

SUBSURFACE INVESTIGATION REPORT

**ENTERPRISE FIELD SERVICES, LLC
LINDRITH COMPRESSOR STATION
SECTION 18, TOWNSHIP 24 NORTH, RANGE 5 WEST
RIO ARriba COUNTY, NEW MEXICO
GW-209**

FEBRUARY 2011

Prepared for:

**ENTERPRISE FIELD SERVICES, LLC
Houston, Texas**





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March 1, 2011

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**RE: Enterprise Field Services, LLC
Lindrith Compressor Station – Subsurface Investigation Report
NE/4, SE/4, Section 18, Township 24, Range 5 West, NMPM
NM Oil Conservation Division GW Discharge Permit No. GW-209
Rio Arriba County, New Mexico**

Dear Mr. Sandoval:

The enclosed *Subsurface Investigation Report*, dated February 2011, documents the results of the recent soil and groundwater investigation performed at the Enterprise Lindrith Compressor Station. This investigation was conducted to determine the extent of environmental impacts associated with historical releases from former condensate storage tanks at the facility. Historical releases from additional sources were also identified during the investigation, including soil and groundwater impacts at the location of a former burn pit. Additional investigations will be proposed under a separate work plan to establish the full extent of these impacts.

During our meeting on May 25, 2010, Enterprise Field Services, LLC (Enterprise) and Jicarilla Bureau of Indian Affairs (BIA) representatives met to discuss remedial actions for releases at the former condensate storage tank locations at the facility. In accordance with this meeting, Enterprise submitted proposed remedial actions to the Jicarilla BIA on June 29, 2010. The proposed remedial actions were approved on July 20, 2010, and are currently being implemented. The findings of the enclosed Subsurface Investigation Report (SIR) will be utilized to amend these remedial actions, due to the discovery of phase-separated hydrocarbon (PSH) on the water table surface at the former location of the condensate storage tanks. Enterprise is evaluating additional remedial actions for this area, and will provide a proposed work plan to the Jicarilla BIA for approval as soon as possible.

If you have any questions, or require additional information, please do not hesitate to contact me at (713) 381-2286 or drsmith@eprod.com.

Sincerely,

David R. Smith, P.G.
Sr. Environmental Scientist

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Manager, Remediation

/dep
Enclosure

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Lindrith Compressor Station
March 1, 2011
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GW-209**

FEBRUARY 2011

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EXECUTIVE SUMMARY

Enterprise Field Services, LLC (Enterprise) is remediating the former location of two condensate aboveground storage tanks (ASTs) and an associated subsurface sump at the Lindrith Compressor Station (Site) following a natural gas condensate release on January 4, 2008. Enterprise filed a form C-141 on January 4, 2008 with the New Mexico Oil Conservation Division (NMOCD) reporting the release volume as 25 barrels. Enterprise initially excavated impacted soil from the Site and conducted a preliminary delineation during which historical impacts were identified at depths greater than 9 feet below ground surface (bgs). A more detailed delineation of the contaminant plume was required to determine an effective remediation strategy for historical impacts.

Enterprise retained LT Environmental, Inc. (LTE) to perform a subsurface investigation to accurately define the vertical and lateral extent of impacted soil and groundwater and to provide a more complete description of the subsurface soil properties in order to properly design and implement a remediation system, if necessary. LTE used a hollow stem auger soil boring and sampling program to drill 20 boreholes and install nine 2-inch diameter monitoring wells and one 4-inch diameter monitoring well.

Results from soil and groundwater sampling indicate multiple historical releases have impacted soil and groundwater at the Site. Phase separated hydrocarbons (PSH) are present on the water table and elevated concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX) exist in groundwater samples. Impacted soil observed near the former location of the condensate ASTs contains elevated concentrations of total petroleum hydrocarbon (TPH), and a significant portion of the TPH concentration is gasoline range organics. These impacts are likely the result of at least one historic release from the condensate tanks. The vertical extent of the impacts is up to 17 feet thick beneath the former source area, but is limited laterally to the water table smear zone in an alluvial aquifer occurring at 27 feet to 35 feet bgs. The southern and western boundaries of these impacts are clearly defined. To the north and east of the study area additional sources become apparent.

Evidence of the condensate AST release appears to overprint numerous historic releases from unknown sources. One release is widespread throughout the Site. It is characterized by field screening measurements that are lower than those observed in soil impacted by the condensate tank release and representative soils contain a larger content of motor oil range organics in the TPH concentrations. Two additional historic point sources are evident as defined by soils that occur at outlying locations and exhibit chemical and physical properties that differ from other soil samples collected at the Site. A potential source for one of these outlying locations is a former burn pit.

The lateral extent of impacts from historic sources remains undefined to the north, east, and west. The concentrations of TPH in these soils exceed the NMOCD action levels, and concentrations of BTEX in groundwater exceed New Mexico Water Quality Control Commission standards. Further delineation is required to completely identify the extent of these historical impacts.

In addition to further delineation of historic releases, remediation of soil and groundwater is necessary. PSH present on the water table will continue to act as a source of contamination to

groundwater at the Site. Monitoring well MW-1R is a 4-inch diameter well and was installed for product recovery. It is recommended that active recovery begin immediately. Additional options for remediation of this Site will be submitted to Enterprise under separate cover.

1.0 INTRODUCTION

Enterprise Field Services, LLC (Enterprise) retained LT Environmental, Inc. (LTE) to complete a subsurface investigation at the Lindrith Compressor Station (Site). The objectives of the investigation were to delineate and characterize the nature and extent of soil and groundwater impacts due to a release of natural gas liquids from aboveground condensate storage tanks (ASTs). This report presents the results of the investigation and provides recommendations for additional work at the Site.

The Site is located approximately 10 miles north of Highway 550 on County Road 379, 12 miles north of Counselor, New Mexico. The facility compresses natural gas collected from the San Juan Field into a 30-inch pipeline. Enterprise is the owner and operator of the compressor facility. Two ASTs were previously used at the Site to store natural gas condensate and produced water. The ASTs have since been decommissioned and removed, and Enterprise is currently remediating the former location of the two ASTs and an associated subsurface sump.

Results from this investigation will be used to evaluate future remediation technologies for the Site. This subsurface investigation included collecting soil samples from soil borings and installing groundwater monitoring wells. Groundwater from monitoring wells was sampled and all data were analyzed for the site characterization.

2.0 SITE SETTING AND BACKGROUND

2.1 SITE DESCRIPTION

The Site is a natural gas compression facility located on the Jicarilla Apache Reservation in Section 18, Township 24 North, Range 5 West in Rio Arriba County, New Mexico. Site topography is gently sloped to the south-southwest toward Largo Canyon (Figure 1). The Jicarilla Environmental Protection Office (JEPO) and the Bureau of Indian Affairs (BIA) retain jurisdiction for environmental oversight, with input from the New Mexico Oil Conservation Division (NMOCD) as necessary.

The investigation area comprises the southern portion of the compressor station and an area of undeveloped land outside and south of the fenced facility. The location of the former ASTs and sump are depicted on Figure 2, as is the boundary of the excavation completed in the early stages of this project. The current structures within the investigation area are a new tank battery, which contains eight ASTs and an elevated water tower (Figure 2). South of the fence, sagebrush and other high desert vegetation cover the ground surface.

2.2 SITE GEOLOGY AND HYDROGEOLOGY

The Site is located within the east-central portion of the San Juan Basin, which contains up to 15,000 feet of Paleozoic and Mesozoic sediments. Asymmetrically layered Tertiary sandstones and shales, along with Quaternary alluvial deposits, dominate surficial geology. Regional

topography is composed of mesas dissected by deep, narrow canyons and arroyos. The cliff-forming sandstones are more resistant than the shales, but eventually weather into their composite sands; the shales weather into silts and clays, resulting in a highly erodible landscape and an abundant sediment supply (Brister and Hoffman, 2002). The predominant geologic formation near the Site is the San Jose Formation, which is exposed as interbedded sandstones and mudstones. The thickness of the San Jose Formation ranges from 200 feet to 2,700 feet (Stone et al., 1983) and generally increases towards the center and eastern portions of the San Juan Basin.

More locally, the Site is located in the upper reaches of the San Juan River drainage basin within the Largo Canyon arroyo. It is approximately 0.6 miles east of Largo Canyon and 0.75 miles south of Cañada Larga (Figure 1). There is a small, unnamed tributary to Largo Canyon approximately 0.25 miles west of the Site. Local geology is identified as Quaternary alluvium consisting of unconsolidated to semi-consolidated silts, sands and clays overlying the San Jose Formation. Due to the proximity of the Site to Largo Canyon, it falls within an expanded vulnerable zone according to topographic maps published by the NMOCD to support Order No. R-7940-C, "Vulnerable Area Order." Depth to groundwater, based on investigation results, is approximately 30 feet below ground surface (bgs), indicating the presence of an alluvial aquifer.

Five drinking water wells were drilled at the Site in the late 1950's to mid 1960's. All of these wells were drilled into the San Jose Formation to depths between 635 feet and 1,004 feet bgs. One of these wells was abandoned immediately after installation due to failure of the casing. Concurrent with this investigation, three of the wells were plugged and abandoned. Documentation of well abandonment is submitted separately from this report. The last well remains in place and is used for livestock watering by members of the Jicarilla Apache Tribe. Records available from the New Mexico Office of the State Engineer report no other domestic drinking water wells within one mile of the Site.

2.3 SITE HISTORY

On January 4, 2008, a release of natural gas condensate occurred from two ASTs situated within an earthen berm containment at the Site (Figure 2). Liquid drained through the berm, around an adjacent sump, under the fence on the south side of the facility and along a small drainage. On the day of the release, Enterprise filed a form C-141 with the NMOCD reporting a release of 25 barrels (bbls). Initial response activities were conducted and included partial removal of impacted soil and sampling from test holes to assess vertical extent of impacts. These activities are documented in the *Spill Cleanup Report Lindrith Compressor Station, Rio Arriba County, New Mexico* report dated September 2008.

