 12:08:49 AM
Toluene	ND	0.050		mg/Kg	1	4/29/2010 12:08:49 AM
Ethylbenzene	ND	0.050		mg/Kg	1	4/29/2010 12:08:49 AM
Xylenes, Total	ND	0.10		mg/Kg	1	4/29/2010 12:08:49 AM
Surr: 4-Bromofluorobenzene	98.0	64.7-120		%REC	1	4/29/2010 12:08:49 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *05-May-10*

CLIENT:	Souder, Miller and Associates	**Client Sample ID:**	South Wall
Lab Order:	1004622	**Collection Date:**	4/23/2010 1:00:00 PM
Project:	Enterprise Field Services K-51 Pipeline Leak	**Date Received:**	4/27/2010
Lab ID:	1004622-03	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	10	10		mg/Kg	1	4/28/2010 6:50:16 PM
Motor Oil Range Organics (MRO)	68	50		mg/Kg	1	4/28/2010 6:50:16 PM
Surr: DNOP	95.3	61.7-135		%REC	1	4/28/2010 6:50:16 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/29/2010 12:39:10 AM
Surr: BFB	94.7	65.9-118		%REC	1	4/29/2010 12:39:10 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	4/29/2010 12:39:10 AM
Toluene	ND	0.050		mg/Kg	1	4/29/2010 12:39:10 AM
Ethylbenzene	ND	0.050		mg/Kg	1	4/29/2010 12:39:10 AM
Xylenes, Total	ND	0.10		mg/Kg	1	4/29/2010 12:39:10 AM
Surr: 4-Bromofluorobenzene	101	64.7-120		%REC	1	4/29/2010 12:39:10 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *05-May-10*

CLIENT:	Souder, Miller and Associates	**Client Sample ID:**	East Wall
Lab Order:	1004622	**Collection Date:**	4/23/2010 3:15:00 PM
Project:	Enterprise Field Services K-51 Pipeline Leak	**Date Received:**	4/27/2010
Lab ID:	1004622-04	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	26	10		mg/Kg	1	4/28/2010 7:27:15 PM
Motor Oil Range Organics (MRO)	68	50		mg/Kg	1	4/28/2010 7:27:15 PM
Surr: DNOP	93.9	61.7-135		%REC	1	4/28/2010 7:27:15 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/3/2010 4:54:22 PM
Surr: BFB	112	66.9-118		%REC	1	5/3/2010 4:54:22 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	5/3/2010 4:54:22 PM
Toluene	ND	0.050		mg/Kg	1	5/3/2010 4:54:22 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/3/2010 4:54:22 PM
Xylenes, Total	ND	0.10		mg/Kg	1	5/3/2010 4:54:22 PM
Surr: 4-Bromofluorobenzene	115	64.7-120		%REC	1	5/3/2010 4:54:22 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *05-May-10*

CLIENT:	Souder, Miller and Associates	**Client Sample ID:**	West Wall
Lab Order:	1004622	**Collection Date:**	4/24/2010 3:30:00 PM
Project:	Enterprise Field Services K-51 Pipeline Leak	**Date Received:**	4/27/2010
Lab ID:	1004622-05	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/28/2010 8:04:13 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/28/2010 8:04:13 PM
Surr: DNOP	93.5	61.7-135		%REC	1	4/28/2010 8:04:13 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/28/2010 7:05:21 PM
Surr: BFB	102	65.9-118		%REC	1	4/28/2010 7:05:21 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	4/28/2010 7:05:21 PM
Toluene	ND	0.050		mg/Kg	1	4/28/2010 7:05:21 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/28/2010 7:05:21 PM
Xylenes, Total	ND	0.10		mg/Kg	1	4/28/2010 7:05:21 PM
Surr: 4-Bromofluorobenzene	112	64.7-120		%REC	1	4/28/2010 7:05:21 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Souder, Miller and Associates
Project: Enterprise Field Services K-51 Pipeline Leak **Work Order:** 1004622

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range Organics											
Sample ID: MB-22078		*MBLK*				Batch ID:	**22078**	Analysis Date:		4/28/2010 3:46:56 PM	
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Motor Oil Range Organics (MRO)	ND	mg/Kg	50								
Sample ID: LCS-22078		*LCS*				Batch ID:	**22078**	Analysis Date:		4/28/2010 4:23:53 PM	
Diesel Range Organics (DRO)	43.18	mg/Kg	10	50	0	86.4	64.6	116			
Sample ID: LCSD-22078		*LCSD*				Batch ID:	**22078**	Analysis Date:		4/28/2010 5:00:22 PM	
Diesel Range Organics (DRO)	42.70	mg/Kg	10	50	0	85.4	64.6	116	1.11	17.4	
Method: EPA Method 8015B: Gasoline Range											
Sample ID: 1004622-05A MSD		*MSD*				Batch ID:	**22080**	Analysis Date:		4/29/2010 1:39:54 AM	
Gasoline Range Organics (GRO)	27.33	mg/Kg	5.0	25	2.33	100	69.5	120	4.40	11.6	
Sample ID: MB-22080		*MBLK*				Batch ID:	**22080**	Analysis Date:		4/28/2010 9:37:19 PM	
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-22080		*LCS*				Batch ID:	**22080**	Analysis Date:		4/29/2010 2:10:15 AM	
Gasoline Range Organics (GRO)	26.60	mg/Kg	5.0	25	1.71	99.6	77.7	135			
Sample ID: 1004622-05A MS		*MS*				Batch ID:	**22080**	Analysis Date:		4/29/2010 1:09:26 AM	
Gasoline Range Organics (GRO)	28.56	mg/Kg	5.0	25	2.33	105	69.5	120			
Method: EPA Method 8021B: Volatiles											
Sample ID: MB-22080		*MBLK*				Batch ID:	**22080**	Analysis Date:		4/28/2010 9:37:19 PM	
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Xylenes, Total	ND	mg/Kg	0.10								
Sample ID: LCS-22080		*LCS*				Batch ID:	**22080**	Analysis Date:		4/29/2010 3:41:08 AM	
Benzene	0.9894	mg/Kg	0.050	1	0.015	97.4	78.8	132			
Toluene	0.9489	mg/Kg	0.050	1	0.0089	94.0	78.9	112			
Ethylbenzene	1.031	mg/Kg	0.050	1	0	103	69.3	125			
Xylenes, Total	3.120	mg/Kg	0.10	3	0	104	73	128			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Souder, Miller and Associates
Project: Enterprise Field Services K-51 Pipeline Leak **Work Order:** 1004622

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles											
Sample ID: 5ML RB		*MBLK*				Batch ID:	**R38489**	Analysis Date:		4/30/2010 8:36:32 AM	
Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: b 27		*MBLK*				Batch ID:	**R38489**	Analysis Date:		4/30/2010 9:46:48 PM	
Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: b 5		*MBLK*				Batch ID:	**R38508**	Analysis Date:		5/3/2010 11:20:40 AM	
Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: 100NG BTEX LCS-II		*LCS*				Batch ID:	**R38489**	Analysis Date:		5/1/2010 4:51:47 AM	
Benzene	20.33	µg/L	1.0	20	0	102	85.9	113			
Toluene	19.97	µg/L	1.0	20	0	99.8	86.4	113			
Ethylbenzene	20.00	µg/L	1.0	20	0.144	99.3	83.5	118			
Xylenes, Total	61.61	µg/L	2.0	60	0	103	83.4	122			
Sample ID: 100NG BTEX LCS		*LCS*				Batch ID:	**R38508**	Analysis Date:		5/3/2010 12:51:46 PM	
Benzene	22.02	µg/L	1.0	20	0	110	85.9	113			
Toluene	21.74	µg/L	1.0	20	0	109	86.4	113			
Ethylbenzene	21.24	µg/L	1.0	20	0	106	83.5	118			
Xylenes, Total	64.43	µg/L	2.0	60	0	107	83.4	122			
Sample ID: 100NG BTEX LCS		*LCS*				Batch ID:	**R38508**	Analysis Date:		5/3/2010 8:56:49 PM	
Benzene	21.46	µg/L	1.0	20	0	107	85.9	113			
Toluene	21.12	µg/L	1.0	20	0	106	86.4	113			
Ethylbenzene	20.64	µg/L	1.0	20	0	103	83.5	118			
Xylenes, Total	61.92	µg/L	2.0	60	0	103	83.4	122			
Sample ID: 100NG BTEX LCSD-		*LCSD*				Batch ID:	**R38489**	Analysis Date:		5/1/2010 5:22:12 AM	
Benzene	21.87	µg/L	1.0	20	0	109	85.9	113	7.33	27	
Toluene	21.73	µg/L	1.0	20	0	109	86.4	113	8.45	19	
Ethylbenzene	21.58	µg/L	1.0	20	0.144	107	83.5	118	7.59	10	
Xylenes, Total	64.63	µg/L	2.0	60	0	108	83.4	122	4.78	13	
Sample ID: 100NG BTEX LCSD		*LCSD*				Batch ID:	**R38508**	Analysis Date:		5/3/2010 9:27:08 PM	
Benzene	19.89	µg/L	1.0	20	0	99.5	85.9	113	7.56	27	
Toluene	19.37	µg/L	1.0	20	0	96.8	86.4	113	8.67	19	
Ethylbenzene	19.18	µg/L	1.0	20	0	95.9	83.5	118	7.29	10	
Xylenes, Total	58.34	µg/L	2.0	60	0	97.2	83.4	122	5.94	13	

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **SMA-FARM** Date Received: **4/27/2010**

Work Order Number **1004622** Received by: TLS

Checklist completed by: _____ 4/27/10 Sample ID labels checked by: _____
Signature Date Initials