Additional excavation occurred between November 18, 2009 and November 25, 2009. Enterprise removed 3,200 cubic yards of hydrocarbon impacted soil from the Site, which included all impact from the 2008 release. Enterprise identified historically impacted soil below 9 feet bgs attributable to releases from the ASTs prior to 2008. On December 15 and 16, 2009, Enterprise drilled six boreholes in the immediate vicinity of the excavation and installed three groundwater monitoring wells to identify the total depth of impacted soil and potential impact to groundwater outside of the excavation (Figure 2). Soil sampled from the boreholes indicated that the lateral impacts to the vadose zone could be limited. However, groundwater samples collected from the

monitoring wells contained concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX) exceeding the New Mexico Water Quality Control Commission (NMWQCC) standards, indicating that dissolved phase migration of contaminants had occurred.

A proposed *Delineation Work Plan* was submitted to JEPO on March 2, 2010, describing a full subsurface investigation. In addition, a *Supplemental Work Plan* dated April 19, 2010, was submitted to describe remedial actions to be performed during removal of the subsurface condensate storage sump. Subsequently, the sump located west of the excavation was removed and an additional 982 cubic yards of soil were excavated from the Site through May 20, 2010. Confirmation samples collected from the final excavation indicated impacted soil remained west and south of the excavation, as well as vertically beneath the open excavation exceeding 20 feet bgs. Enterprise determined that continued excavation of impacted soil would pose potential safety issues, would not totally address the known historical soil and groundwater impacts at the Site, and was not practical since it may have required moving the new condensate tank battery.

Enterprise submitted a *Combined ORC Injection and Delineation Work Plan and Remediation Work Plan* dated June 21, 2010, proposing *in situ* treatment and delineation investigation objectives. Approval of the work plans was provided in a letter addressed to Enterprise from the BIA dated July 12, 2010. As a result, four trenches were dug in the floor of the open excavation and packed with oxygen release compound (ORC). A perforated drain system with riser pipes was then installed in the trenches to allow for hydration of the ORC. The trenches and the entire excavation were subsequently backfilled. Hydration of the ORC occurred upon installation and on September 16, 2010, October 27, 2010, and November 22, 2010. On October 18, 2010, LTE began the delineation portion of the combined work plans, the results of which are described in this report.

3.0 INVESTIGATION METHODS

This section provides a description of the technical approach and strategies employed to complete the subsurface investigation. Twenty boreholes (B-10 to B-29) were completed during the course of the investigation. Nine of those boreholes were converted to 2-inch diameter monitoring wells (MW-4 to MW-12) and one borehole was converted to a 4-inch diameter monitoring well (MW-1R). Locations of the borings and monitoring wells are shown on Figure 2. Boreholes B-3 and B-6, as well as monitoring wells MW-2 and MW-3, were installed prior to this investigation.

3.1 INVESTIGATION OF UNDERGROUND UTILITIES

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.

3.2 DRILLING PROGRAM

For this investigation, LTE utilized a hollow-stem auger soil boring and sampling program with a CME 75 drill rig. LTE provided a geologist trained in conducting soil and groundwater investigations to oversee drilling activities at the Site. The geologist described continuous samples using a 5-foot split spoon sampler and determined which soil samples were to be retained for a laboratory analysis. The lithologic logs are included in Appendix A. The intervals from immediately beneath the ground surface and then every 2 feet thereafter were field screened for volatile aromatic hydrocarbons using a photoionization detector (PID) with a 10.6 electron-volt lamp. Additionally, any soil visibly stained or exhibiting hydrocarbon odor was also field screened. Field screening of soil samples was conducted in accordance with the NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases*, dated August 13, 1993. Results of the soil field screening data are recorded in the lithologic logs in Appendix A.

Nine of the 20 boreholes were converted to groundwater monitoring wells (MW-4 to MW-12) and one was converted to a product recovery well (MW-1R). Groundwater monitoring wells were constructed of 2-inch diameter schedule 40 polyvinyl-chloride (PVC) and included 20 feet of 0.01 or 0.02-inch machine slotted flush-threaded PVC well screen. The product recovery well MW-1R was constructed of 4-inch diameter schedule 40 PVC and included 20 feet of 0.02-inch machine slotted flush-threaded PVC well screen. At least 10 feet of screen was set beneath the water table and 10 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 2 feet above the top of the screen. A total of 2 feet of 3/8-inch bentonite chips was set above the gravel pack, followed by a neat cement slurry, containing a minimum of 5 percent (%) powdered bentonite to the surface. Well completion diagrams are included with the lithologic logs in Appendix A.

Following installation of the monitoring wells, each new well was developed utilizing a clean, disposable PVC bailer. LTE personnel removed fluid until the pH, electrical 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.

All work was conducted in accordance with industry-accepted practices. Downhole equipment was thoroughly decontaminated on site prior to each use. The decontamination water was containerized in a lined bin and collected into 55-gallon drums, then transferred to an on-site below ground tank for temporary storage prior to disposal. Impacted soil was containerized in 55-gallon drums, labeled for the contents, and sampled for waste characterization purposes. Soil will be disposed of at the Envirotech, Inc. landfarm in Hilltop, New Mexico. Soil borings that were not completed as groundwater monitoring wells were filled to the ground surface with grout.

A New Mexico licensed surveyor surveyed the coordinate locations and ground surface elevation of each soil boring and groundwater monitoring well in addition to the top of casing elevation for the groundwater monitoring wells. The existing 2-inch diameter groundwater monitoring wells (MW-2 and MW-3) were re-surveyed for consistency. The survey data is presented in Table 1.

3.3 SOIL SAMPLING

Soil samples were collected for laboratory analysis from the bottom of each soil boring and from the sections of cores containing the highest field screening results. Samples were collected in glass soil jars supplied by the laboratory and packed into jars to minimize headspace to the extent practicable. Samples were 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 United States Environmental Protection Agency (USEPA) Method 8021B, and total petroleum hydrocarbons (TPH) by USEPA Method 8015B. Based on field observations, two soil samples from B-27 were analyzed by HEAL for the full suite of volatile organic compounds (VOCs) by USEPA Method 8260B. One sample from soil boring B-29 at a depth of 30 feet to 30.5 feet bgs was submitted to Advanced Terra Testing, Inc. for geotechnical analyses, including a #200 sieve test and constant head permeability test. Glycol is used in current operations on site. A soil sample was submitted to HEAL for analysis of glycol based on a distinct odor observed during logging of B-21 and its distance from the source area.

3.4 GROUNDWATER SAMPLING

On November 15 and 16, 2010, LTE collected groundwater samples from the monitoring wells. Depth to product, depth to water, and total depth of the wells were measured with a Keck[®] oil-water interface probe. The interface probe was decontaminated with Alconox[™] soap and rinsed with de-ionized water prior to each measurement. At least three well casing volumes were purged from each well while pH, electrical conductivity, and temperature were monitored for stabilization. Field parameters were recorded on groundwater sampling forms, included in Appendix B. Once these parameters stabilized, the monitoring wells were sampled.

Groundwater samples were collected for analysis of BTEX, TPH, nitrate (as N) + nitrite (as N), iron, and pH. Samples for BTEX and TPH were collected by filling four 40-milliliter (ml) volatile organic analysis (VOA) glass vials provided by the analytical laboratory. The VOA vials were filled with groundwater until there was no headspace to prevent the loss of volatiles. The VOA vials were pre-preserved by the laboratory with mercuric chloride to prevent biodegradation. Groundwater samples were analyzed for BTEX according to USEPA Method 8021B Modified or 8260B, and for TPH by USEPA Method 8015B. Groundwater samples for analysis of nitrate (as N) + nitrite (as N) were collected in plastic bottles pre-preserved by the laboratory with sulfuric acid and analyzed by USEPA Method 300.0. Groundwater samples were collected in plastic bottles pre-preserved by the laboratory with nitric acid and analyzed for iron by EPA Method 200.7. Groundwater samples were analyzed for pH by Standard Method SM4500-H+B.

4.0 SAMPLING RESULTS

4.1 SOIL SAMPLING RESULTS

Soil samples collected from continuous cores for headspace screening and laboratory analysis were logged using the Unified Soil Classification System (USCS). Cross sections, showing

distribution of subsurface lithologies, are presented in Figures 3, 4 and 5. Cross section locations are shown in Figure 2.

4.1.1 Lithology

Lithology at the Site consists of a thick upper unit of brown sandy silt to silty sand that is 18 feet to 24 feet thick. The unit contains shallow clay lenses that pinch out in the southeastern portion of the investigation area. The clay layers are less than 5 feet thick.

A yellowish brown poorly sorted silty sand containing primarily fine sand grain content occurs beneath the upper unit. Its distinguishing color makes it an easy marker and it is identifiable throughout the Site. The layer is 3 feet to 6.5 feet thick and grades into a finer grained clayey sand to the west.

Beneath the yellowish brown silty sand, a poorly sorted sand interbedded with silty sands occurs. The interbedded silty sands are coarser than the silty sands identified above, containing at least 60% sand content and more often greater than 75% sand content. Grain sizes increase and include medium to coarse grained sand, which was not present in the upper layers. This unit exhibits an undulating lower surface and is thick beneath the source area. The sand is most often saturated. A large brown clay lens occurs within the thickest portion of the sand and extends for 40 feet in the northwest direction (Figure 3). Smaller clay lenses occur within the sand (Figures 4 and 5). The clay layers are 5 feet to 20 feet thick.

The deepest unit identified is a gray semi-consolidated silty sand to silt. The layer is hard, compacted and dry, and it appears to serve as a confining unit. Its presence commonly serves as a distinct boundary between saturated and dry soils and impacted and non-impacted soils. The undulating upper surface rises to the north and east, pinching portions of the upper sandy unit to only 6 feet thick. In these areas, the confining unit appears to inhibit groundwater saturation of the sandy unit, which becomes only moist to dry. This confining layer is located at depths ranging from approximately 33 feet to 43 feet bgs. The confining layer was not observed in soil borings B-10, B-14, B-22, or B-28. It is likely to be present in these locations, but at a depth greater than the total depth of the soil borings.

4.1.2 Field Screening

All field screening results are recorded in the lithologic logs in Appendix A. Bar graphs corresponding to field screening results are displayed next to boreholes on the cross sections in Figures 3, 4 and 5. Field screening results indicate that most of the measurable organic vapors occurred within the saturated sandy unit. PID measurements of over 1,000 parts per million (ppm) most often occurred at depths between 27 feet and 38 feet bgs. Within this depth range, two impacted intervals are often present. One interval occurs at 27 feet to 33 feet bgs and resulted in PID measurements ranging from over 100 ppm to as high as 4,723 ppm. Between 38 feet and 40 feet bgs, lower PID values were observed, ranging from 43.8 ppm to 360 ppm.

PID values greater than 100 ppm were measured in shallower soils (less than 27 feet bgs) in B-10, B-27, and B-29. PID values greater than 100 ppm occurred within the deeper gray confining layer only in B-17 and B-29.

4.1.3 Laboratory Analytical Results

Tables 2 and 3 summarize the soil laboratory analytical results. Appendix C contains the complete laboratory reports and Figures 6 and 7 depict laboratory results on a site map. Results indicate soils at the Site contain elevated concentrations of BTEX and TPH in samples collected between 22 feet and 35 feet bgs. Soil samples collected from the bottom of the boreholes are below the NMOCD standards for total BTEX and TPH. These samples were collected from 39 feet to 48 feet bgs.

Soil containing elevated BTEX and TPH concentrations was primarily restricted to the sandy layer. Total BTEX concentrations exceed the NMOCD standards in B-13 at 30 feet bgs and in B-20 at 30 feet bgs. The analytical results indicate that of the BTEX constituents, the highest concentrations are total xylenes, followed by benzene. Ethylbenzene and toluene are present in smaller concentrations. This is characteristic of almost all of the soil samples.

TPH concentrations exceed the NMOCD standards from all samples collected from the sandy layer, except in B-22 and B-23 to the south and in B-19, B-21, and B-26 to the northwest. However, TPH concentrations within the sandy layer at 22 feet to 35 feet bgs are not compositionally consistent throughout the Site. Gasoline range organics (GRO) are the significant TPH constituent in samples collected from within and near the former excavation (B-10, B-11, and B-12). These samples contain no motor oil range organics (MRO) and only minor concentrations of diesel range organics (DRO). The samples correspond to PID measurements that are less than 3,000 ppm. Similar results were detected in samples from B-3 and B-6 from the previous investigation. Soil boring B-19, located far north of the source area contains trace amounts of GRO and DRO, but no MRO.

MRO was the major TPH constituent in other samples. These include B-14, B-15, B-17, and B-29, which are located north of the former excavation. B-27 and B-28 are located farther from the former excavation and contain high concentrations of MRO. Corresponding PID measurements for samples from these locations were exceptionally high, reaching as high as 4,056 ppm in B-17 and 4,723 ppm in B-28.

Soil borings B-13, B-16, B-18, B-20, and B-24 contain significant concentrations of both GRO and MRO. PID measurements from these boreholes were consistently in the 3,000 ppm to 4,000 ppm range. These sample locations are distributed throughout the investigation area, primarily northwest and southeast of the new tank battery, with B-13 located in the northeast corner of the study area.

Neither the PID nor the laboratory analytical results from B-27 samples correlate to data observed near the former excavation. Two samples from different depths were collected from B-27 and analyzed using USEPA Modified Method 8260B to determine if different signatures were evident at different depths, which may indicate separate sources. The lab results shown in Table 3 do not vary significantly. Both samples contain small concentrations of trimethylbenzene and xylenes. The shallow sample from 12 feet bgs also contains traces of naphthalene, isopropyltoluene, n-propylbenzene, and sec-butylbenzene. Concentrations of these constituents are below the New Mexico Environment Department soil screening levels for industrial sites.

A soil sample was submitted for analysis of glycol based on a distinct odor observed during logging of B-21 and its distance from the source area. No glycol was identified in the soil sample from soil boring B-21 (Table 4).

4.1.4 Geotechnical Results

Results of the #200 sieve test concluded that 29.5% of the sandy layer sampled at a depth of 30 feet to 30.5 feet bgs in B-29 passed through the 0.075 millimeter sieve. Therefore, 70.5% of the soil is larger than the #200 sieve. This classifies the soil as a fine sand (Fetter, 1998).

Results of the back pressure constant head permeability test indicate the porosity of the soil is 38.62%. The permeability result was 0.0016 centimeters per second, indicating the soils are a fine sand or silty sand. Appendix D contains the geotechnical laboratory results.

4.2 GROUNDWATER SAMPLING RESULTS

Table 5 summarizes the depth to water and groundwater elevation data collected from the monitoring wells. Groundwater level measurements were collected on November 11, 2010, as part of well development activities and were measured again on November 15, 2010, in preparation for purging and sampling. Monitoring wells MW-1R, MW-2, and MW-9 all contained measureable amounts of phase separated hydrocarbon (PSH), including 0.93 feet in MW-1R, 0.04 feet in MW-2, and 0.77 feet in MW-9. Groundwater elevations were calculated in these wells using a density correction factor of 0.8. MW-1R is located in the former excavation and MW-2 and MW-9 are downgradient of the source area (Figure 2).

Figure 8 depicts a groundwater potentiometric surface map interpreted for data collected during the sampling event. Groundwater flow direction is generally toward the west-northwest, parallel to the unnamed tributary of Largo Canyon. Mounding occurs beneath the former excavation and a local depression is evident at MW-3.

Table 6 summarizes the groundwater analytical results, Figure 9 depicts the groundwater analytical results, and Appendix E contains the laboratory analytical report for the groundwater samples. Analytical results indicate that groundwater at the Site contains elevated concentrations of total BTEX, but does not contain significant concentrations of TPH. Monitoring well MW-3 contains the highest concentration of TPH at 0.0211 micrograms per liter (ug/l). Total BTEX concentrations range from less than 5 ug/l in MW-8, MW-10, and MW-11 to 6,912 ug/l in MW-3. Total BTEX concentrations exceed the NMWQCC standards in MW-3, MW-4, MW-6, MW-7, and MW-12.

Additional water quality parameters indicate pH values for groundwater range from 6.57 in MW-6 to 7.57 in MW-10. There is no detectable nitrate and nitrite in the groundwater samples; however, iron occurs at concentrations exceeding the NMWQCC domestic water supply standard of 1 milligram per liter (mg/l) in all wells sampled. The highest concentrations of iron occur in monitoring wells near the former excavation at 470 mg/l in MW-4, 210 mg/l in MW-3, and 140 mg/l in MW-6.

5.0 DATA INTERPRETATION

5.1 LOCAL SITE GEOLOGY AND HYDROGEOLOGY

Site-specific geology is identified as Quaternary alluvium consisting of unconsolidated silts and sands that were most likely formed by fluvial processes associated with the presence of shallow braided channels within the uppermost reaches of Largo Canyon. The very fine sediments identified in the subsurface likely represent overbank or drape deposits formed during periods of low discharge.

The slightly coarser sand and silty sand occurring below the silts could represent deposition during formation of minor channels that cut into the underlying units. This scouring action may be responsible for the variations in thickness of the sand unit and the undulating lower surface. The clay lenses within the sandy layer represent drape deposits formed when flow velocity decreased rapidly. Due to the presence of water in this interval, it serves as a shallow alluvial aquifer. The aquifer does not produce significant water when it occurs as a thin layer.

The lowermost sandy silt serves as a confining unit for the alluvial aquifer and represents older semi-consolidated alluvium. It was not sampled in areas where the sand layer is thickest. These areas are remnants of former scours or channels that cut into the underlying silt.

General groundwater flow direction is to the west-northwest, following a tributary of Largo Canyon. Mounding at the former excavation location causes groundwater to flow outward from the source area in all directions. A small depression occurs south of the source area, and the water table gradient to the northwest is gently sloping.

5.2 SOIL AND GROUNDWATER IMPACTS

Results of the investigation suggest the release from the decommissioned ASTs impacted soil and groundwater directly beneath and downgradient of their former location. The impacts extend outward from the former AST location to the flat areas of the water table gradient. Most of the vertical impact was removed during the excavation portion of the remediation. However, in the near vicinity of the source area, up to 17 feet of the unsaturated zone above the water table is impacted. The vertical thickness of impact decreases with the lateral distance away from the source area, as the impact is restricted to the groundwater smear zone in the sandy alluvial aquifer. Field and laboratory data confirm that the impact does not extend vertically below the upper portion of the confining unit at any location on the Site.

Lateral impacts are limited to the sandy layer, but widespread. The impacts have been distributed by groundwater advection. Within the sandy layer, it is likely the light hydrocarbon condensate released from the ASTs did not sorb strongly to the soils; rather, it migrated through the pore spaces of the soils. Further evidence of this is provided by the presence of PSH in MW-1R, MW-2, and MW-9.

The AST release is characterized in the soil by a light GRO constituent in soil TPH concentrations. The GRO component is most prevalent in soil at B-10, B-11, B-12, and B-3, and

B-6 from a previous investigation. Impact from this release has not migrated south to B-23 and B-22 and has not migrated west to B-26 or B-21.

It is likely that the AST release overprinted additional historical releases. Research of previous operations at the Site indicates a variety of potential sources existed, including a former hydrocarbon storage tank that was abandoned in place, former compressor operations and associated former lube oil storage and drain lines, and an unlined burn pit. The estimated former locations of potential sources are shown on Figure 10.

One widespread release is evident in the sandy alluvial aquifer and is represented by elevated PID measurements occurring between 38 feet and 40 feet bgs in many borings. Additionally, the widespread release is characterized by a high MRO constituent in TPH concentrations measured in soil samples. MRO is the primary constituent in samples collected from the sandy layer north of the excavation (B-14, B-15, B-17, and B-29) and from two outliers (B-27 and B-28). MRO and GRO constituents are both high in samples from B-13, B-16, B-18, B-20 and B-24, possibly representing commingling of releases from separate sources.

Soil exhibiting elevated concentrations of TPH were identified in B-28. Groundwater sampled from MW-12 also contained elevated BTEX concentrations. However, clean soil and groundwater were sampled between B-28/MW-12 and the AST release source area, indicating the AST release has not migrated to the vicinity of B-28/MW-12 at this time. The source for the impacts observed at B-28 and MW-12 is unknown.

Additional investigation and groundwater monitoring will be required in the area of B-27. In this boring, PID readings greater than 2,000 ppm started at 12 feet bgs and continued to 40 feet bgs. PID readings between 12 feet and 20 feet bgs typically exceeded 5,000 ppm. The elevated iron concentrations at MW-4 are likely attributable to a reduction reaction from an upgradient source in the vicinity of B-27. Historical site plans provided by Enterprise indicate a pipeline leading to the southeast, labeled "To Burn Pit". It is possible that B-27 is located in or near the former burn pit. Naphthalene and other aromatics identified in B-27 are known to occur during burning of hydrocarbons. Their presence in B-27 is additional evidence of a burn pit source.