Matrix: Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	*<2 >12 unless noted below.*
Container/Temp Blank temperature?	**0.9°**	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

_____

_____

_____

_____

Corrective Action _____

_____

_____

Chain-of-Custody Record

Client: Souder Miller for Enterprise Field Services

Mailing Address: PO Box 248 Farmington NM 87499

Phone #: 505-325-5667

email or Fax#: denny.foust@soudermiller.com

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☑ Standard ☐ Rush _____

Project Name: Enterprise Field Services K-51 Pipeline Leak

Project #: 5119396 BG 24

Project Manager: Cindy Gray

Sampler: Denny Foust

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.8°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1004622	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	8021 BTEX				Air Bubbles (Y or N)
4/21/10	11:10	H2O	Water From Excavation	20 mL vola	Hg Cl2	1												X				
4/21/10	11:30	Soil	North Wall	4oz Glass		2			X									X				
4/23/10	13:00	Soil	South Wall	" "		3			X									X				
4/23/10	15:15	Soil	East Wall	" "		4			X									X				
4/24/10	15:30	Soil	West Wall	" "		5			X									X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/26/10	16:00	Denny Foust			
Date:	Time:	Relinquished by:	Received by:	4/27/10	920

Remarks: Bill to Enterprise

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Sunday, June 20, 2010

Ashley Ager
LTE
2243 Main Ave Suite 3
Durango, CO 81301

TEL: (970) 946-1093
FAX

RE: K-51 Pipeline

Order No.: 1006304

Dear Ashley Ager:

Hall Environmental Analysis Laboratory, Inc. received 13 sample(s) on 6/9/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX

Hall Environmental Analysis Laboratory, Inc. **Date:** *20-Jun-10*

CLIENT: LTE
Project: K-51 Pipeline
Lab Order: 1006304

CASE NARRATIVE

"S" flags denote that the surrogate recovery was elevated due to sample dilution or matrix interferences.

Hall Environmental Analysis Laboratory, Inc.

Date: *20-Jun-10*

CLIENT:	LTE	**Client Sample ID:**	BH2 12-16'
Lab Order:	1006304	**Collection Date:**	6/8/2010 1:55:00 PM
Project:	K-51 Pipeline	**Date Received:**	6/9/2010
Lab ID:	1006304-01	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2010 6:02:22 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2010 6:02:22 PM
Surr: DNOP	95.8	61.7-135		%REC	1	6/14/2010 6:02:22 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/14/2010 3:17:24 PM
Surr: BFB	93.5	65.9-118		%REC	1	6/14/2010 3:17:24 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/14/2010 3:17:24 PM
Benzene	ND	0.050		mg/Kg	1	6/14/2010 3:17:24 PM
Toluene	ND	0.050		mg/Kg	1	6/14/2010 3:17:24 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/14/2010 3:17:24 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/14/2010 3:17:24 PM
Surr: 4-Bromofluorobenzene	92.7	64.7-120		%REC	1	6/14/2010 3:17:24 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *20-Jun-10*

CLIENT:	LTE	**Client Sample ID:**	BH1 12-16'
Lab Order:	1006304	**Collection Date:**	6/8/2010 1:50:00 PM
Project:	K-51 Pipeline	**Date Received:**	6/9/2010
Lab ID:	1006304-02	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2010 7:43:55 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2010 7:43:55 PM
Surr: DNOP	98.2	61.7-135		%REC	1	6/14/2010 7:43:55 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/14/2010 3:47:50 PM
Surr: BFB	92.1	65.9-118		%REC	1	6/14/2010 3:47:50 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/14/2010 3:47:50 PM
Benzene	ND	0.050		mg/Kg	1	6/14/2010 3:47:50 PM
Toluene	ND	0.050		mg/Kg	1	6/14/2010 3:47:50 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/14/2010 3:47:50 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/14/2010 3:47:50 PM
Surr: 4-Bromofluorobenzene	95.0	64.7-120		%REC	1	6/14/2010 3:47:50 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *20-Jun-10*

CLIENT:	LTE	**Client Sample ID:**	BH6 12-16'
Lab Order:	1006304	**Collection Date:**	6/8/2010 2:52:00 PM
Project:	K-51 Pipeline	**Date Received:**	6/9/2010
Lab ID:	1006304-03	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2010 8:17:47 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2010 8:17:47 PM
Surr: DNOP	98.4	61.7-135		%REC	1	6/14/2010 8:17:47 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	16	5.0		mg/Kg	1	6/15/2010 2:17:41 PM
Surr: BFB	129	65.9-118	S	%REC	1	6/15/2010 2:17:41 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/15/2010 2:17:41 PM
Benzene	ND	0.050		mg/Kg	1	6/15/2010 2:17:41 PM
Toluene	0.72	0.050		mg/Kg	1	6/15/2010 2:17:41 PM
Ethylbenzene	0.12	0.050		mg/Kg	1	6/15/2010 2:17:41 PM
Xylenes, Total	1.2	0.10		mg/Kg	1	6/15/2010 2:17:41 PM
Surr: 4-Bromofluorobenzene	111	64.7-120		%REC	1	6/15/2010 2:17:41 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *20-Jun-10*

CLIENT:	LTE	**Client Sample ID:**	BH4 8-12'
Lab Order:	1006304	**Collection Date:**	6/8/2010 2:20:00 PM
Project:	K-51 Pipeline	**Date Received:**	6/9/2010
Lab ID:	1006304-04	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	45	10		mg/Kg	1	6/14/2010 8:51:39 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2010 8:51:39 PM
Surr: DNOP	96.9	61.7-135		%REC	1	6/14/2010 8:51:39 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	25	5.0		mg/Kg	1	6/15/2010 2:47:54 PM
Surr: BFB	186	65.9-118	S	%REC	1	6/15/2010 2:47:54 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/15/2010 2:47:54 PM
Benzene	0.055	0.050		mg/Kg	1	6/15/2010 2:47:54 PM
Toluene	0.74	0.050		mg/Kg	1	6/15/2010 2:47:54 PM
Ethylbenzene	0.12	0.050		mg/Kg	1	6/15/2010 2:47:54 PM
Xylenes, Total	1.3	0.10		mg/Kg	1	6/15/2010 2:47:54 PM
Surr: 4-Bromofluorobenzene	103	64.7-120		%REC	1	6/15/2010 2:47:54 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *20-Jun-10*

CLIENT:	LTE	**Client Sample ID:**	BH3 12-16'
Lab Order:	1006304	**Collection Date:**	6/8/2010 1:57:00 PM
Project:	K-51 Pipeline	**Date Received:**	6/9/2010
Lab ID:	1006304-05	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						**Analyst: JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2010 9:25:31 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2010 9:25:31 PM
Surr: DNOP	102	61.7-135		%REC	1	6/14/2010 9:25:31 PM
EPA METHOD 8015B: GASOLINE RANGE						**Analyst: NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/14/2010 5:18:42 PM
Surr: BFB	92.2	65.9-118		%REC	1	6/14/2010 5:18:42 PM
EPA METHOD 8021B: VOLATILES						**Analyst: NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/14/2010 5:18:42 PM
Benzene	ND	0.050		mg/Kg	1	6/14/2010 5:18:42 PM
Toluene	ND	0.050		mg/Kg	1	6/14/2010 5:18:42 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/14/2010 5:18:42 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/14/2010 5:18:42 PM
Surr: 4-Bromofluorobenzene	99.3	64.7-120		%REC	1	6/14/2010 5:18:42 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *20-Jun-10*

CLIENT:	LTE	**Client Sample ID:**	BH5 12-16'
Lab Order:	1006304	**Collection Date:**	6/8/2010 2:40:00 PM
Project:	K-51 Pipeline	**Date Received:**	6/9/2010
Lab ID:	1006304-06	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2010 9:59:23 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2010 9:59:23 PM
Surr: DNOP	101	61.7-135		%REC	1	6/14/2010 9:59:23 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/14/2010 5:49:02 PM
Surr: BFB	94.5	65.9-118		%REC	1	6/14/2010 5:49:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/14/2010 5:49:02 PM
Benzene	ND	0.050		mg/Kg	1	6/14/2010 5:49:02 PM
Toluene	ND	0.050		mg/Kg	1	6/14/2010 5:49:02 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/14/2010 5:49:02 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/14/2010 5:49:02 PM
Surr: 4-Bromofluorobenzene	102	64.7-120		%REC	1	6/14/2010 5:49:02 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *20-Jun-10*

CLIENT:	LTE	**Client Sample ID:**	BH5 8-12'
Lab Order:	1006304	**Collection Date:**	6/8/2010 2:40:00 PM
Project:	K-51 Pipeline	**Date Received:**	6/9/2010
Lab ID:	1006304-07	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2010 10:33:14 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2010 10:33:14 PM
Surr: DNOP	97.9	61.7-135		%REC	1	6/14/2010 10:33:14 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/14/2010 6:19:03 PM
Surr: BFB	90.3	65.9-118		%REC	1	6/14/2010 6:19:03 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/14/2010 6:19:03 PM
Benzene	ND	0.050		mg/Kg	1	6/14/2010 6:19:03 PM
Toluene	ND	0.050		mg/Kg	1	6/14/2010 6:19:03 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/14/2010 6:19:03 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/14/2010 6:19:03 PM
Surr: 4-Bromofluorobenzene	97.6	64.7-120		%REC	1	6/14/2010 6:19:03 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *20-Jun-10*