The impacts observed in soil at B-13 are significant and differ in properties from the AST release and the widespread historic release. Soil exhibiting elevated concentrations of both BTEX and TPH are present in soil from this borehole. Groundwater sampled from MW-5 also contains elevated BTEX; although the concentrations do not exceed NMWQCC standards. B-13 contains soil with TPH concentrations that are higher than those recorded from the AST source area. The MRO concentration in B-13 is the highest recorded MRO concentration at the Site, suggesting strong influence from a separate release.

Groundwater impacts appear to be comingled between the widespread historic and AST releases; however, the presence of PSH in MW-1R and MW-2 are likely due to the AST release. PSH in MW-9 may also be related to the AST release; however the thickness of PSH in MW-9 and the elevated TPH concentrations in B-24 may suggest a separate source. Elevated BTEX concentrations in MW-3, MW-4, and MW-6 may be related to the AST release based on groundwater flow direction from the mounding at the former source area. MW-11 defines the downgradient extent of impact from the AST release.

6.0 SUMMARY AND CONCLUSIONS

Soil at the Site has been impacted by multiple historical releases of hydrocarbons. The historic AST release affects an area approximately 600 feet long by 240 feet wide (Figure 10) and is defined by the presence of PSH on the water table and elevated BTEX concentrations in groundwater. Soil impacted by the AST release contains elevated concentrations of TPH, and the GRO constituent in particular. Up to 17 feet of impacted soil remains under the former source area. Outside this location, impact is restricted to the upper portion of a sandy alluvial aquifer and has migrated along the water table. Laterally, the impacts extend to the northwest.

The mounding of the groundwater table observed near the AST release source area may be artificial due to addition of approximately 600 gallons of water to hydrate ORC installed during previous remediation efforts. Infiltration from precipitation occurred while the excavation was open and also may have contributed to the mounding. LTE has ceased hydration activities until further remediation is planned and additional groundwater elevation data are gathered to determine if the mounding is artificial.

PSH present in MW-1R, MW-2, and MW-9 will continue to act as a source of dissolved phase contamination in groundwater at the Site. MW-1R was installed as a product recovery well, and active recovery should begin immediately. LTE recommends installation of a product skimming pump in MW-1R as soon as possible. Groundwater elevations should be monitored monthly to gauge the PSH thickness and to investigate any changes in groundwater flow behavior. Additional options for remediation of the AST release at this Site will be submitted to Enterprise under separate cover.

Impacts from the AST release overprinted additional historic releases as shown on Figure 10. One historic release is widespread throughout the Site. It is represented by elevated PID measurements ranging from 43.8 ppm to 330 ppm, and it contains a significant component of MRO in the TPH results. Its source is unknown and may be numerous. Four other potential point source areas are evident. One is near B-28/MW-12 and another is near B-13/MW-5. The sources for these impacts are unidentified. A third potential source may be located near MW-9, and a final point source is located near B-27. The source near B-27 may be the former burn pit.

The vertical extent of soil impact has been defined and does not extend deep into the confining layer. The lateral extent of soil impacts from historic sources remains undefined to the west, north, and east. The concentrations of TPH in the soil impacted by the historic releases exceed NMOCD standards and concentrations of BTEX in groundwater exceed NMWQCC standards. Further delineation is required to fully identify the extent of these impacts.

7.0 LIMITATIONS

No investigation is infallible. Some uncertainty will always exist concerning the presence or absence of potential contaminants at a particular property, irrespective of the rigor of the investigation. Accordingly, LTE does not warrant that contaminants, other than those identified in this report, do not exist at the subject property or may not exist there in the future.

LTE believes that it has performed the services summarized in this report in a manner consistent with the level of care and skill ordinarily exercised by members of the environmental profession practicing at the same time and under similar conditions in the area of the project.

8.0 REFERENCES

Fetter, C.W., 1998, Applied Hydrogeology, New York, Macmillan.

Brister, B.S. and G.K. Hoffman, 2002, *Fundamental Geology of San Juan Basin Energy Resources*, New Mexico's Energy, Present and Future: Policy, Production, Economics, and the Environment edited by B.S. Brister and L.G. Price. New Mexico Bureau of Geology and Mineral Resources.

Stone, W.J., F.P. Lyford, P.F. Frenzel, N.H. Mizell and E.T. Padgett, 1983, *Hydrogeology and water resources of the San Juan Basin, New Mexico*, HR-6 New Mexico Bureau of Geology and Mineral Resources Hydrology Report 6.

FIGURES

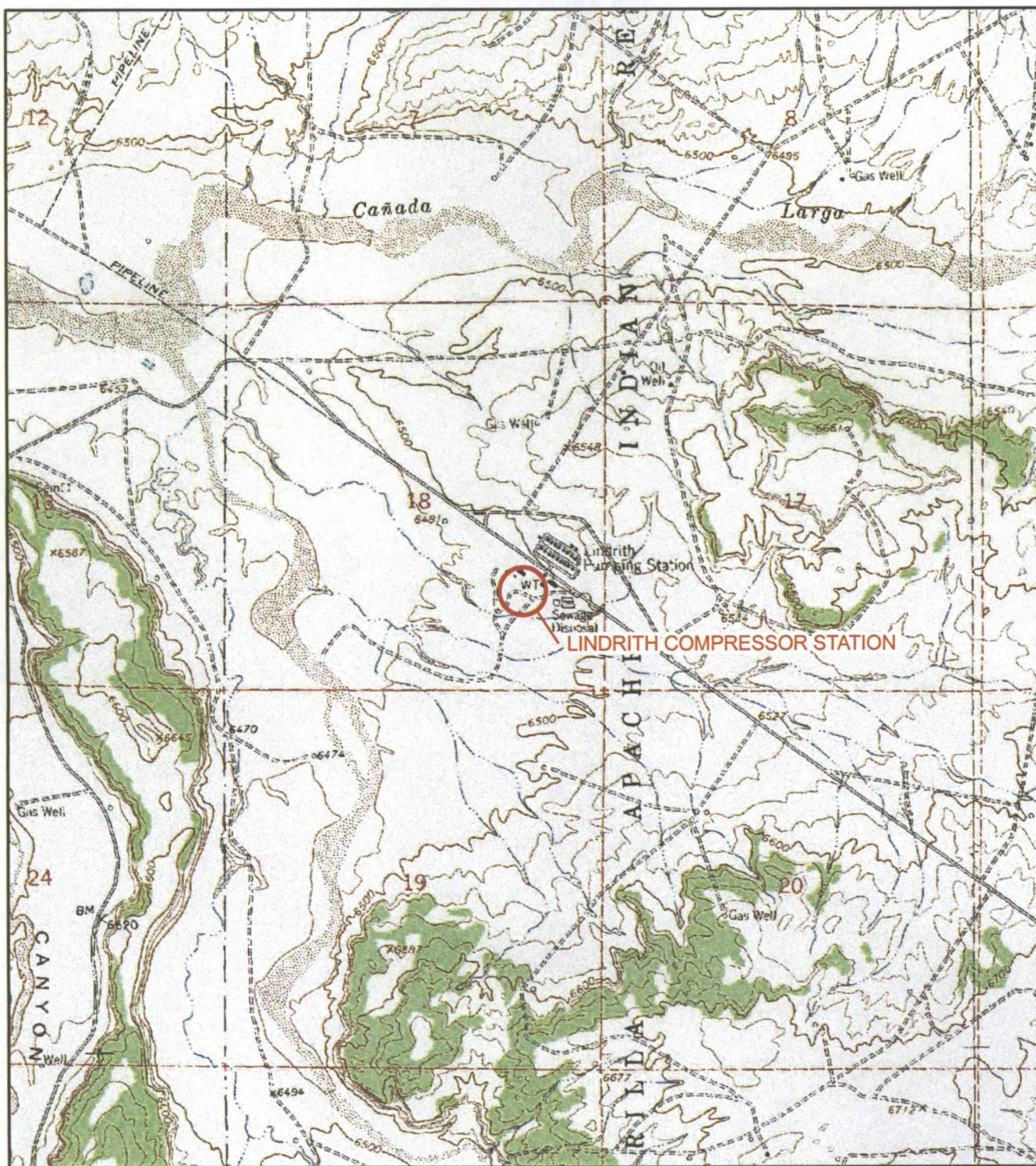
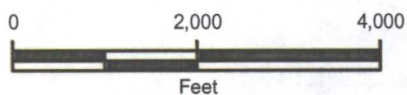