CLIENT:	LTE	**Client Sample ID:**	BH4 12-16'
Lab Order:	1006304	**Collection Date:**	6/8/2010 2:25:00 PM
Project:	K-51 Pipeline	**Date Received:**	6/9/2010
Lab ID:	1006304-08	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2010 11:07:06 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2010 11:07:06 PM
Surr: DNOP	103	61.7-135		%REC	1	6/14/2010 11:07:06 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/14/2010 6:49:19 PM
Surr: BFB	93.3	65.9-118		%REC	1	6/14/2010 6:49:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/14/2010 6:49:19 PM
Benzene	ND	0.050		mg/Kg	1	6/14/2010 6:49:19 PM
Toluene	ND	0.050		mg/Kg	1	6/14/2010 6:49:19 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/14/2010 6:49:19 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/14/2010 6:49:19 PM
Surr: 4-Bromofluorobenzene	101	64.7-120		%REC	1	6/14/2010 6:49:19 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *20-Jun-10*

CLIENT:	LTE	**Client Sample ID:**	BH1 8-12' Below Clay
Lab Order:	1006304	**Collection Date:**	6/8/2010 1:50:00 PM
Project:	K-51 Pipeline	**Date Received:**	6/9/2010
Lab ID:	1006304-09	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/15/2010 12:14:48 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/15/2010 12:14:48 AM
Surr: DNOP	103	61.7-135		%REC	1	6/15/2010 12:14:48 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/14/2010 7:19:36 PM
Surr: BFB	90.8	65.9-118		%REC	1	6/14/2010 7:19:36 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/14/2010 7:19:36 PM
Benzene	0.12	0.050		mg/Kg	1	6/14/2010 7:19:36 PM
Toluene	ND	0.050		mg/Kg	1	6/14/2010 7:19:36 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/14/2010 7:19:36 PM
Xylenes, Total	0.11	0.10		mg/Kg	1	6/14/2010 7:19:36 PM
Surr: 4-Bromofluorobenzene	94.8	64.7-120		%REC	1	6/14/2010 7:19:36 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *20-Jun-10*

CLIENT:	LTE	**Client Sample ID:**	BH7 12-16'
Lab Order:	1006304	**Collection Date:**	6/8/2010 3:00:00 PM
Project:	K-51 Pipeline	**Date Received:**	6/9/2010
Lab ID:	1006304-10	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/15/2010 12:48:24 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/15/2010 12:48:24 AM
Surr: DNOP	94.4	61.7-135		%REC	1	6/15/2010 12:48:24 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/14/2010 7:50:00 PM
Surr: BFB	84.0	65.9-118		%REC	1	6/14/2010 7:50:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/14/2010 7:50:00 PM
Benzene	ND	0.050		mg/Kg	1	6/14/2010 7:50:00 PM
Toluene	ND	0.050		mg/Kg	1	6/14/2010 7:50:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/14/2010 7:50:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/14/2010 7:50:00 PM
Surr: 4-Bromofluorobenzene	89.5	64.7-120		%REC	1	6/14/2010 7:50:00 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *20-Jun-10*

CLIENT:	LTE	**Client Sample ID:**	BH2 8-12'
Lab Order:	1006304	**Collection Date:**	6/8/2010 1:55:00 PM
Project:	K-51 Pipeline	**Date Received:**	6/9/2010
Lab ID:	1006304-11	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	12	10		mg/Kg	1	6/15/2010 1:21:59 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/15/2010 1:21:59 AM
Surr: DNOP	102	61.7-135		%REC	1	6/15/2010 1:21:59 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	8.5	5.0		mg/Kg	1	6/15/2010 3:18:17 PM
Surr: BFB	154	65.9-118	S	%REC	1	6/15/2010 3:18:17 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/15/2010 3:18:17 PM
Benzene	ND	0.050		mg/Kg	1	6/15/2010 3:18:17 PM
Toluene	0.062	0.050		mg/Kg	1	6/15/2010 3:18:17 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/15/2010 3:18:17 PM
Xylenes, Total	0.19	0.10		mg/Kg	1	6/15/2010 3:18:17 PM
Surr: 4-Bromofluorobenzene	109	64.7-120		%REC	1	6/15/2010 3:18:17 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *20-Jun-10*

CLIENT:	LTE	**Client Sample ID:**	BH8 12-16'
Lab Order:	1006304	**Collection Date:**	6/8/2010 3:19:00 PM
Project:	K-51 Pipeline	**Date Received:**	6/9/2010
Lab ID:	1006304-12	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/15/2010 1:55:35 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/15/2010 1:55:35 AM
Surr: DNOP	98.7	61.7-135		%REC	1	6/15/2010 1:55:35 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/15/2010 12:22:27 AM
Surr: BFB	84.6	65.9-118		%REC	1	6/15/2010 12:22:27 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/15/2010 12:22:27 AM
Benzene	ND	0.050		mg/Kg	1	6/15/2010 12:22:27 AM
Toluene	ND	0.050		mg/Kg	1	6/15/2010 12:22:27 AM
Ethylbenzene	ND	0.050		mg/Kg	1	6/15/2010 12:22:27 AM
Xylenes, Total	ND	0.10		mg/Kg	1	6/15/2010 12:22:27 AM
Surr: 4-Bromofluorobenzene	92.5	64.7-120		%REC	1	6/15/2010 12:22:27 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *20-Jun-10*