IMAGE COURTESY OF USDA/NRCS, VARIOUS DATES

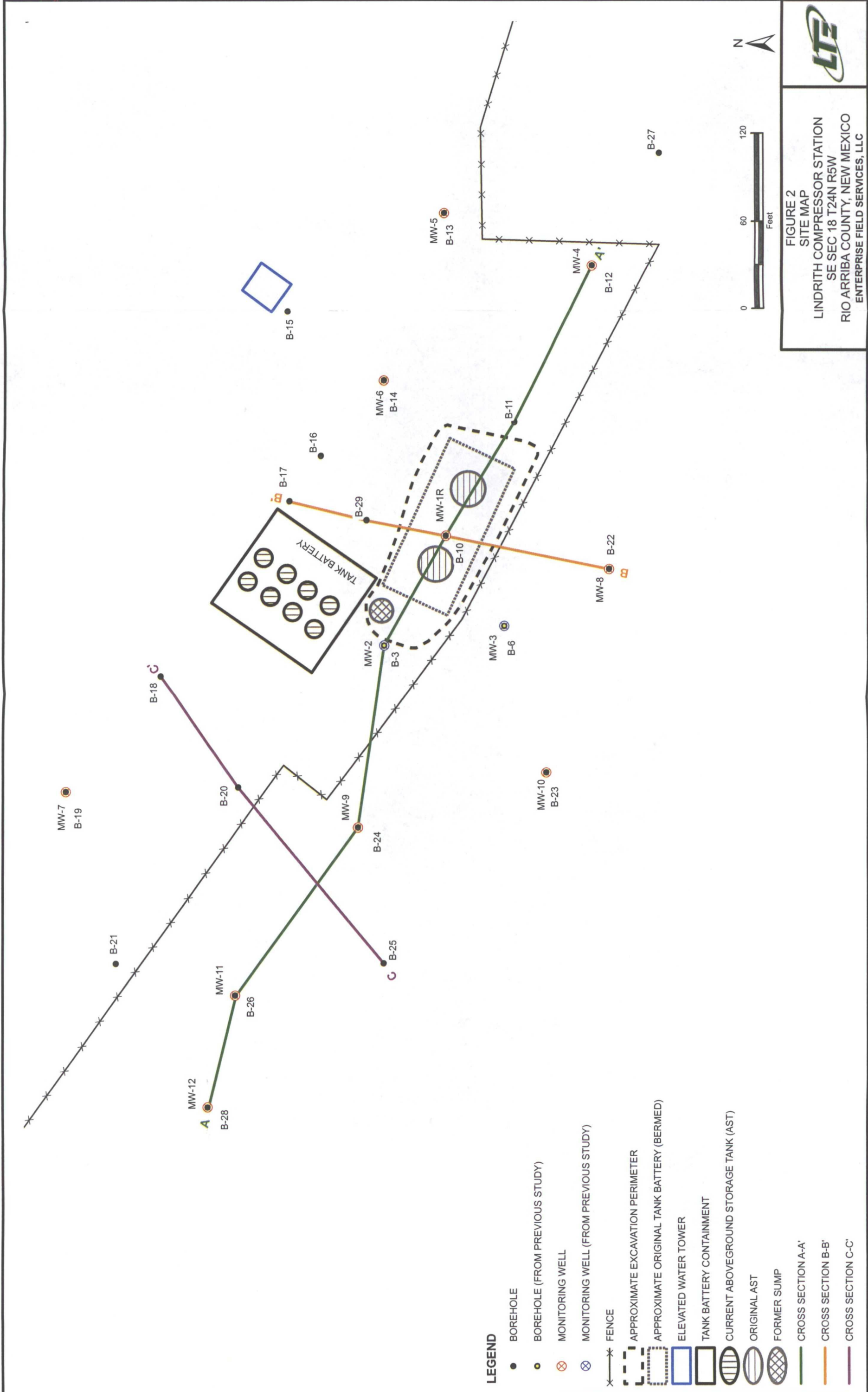


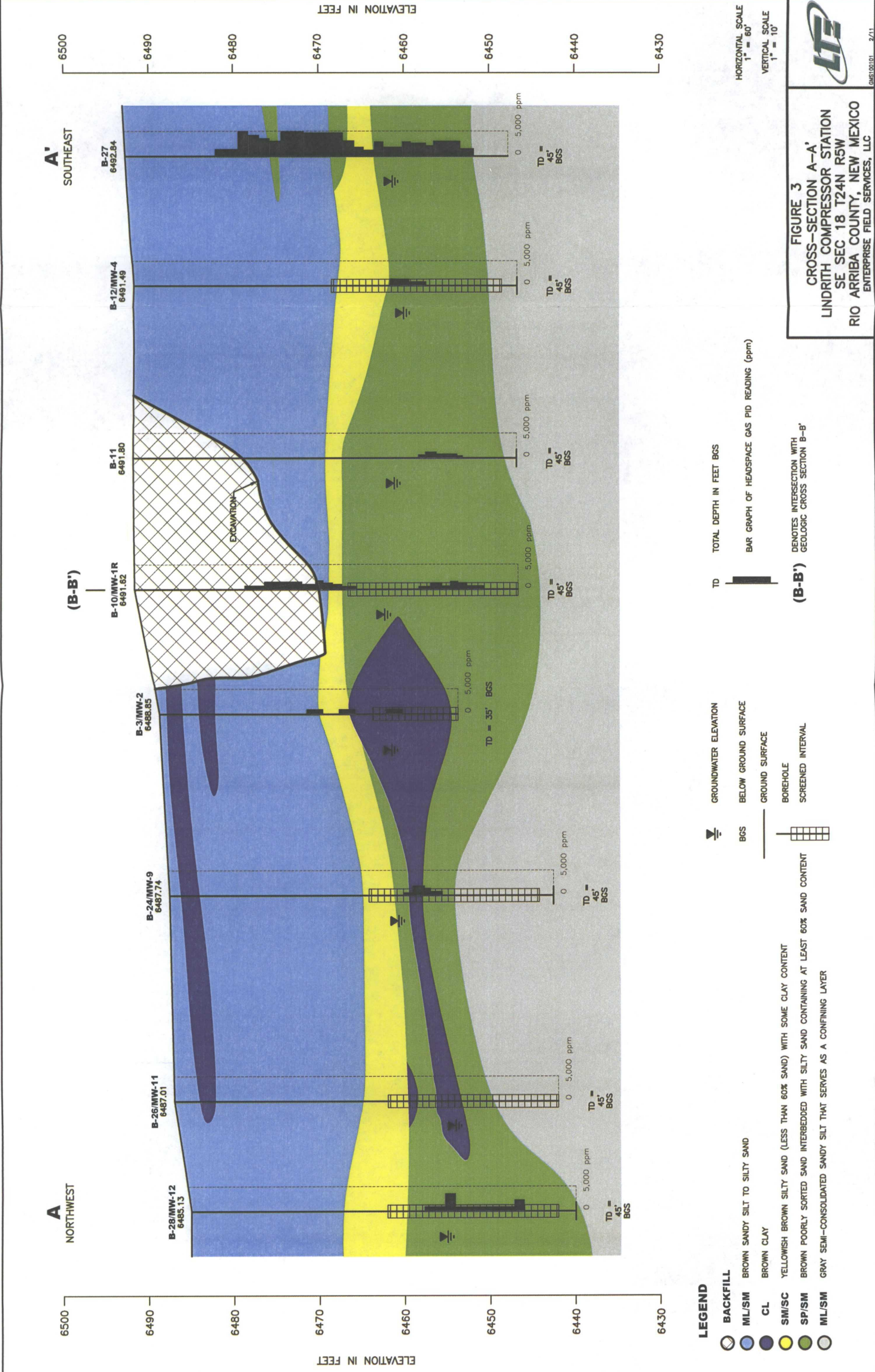
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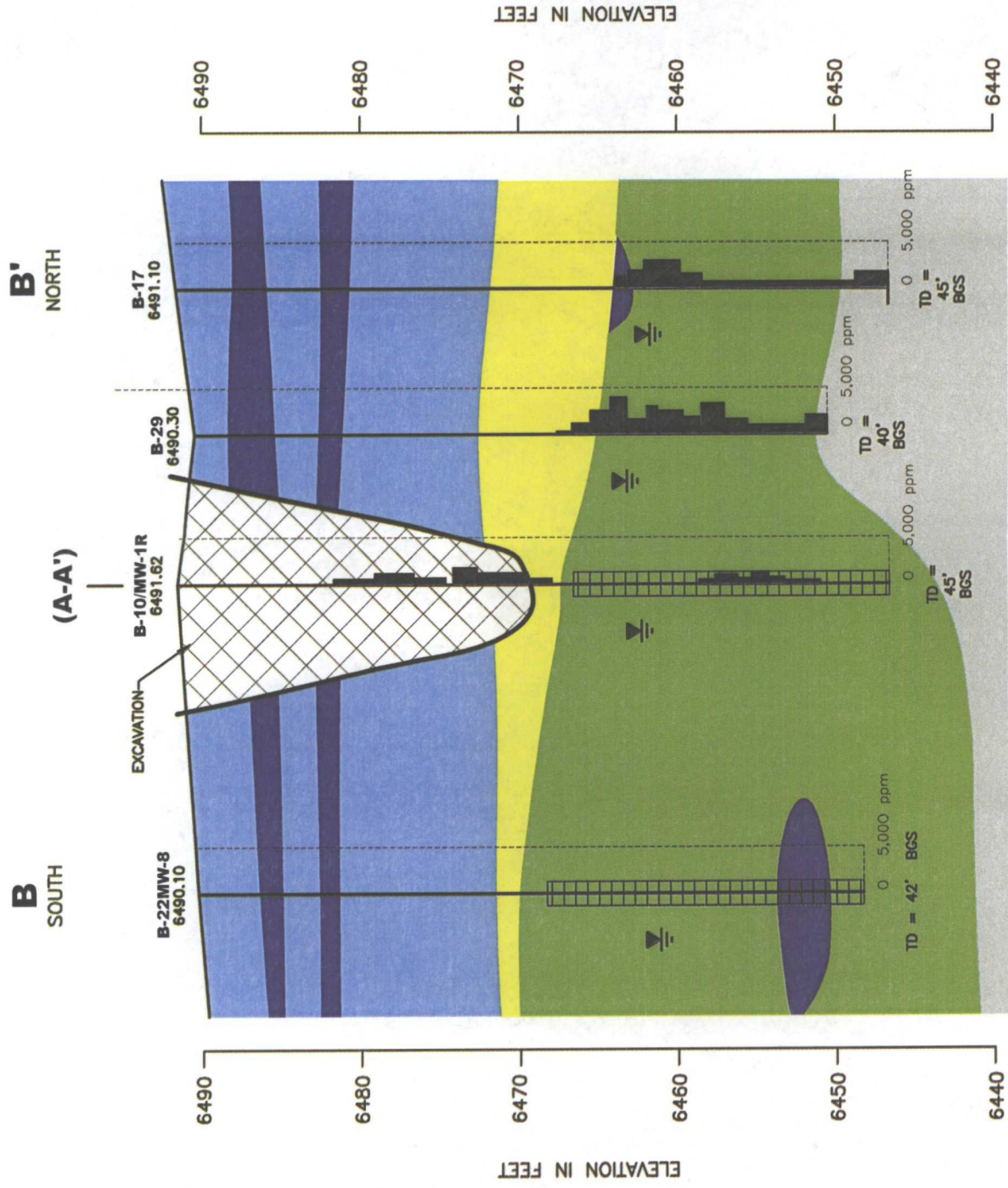
 SITE LOCATION

FIGURE 1
SITE LOCATION MAP
LINDRITH COMPRESSOR STATION
SE SEC 18 T24N R5W
RIO ARRIBA COUNTY, NEW MEXICO
ENTERPRISE FIELD SERVICES, LLC