CLIENT:	LTE	**Client Sample ID:**	BH1 8-12' Above Clay
Lab Order:	1006304	**Collection Date:**	6/8/2010 1:50:00 PM
Project:	K-51 Pipeline	**Date Received:**	6/9/2010
Lab ID:	1006304-13	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	1400	100		mg/Kg	10	6/15/2010 9:46:46 AM
Motor Oil Range Organics (MRO)	620	500		mg/Kg	10	6/15/2010 9:46:46 AM
Surr: DNOP	121	61.7-135		%REC	10	6/15/2010 9:46:46 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	740	250		mg/Kg	50	6/15/2010 12:52:43 AM
Surr: BFB	130	65.9-118	S	%REC	50	6/15/2010 12:52:43 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	5.0		mg/Kg	50	6/15/2010 12:52:43 AM
Benzene	ND	2.5		mg/Kg	50	6/15/2010 12:52:43 AM
Toluene	31	2.5		mg/Kg	50	6/15/2010 12:52:43 AM
Ethylbenzene	6.8	2.5		mg/Kg	50	6/15/2010 12:52:43 AM
Xylenes, Total	72	5.0		mg/Kg	50	6/15/2010 12:52:43 AM
Surr: 4-Bromofluorobenzene	92.8	64.7-120		%REC	50	6/15/2010 12:52:43 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: LTE
Project: K-51 Pipeline **Work Order:** 1006304

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range Organics											
Sample ID: 1006304-01AMSD		*MSD*				Batch ID:	**22591**	Analysis Date:		6/14/2010 7:10:04 PM	
Diesel Range Organics (DRO)	52.16	mg/Kg	10	50	0	104	67.4	117	1.93	17.4	
Sample ID: MB-22591		*MBLK*				Batch ID:	**22591**	Analysis Date:		6/14/2010 3:46:46 PM	
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Motor Oil Range Organics (MRO)	ND	mg/Kg	50								
Sample ID: LCS-22591		*LCS*				Batch ID:	**22591**	Analysis Date:		6/14/2010 4:20:53 PM	
Diesel Range Organics (DRO)	53.66	mg/Kg	10	50	0	107	64.6	116			
Sample ID: LCSD-22591		*LCSD*				Batch ID:	**22591**	Analysis Date:		6/14/2010 4:54:43 PM	
Diesel Range Organics (DRO)	52.04	mg/Kg	10	50	0	104	64.6	116	3.06	17.4	
Sample ID: 1006304-01AMS		*MS*				Batch ID:	**22591**	Analysis Date:		6/14/2010 6:36:12 PM	
Diesel Range Organics (DRO)	51.16	mg/Kg	10	50	0	102	67.4	117			
Method: EPA Method 8015B: Gasoline Range											
Sample ID: 1006304-05A MSD		*MSD*				Batch ID:	**22582**	Analysis Date:		6/15/2010 2:23:16 AM	
Gasoline Range Organics (GRO)	13.28	mg/Kg	5.0	25	0	53.1	69.5	120	1.79	11.6	S
Sample ID: MB-22582		*MBLK*				Batch ID:	**22582**	Analysis Date:		6/14/2010 9:20:47 PM	
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-22582		*LCS*				Batch ID:	**22582**	Analysis Date:		6/14/2010 8:20:21 PM	
Gasoline Range Organics (GRO)	25.44	mg/Kg	5.0	25	1.51	95.7	77.7	135			
Sample ID: 1006304-05A MS		*MS*				Batch ID:	**22582**	Analysis Date:		6/15/2010 1:53:06 AM	
Gasoline Range Organics (GRO)	13.52	mg/Kg	5.0	25	0	54.1	69.5	120			S

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: LTE
Project: K-51 Pipeline **Work Order:** 1006304

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles											
Sample ID: 1006304-05A MSD		*MSD*				Batch ID:	**22582**	Analysis Date:		6/15/2010 3:23:53 AM	
Methyl tert-butyl ether (MTBE)	1.015	mg/Kg	0.10	1	0	102	67.9	135	2.34	28	
Benzene	0.5798	mg/Kg	0.050	1	0	58.0	78.8	132	6.87	27	S
Toluene	0.7339	mg/Kg	0.050	1	0	73.4	78.9	112	8.30	19	S
Ethylbenzene	0.8519	mg/Kg	0.050	1	0	85.2	69.3	125	10.7	10	R
Xylenes, Total	2.602	mg/Kg	0.10	3	0	86.7	73	128	8.66	13	
Sample ID: MB-22582		*MBLK*				Batch ID:	**22582**	Analysis Date:		6/14/2010 9:20:47 PM	
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.10								
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Xylenes, Total	ND	mg/Kg	0.10								
Sample ID: LCS-22582		*LCS*				Batch ID:	**22582**	Analysis Date:		6/14/2010 8:50:37 PM	
Methyl tert-butyl ether (MTBE)	1.385	mg/Kg	0.10	1	0.0114	137	67.9	135			S
Benzene	0.9539	mg/Kg	0.050	1	0	95.4	78.8	132			
Toluene	0.9044	mg/Kg	0.050	1	0	90.4	78.9	112			
Ethylbenzene	0.9861	mg/Kg	0.050	1	0.0118	97.4	69.3	125			
Xylenes, Total	3.010	mg/Kg	0.10	3	0	100	73	128			
Sample ID: 1006304-05A MS		*MS*				Batch ID:	**22582**	Analysis Date:		6/15/2010 2:53:32 AM	
Methyl tert-butyl ether (MTBE)	0.9917	mg/Kg	0.10	1	0	99.2	67.9	135			
Benzene	0.5413	mg/Kg	0.050	1	0	54.1	78.8	132			S
Toluene	0.6754	mg/Kg	0.050	1	0	67.5	78.9	112			S
Ethylbenzene	0.7653	mg/Kg	0.050	1	0	76.5	69.3	125			
Xylenes, Total	2.386	mg/Kg	0.10	3	0	79.5	73	128			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **LTE** Date Received: **6/9/2010**

Work Order Number **1006304** Received by: **TLS**

Checklist completed by: Signature 6/9/10 Date Sample ID labels checked by: Initials

Matrix: Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:
Water - VOA vials have zero headspace? No VOA vials submitted ☑		Yes ☐	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	*<2 >12 unless noted below.*
Container/Temp Blank temperature?	**3.8°**	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: LTE

Mailing Address: 2243 Main Ave, S3
Durango, Co 81301

Phone #: 970-385-1096

email or Fax#: aager@ltenv.com

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: K-51 Pipeline

Project #: GMS1005

Project Manager: Ashley Ager

Sampler: Travis Laverty

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.6

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1003504	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
6/8/10	1355	Soil	BH2 12-16'	Jar	None	1	X		X													
	1350		BH1 12-16'			2																
	1452		BH6 12-16'			3																
	1420		BH4 8-12'			4																
	1357		BH3 12-16'			5																
	1440		BH5 12-16'			6																
	1446		BH5 8-12'			7																
	1425		BH4 12-16'			8																
	1350		BH1 8-12' Below Zone			9																
	1500		BH7 12-16'			10																
	1355		BH2 8-12'			11																
	1519		BH8 12-16'			12																

Date:	Time:	Relinquished by:	Received by:	Date	Time
6-8-10	1900			6/9/10	922
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: LTE

Mailing Address: 2243 Main Ave #3
Durango, Co 81301

Phone #: 970-385-1096

email or Fax#: oager@ltenv.com

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: K-51 Pipeline

Project #: GMS 1005

Project Manager: Ashley Ager

Sampler: Travis Laverty

On Ice: Yes No

Sample Temperature: 6

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1005354	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
6/8/10	1350	Soil	BH1 8-12' Above Clay	Jar	None	13	X		X													

Date:	Time:	Relinquished by:	Received by:	Date	Time
6-8-10	1800			6/9/10	932
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Tuesday, July 06, 2010

Ashley Ager
LTE
2243 Main Ave Suite 3
Durango, CO 81301
TEL: (970) 946-1093
FAX

RE: K-51 Pipeline

Order No.: 1006792

Dear Ashley Ager:

Hall Environmental Analysis Laboratory, Inc. received 4 sample(s) on 6/23/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX

Hall Environmental Analysis Laboratory, Inc.

Date: *06-Jul-10*

CLIENT: LTE
Project: K-51 Pipeline
Lab Order: 1006792

Lab ID: 1006792-01 **Collection Date:** 6/21/2010 12:57:00 PM
Client Sample ID: MW-2 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	200	10		µg/L	10	7/2/2010 2:22:36 PM
Toluene	5.3	1.0		µg/L	1	7/1/2010 5:59:32 PM
Ethylbenzene	14	1.0		µg/L	1	7/1/2010 5:59:32 PM
Xylenes, Total	96	2.0		µg/L	1	7/1/2010 5:59:32 PM
Surr: 4-Bromofluorobenzene	114	65.9-130		%REC	1	7/1/2010 5:59:32 PM