LEGEND

- BACKFILL
- ML/SM BROWN SANDY SILT TO SILTY SAND
- CL BROWN CLAY
- SM/SC YELLOWISH BROWN SILTY SAND (LESS THAN 60% SAND) WITH SOME CLAY CONTENT
- SP/SM BROWN POORLY SORTED SAND INTERBEDDED WITH SILTY SAND CONTAINING AT LEAST 60% SAND CONTENT
- ML/SM GRAY SEMI-CONSOLIDATED SANDY SILT THAT SERVES AS A CONFINING LAYER

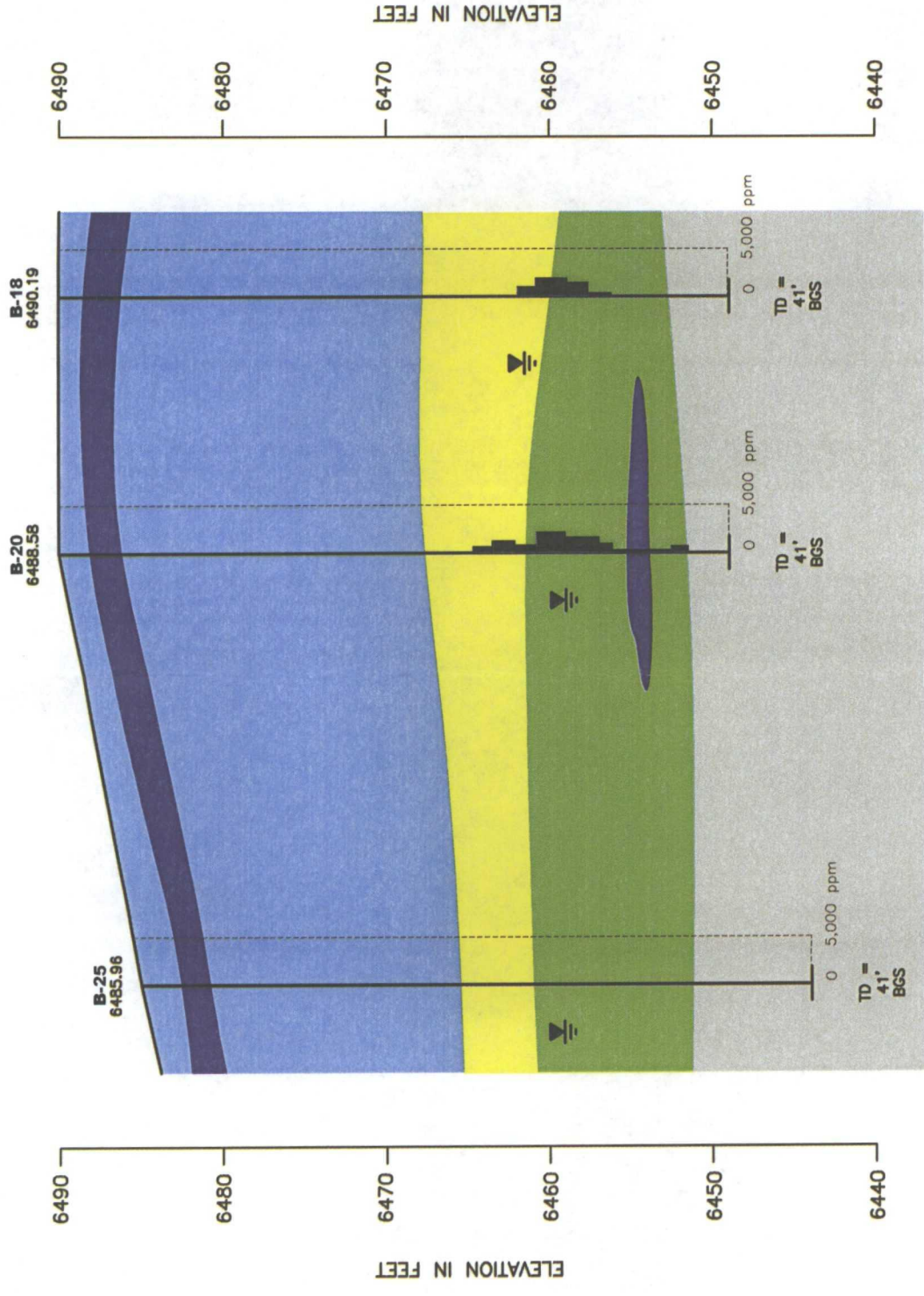
- GROUNDWATER ELEVATION
- BGS BELOW GROUND SURFACE
- GROUND SURFACE
- CONTACT LINE (DASHED WHERE INFERRED)
- BOREHOLE
- SCREENED INTERVAL

- TD TOTAL DEPTH IN FEET BGS
- BAR GRAPH OF HEADSPACE GAS PID READING (ppm)
- (A-A') DENOTES INTERSECTION WITH GEOLOGIC CROSS SECTION A-A'

HORIZONTAL SCALE
1" = 80'
VERTICAL SCALE
1" = 10'

C
SOUTHWEST

C'
NORTHEAST



LEGEND

- BACKFILL
- ML/SM BROWN SANDY SILT TO SILTY SAND
- CL BROWN CLAY
- SM/SC YELLOWISH BROWN SILTY SAND (LESS THAN 60% SAND) WITH SOME CLAY CONTENT
- SP/SM BROWN POORLY SORTED SAND INTERBEDDED WITH SILTY SAND CONTAINING AT LEAST 60% SAND CONTENT
- ML/SM GRAY SEMI-CONSOLIDATED SANDY SILT THAT SERVES AS A CONFINING LAYER

- GROUNDWATER ELEVATION
- BGS BELOW GROUND SURFACE
- GROUND SURFACE
- CONTACT LINE (DASHED WHERE INFERRED)
- BOREHOLE
- SCREENED INTERVAL

- TOTAL DEPTH IN FEET BGS
- BAR GRAPH OF HEADSPACE GAS PID READING (ppm)

HORIZONTAL SCALE
1" = 60'
VERTICAL SCALE
1" = 10'

FIGURE 5
CROSS-SECTION C-C'
LINDRITH COMPRESSOR STATION
SE SEC 18 T24N R5W
RIO ARRIBA COUNTY, NEW MEXICO
ENTERPRISE FIELD SERVICES, LLC