Lab ID: 1006792-02 **Collection Date:** 6/21/2010 1:33:00 PM
Client Sample ID: MW-1 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	8400	100		µg/L	100	7/2/2010 2:59:05 PM
Toluene	1300	100		µg/L	100	7/2/2010 2:59:05 PM
Ethylbenzene	560	100		µg/L	100	7/2/2010 2:59:05 PM
Xylenes, Total	4200	200		µg/L	100	7/2/2010 2:59:05 PM
Surr: 4-Bromofluorobenzene	113	65.9-130		%REC	100	7/2/2010 2:59:05 PM
Surr: 4-Bromofluorobenzene	123	65.9-130		%REC	10	7/1/2010 10:32:21 PM

Lab ID: 1006792-03 **Collection Date:** 6/21/2010 2:32:00 PM
Client Sample ID: MW-3 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	640	10		µg/L	10	7/2/2010 3:29:19 PM
Toluene	57	10		µg/L	10	7/2/2010 3:29:19 PM
Ethylbenzene	72	10		µg/L	10	7/2/2010 3:29:19 PM
Xylenes, Total	1000	20		µg/L	10	7/2/2010 3:29:19 PM
Surr: 4-Bromofluorobenzene	99.6	65.9-130		%REC	10	7/2/2010 3:29:19 PM

Lab ID: 1006792-04 **Collection Date:** 6/21/2010 2:52:00 PM
Client Sample ID: MW-4 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	3600	100		µg/L	100	7/2/2010 3:59:42 PM
Toluene	10000	500		µg/L	500	7/4/2010 4:12:08 PM
Ethylbenzene	600	100		µg/L	100	7/2/2010 3:59:42 PM
Xylenes, Total	6600	200		µg/L	100	7/2/2010 3:59:42 PM
Surr: 4-Bromofluorobenzene	106	65.9-130		%REC	100	7/2/2010 3:59:42 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: LTE
Project: K-51 Pipeline **Work Order:** 1006792

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles											
Sample ID: 1006792-01A MSD		*MSD*				Batch ID:	**R39611**	Analysis Date:		7/1/2010 7:00:03 PM	
Benzene	167.1	µg/L	1.0	20	167.3	-1.06	85.9	113	7.20	27	SE
Toluene	24.26	µg/L	1.0	20	5.324	94.7	86.4	113	11.1	19	
Ethylbenzene	31.81	µg/L	1.0	20	14.08	88.7	83.5	118	10.4	10	R
Xylenes, Total	142.6	µg/L	2.0	60	95.65	78.2	83.4	122	8.95	13	S
Sample ID: 5ML RB		*MBLK*				Batch ID:	**R39611**	Analysis Date:		7/1/2010 9:56:08 AM	
Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: 100NG BTEX LCS		*LCS*				Batch ID:	**R39611**	Analysis Date:		7/1/2010 7:30:24 PM	
Benzene	22.32	µg/L	1.0	20	0	112	87.9	121			
Toluene	20.50	µg/L	1.0	20	0	103	83	124			
Ethylbenzene	19.85	µg/L	1.0	20	0	99.3	81.7	122			
Xylenes, Total	62.17	µg/L	2.0	60	0	104	85.6	121			
Sample ID: 1006792-01A MS		*MS*				Batch ID:	**R39611**	Analysis Date:		7/1/2010 6:29:45 PM	
Benzene	179.6	µg/L	1.0	20	167.3	61.3	85.9	113			SE
Toluene	27.11	µg/L	1.0	20	5.324	109	86.4	113			
Ethylbenzene	35.31	µg/L	1.0	20	14.08	106	83.5	118			
Xylenes, Total	156.0	µg/L	2.0	60	95.65	100	83.4	122			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **LTE** Date Received: **6/23/2010**

Work Order Number **1006792** Received by: **ARS**

Checklist completed by: Signature 6/23/10 Date Sample ID labels checked by: Initials

Matrix: Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:
Water - VOA vials have zero headspace? No VOA vials submitted ☐		Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	*<2 >12 unless noted below.*
Container/Temp Blank temperature?	**4.8°**	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: L T Environmental

Mailing Address: 2243 Main Ave S 3
Durango CO 81301

Phone #: 970 . 385 . 1096

email or Fax#: aager@ltenv.com

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other ______

☐ EDD (Type) ______

Turn-Around Time:
☒ Standard ☐ Rush ______

Project Name: K-51 Pipeline

Project #: GMS1005

Project Manager: A. Ager

Sampler: Brooke Herb

[illegible]

Sample Temperature [illegible]

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	[illegible]	BTEX + ~~MTBE + TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
6/21/10	12:57	AQ	MW-~~2~~	40mL/3	$HgCl_2$	1	X															
6/21/10	13:33	AQ	MW-~~3~~1	40mL/3	$HgCl_2$	2	X															
6/21/10	14:32	AQ	MW-3	40mL/3	$HgCl_2$	3	X															
6/21/10	14:52	AQ	MW-4	40mL/3	$HgCl_2$	4	X															

Date:	Time:	Relinquished by:	Received by:	Date	Time
6/22/10	2200	[signature]	[signature]	6/23/10	10:05
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.