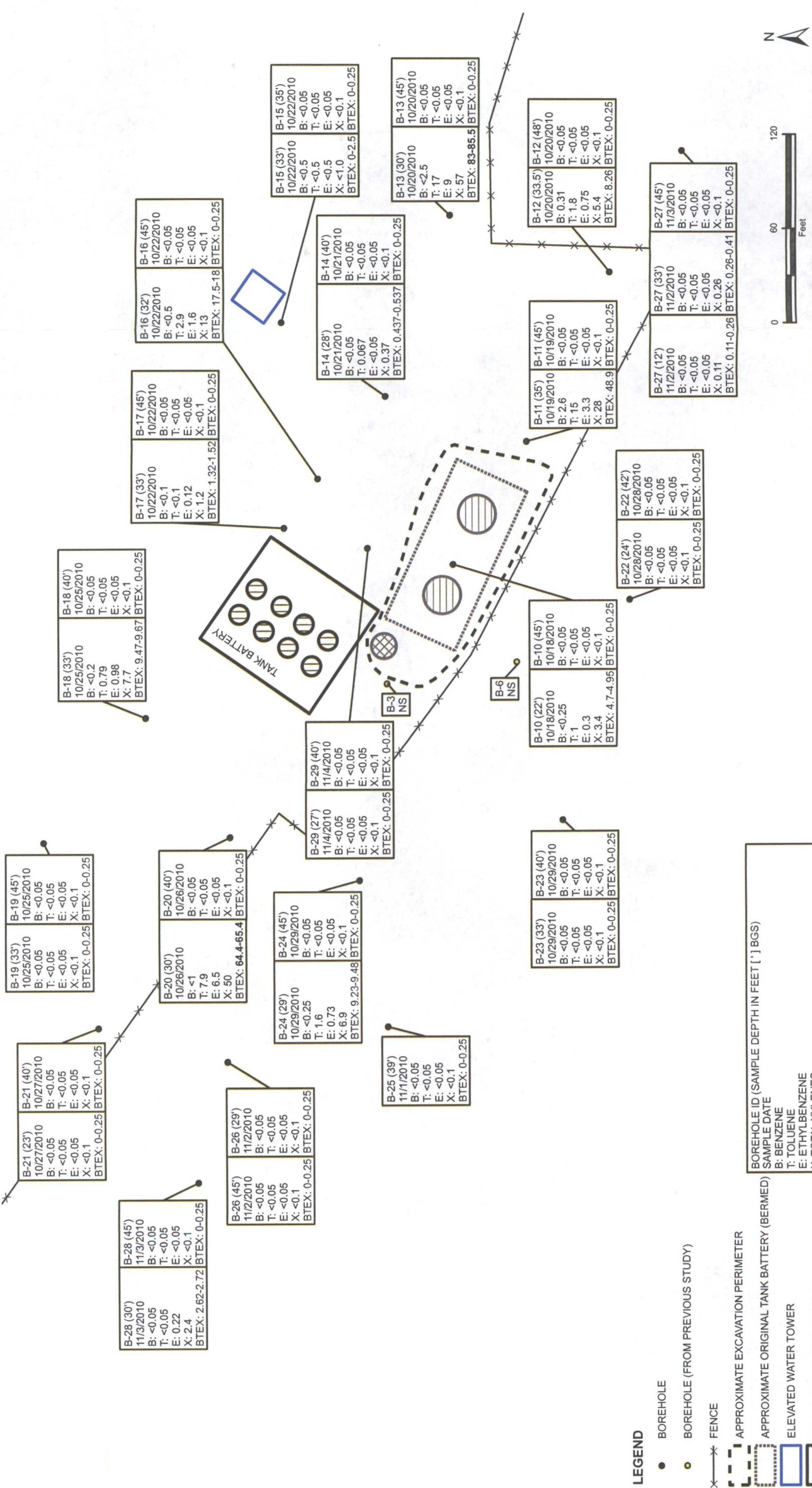
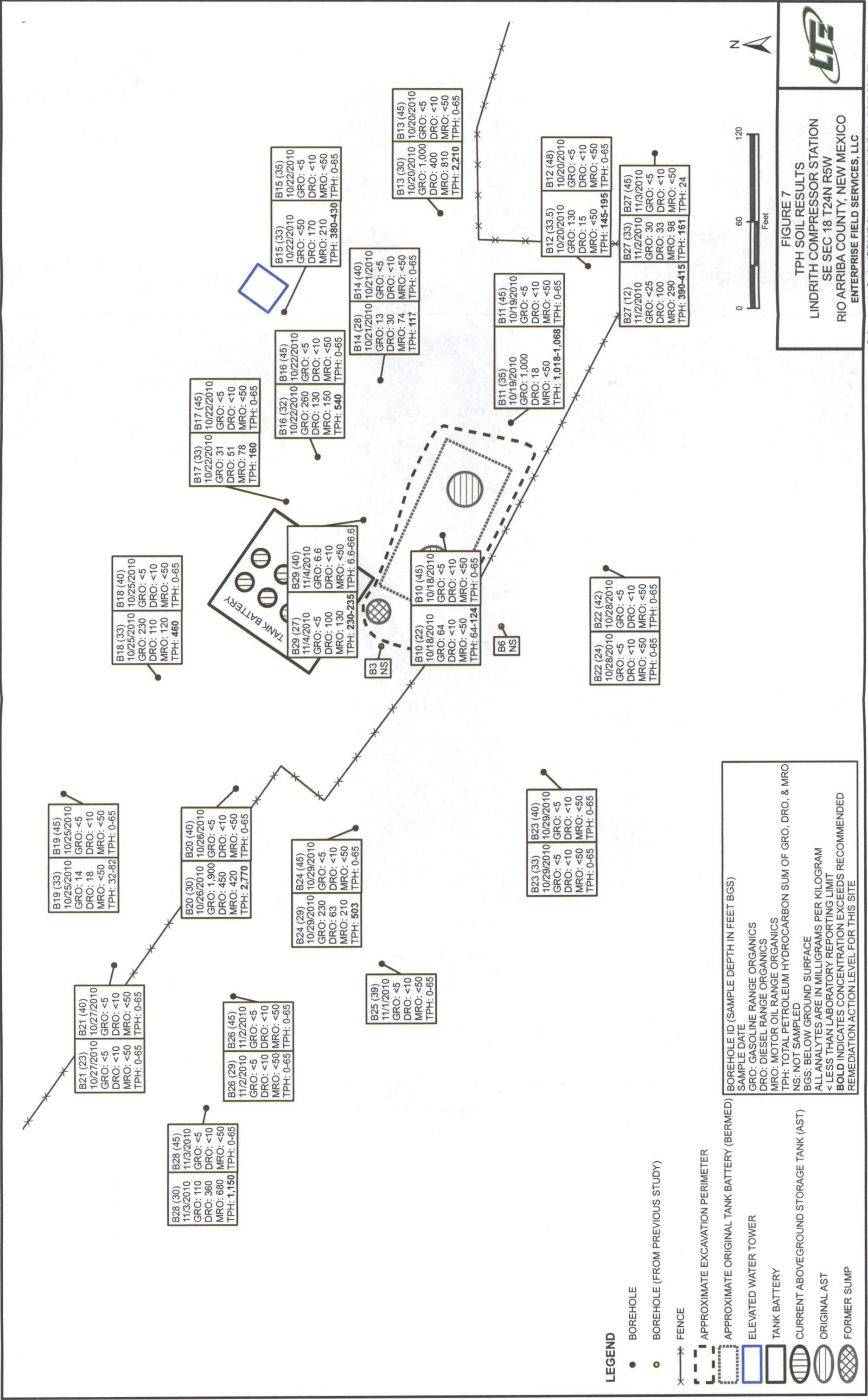
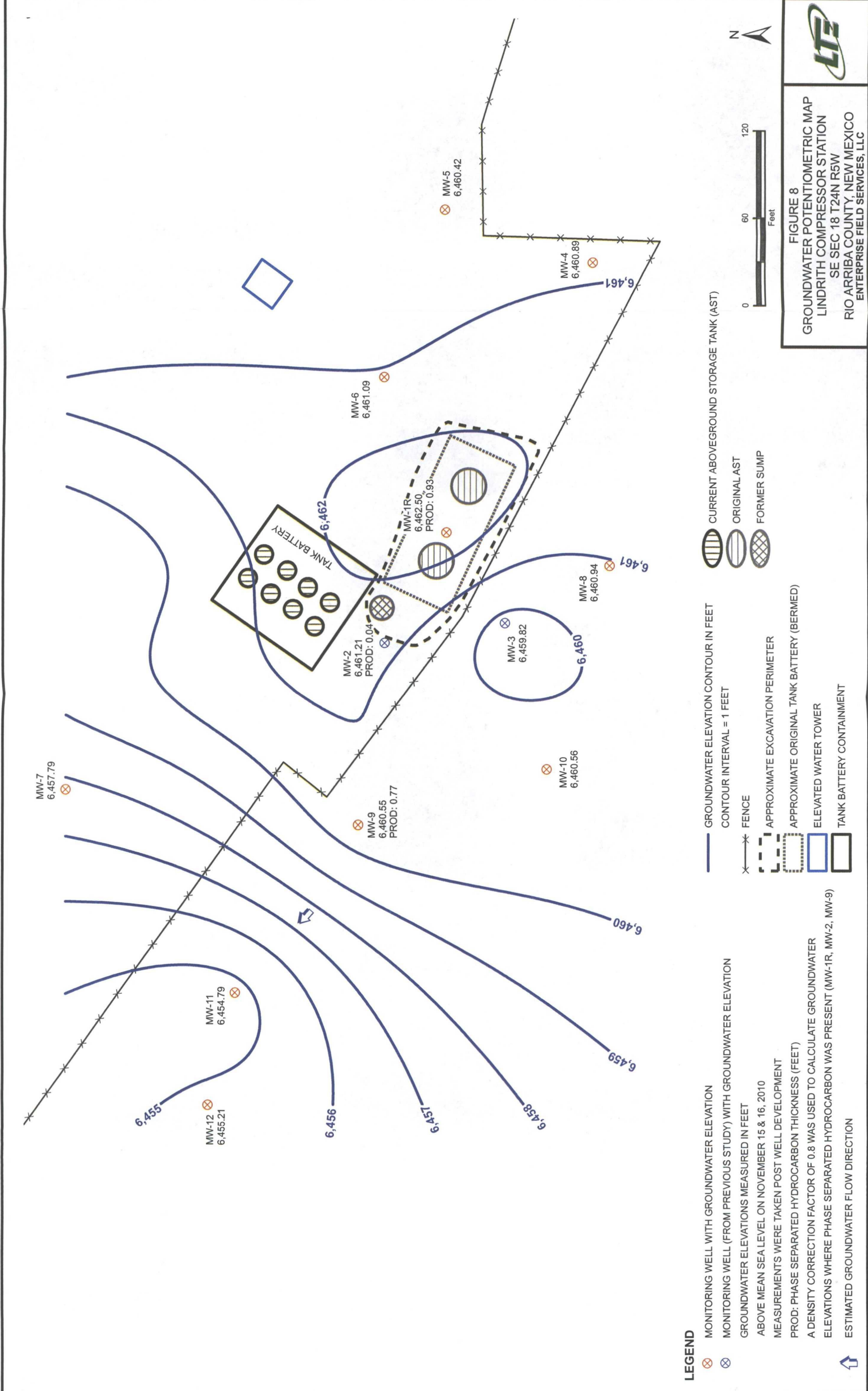


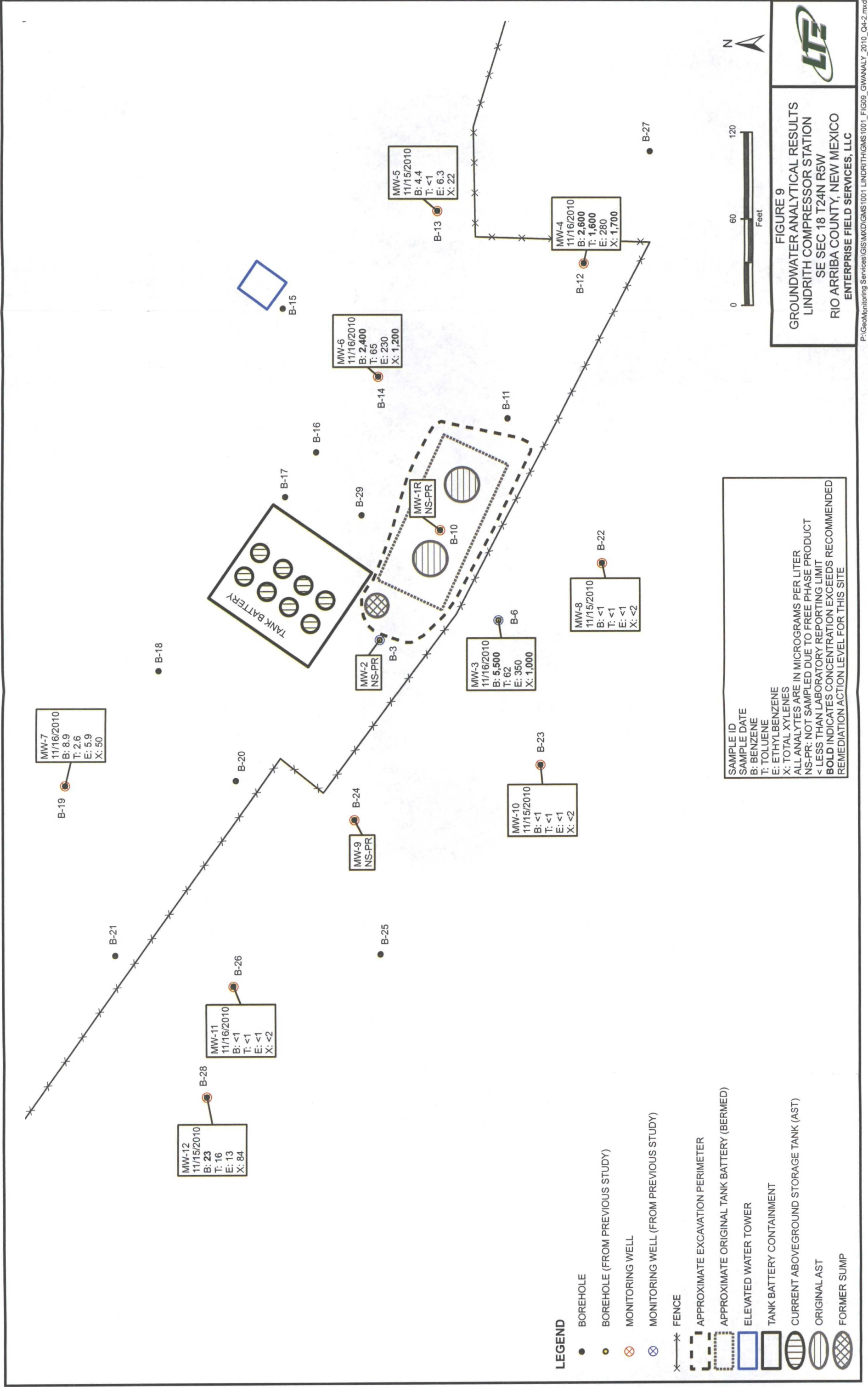
FIGURE 6
BTEX SOIL RESULTS
LINDRITH COMPRESSOR STATION
SE SEC 18 T24N R5W
RIO ARRIBA COUNTY, NEW MEXICO
ENTERPRISE FIELD SERVICES, LLC

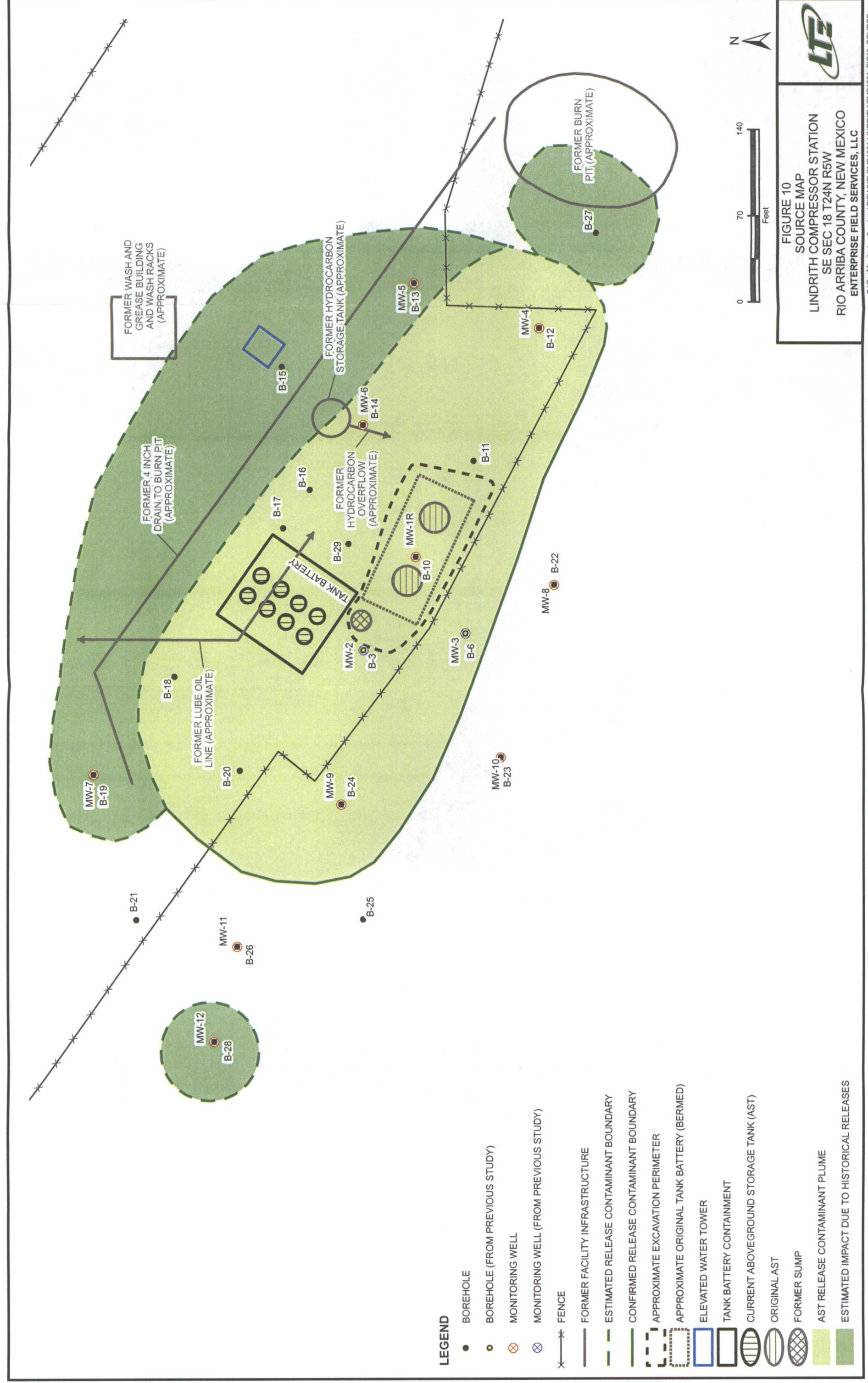
BOREHOLE ID (SAMPLE DEPTH IN FEET ['] BGS)
SAMPLE DATE
B: BENZENE
T: TOLUENE
E: ETHYLBENZENE
X: TOTAL XYLENES
BTEX: SUM OF B, T, E, & X
NS: NOT SAMPLED
BGS: BELOW GROUND SURFACE
ALL ANALYTES ARE IN MILLIGRAMS PER KILOGRAM
< LESS THAN LABORATORY REPORTING LIMIT
**BOLD INDICATES CONCENTRATION EXCEEDS RECOMMENDED
REMEDIATION ACTION LEVEL FOR THIS SITE**

LEGEND
● BOREHOLE
● BOREHOLE (FROM PREVIOUS STUDY)
✕ FENCE
--- APPROXIMATE EXCAVATION PERIMETER
--- APPROXIMATE ORIGINAL TANK BATTERY (BERMED)
ELEVATED WATER TOWER
TANK BATTERY CONTAINMENT
CURRENT ABOVEGROUND STORAGE TANK (AST)
ORIGINAL AST
FORMER SUMP









LEGEND

- BOREHOLE
- BOREHOLE (FROM PREVIOUS STUDY)
- ⊗ MONITORING WELL
- ⊗ MONITORING WELL (FROM PREVIOUS STUDY)
- FENCE
- FORMER FACILITY INFRASTRUCTURE
- ESTIMATED RELEASE CONTAMINANT BOUNDARY
- CONFIRMED RELEASE CONTAMINANT BOUNDARY
- APPROXIMATE EXCAVATION PERIMETER
- APPROXIMATE ORIGINAL TANK BATTERY (BERMED)
- ELEVATED WATER TOWER
- TANK BATTERY CONTAINMENT
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- ORIGINAL AST
- FORMER SUMP
- AST RELEASE CONTAMINANT PLUME
- ESTIMATED IMPACT DUE TO HISTORICAL RELEASES

FIGURE 10
SOURCE MAP
LINDRITH COMPRESSOR STATION
SE SEC 18 T24N R5W
RIO ARriba COUNTY, NEW MEXICO
ENTERPRISE FIELD SERVICES, LLC



TABLES

TABLE 1

**BOREHOLE AND MONITORING WELL SURVEY DATA
LINDRITH COMPRESSOR STATION
ENTERPRISE FIELD SERVICES, LLC**

Borehole ID	Monitoring Well ID	Ground Surface Elevation (feet amsl/NAVD 88)	Top of Monitoring Well Casing Elevation (feet amsl/NAVD 88)	X (New Mexico State Plane West Zone NAD 83)	Y (New Mexico State Plane West Zone NAD 83)
B-3	MW-2	6488.85	6491.08	1932117.56	2851699.85
B-6	MW-3	6490.27	2492.78	1932034.20	2851713.36
B-10	MW-1R	6491.62	6494.62	1932074.85	2851775.33
B-11	None	6491.80	n/a	1932027.54	2851853.16
B-12	MW-4	6491.49	6493.99	1931973.94	2851960.68
B-13	MW-5	6493.05	6496.06	1932076.40	2851996.89
B-14	MW-6	6491.86	6494.72	1932118.09	2851882.00
B-15	None	6493.16	n/a	1932184.88	2851929.07
B-16	None	6491.57	n/a	1932161.66	2851829.84
B-17	None	6491.10	n/a	1932183.46	2851798.87
B-18	None	6490.19	n/a	1932272.39	2851678.78
B-19	MW-7	6489.84	6492.49	1932337.76	2851598.91
B-20	None	6488.58	n/a	1932218.74	2851602.32
B-21	None	6488.27	n/a	1932303.16	2851481.59
B-22	MW-8	6490.10	6493.10	1931961.11	2851752.75
B-23	MW-10	6489.32	6492.39	1932004.20	2851612.98
B-24	MW-9	6487.74	6491.17	1932134.92	2851574.98
B-25	None	6485.96	n/a	1932117.72	2851482.07
B-26	MW-11	6487.01	6489.84	1932219.98	2851459.72
B-27	None	6492.84	n/a	1931927.70	2852037.94
B-28	MW-12	6485.13	6487.95	1932238.98	2851382.78
B-29	None	6490.30	n/a	1932129.96	2851786.05

Notes:

amsl - above mean sea level

NAVD - North American Vertical Datum

NAD - North American Datum

Coordinate values are in New Mexico State Plane West Zone NAD 83; values are in feet.

Elevations are NAVD 88; values are in feet.

n/a - not applicable

TABLE 2

SOIL ANALYTICAL RESULTS - BTEX & TPH
LINDRITH COMPRESSOR STATION
ENTERPRISE FIELD SERVICES, LLC

Sample ID	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)
NMOCD	Standard	10	n/e	n/e	n/e	50	n/e	n/e	n/e	100
B-10-22'	10/18/2010	<0.25	1	0.3	3.4	4.7-4.95	64	<10	<50	64-124
B-10-45'	10/18/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-11-35'	10/19/2010	2.6	15	3.3	28	48.9	1,000	18	<50	1,018 - 1,068
B-11-45'	10/19/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-12-33.5'	10/20/2010	0.31	1.8	0.75	5.4	8.26	130	15	<50	145-195
B-12-48'	10/20/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-13-30'	10/20/2010	<2.5	17	9	57	83-85.5	1,000	400	810	2,210
B-13-45'	10/20/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-14-28'	10/21/2010	<0.05	0.067	<0.05	0.37	0.437-0.537	13	30	74	117
B-14-40'	10/21/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-15-33'	10/22/2010	<0.5	<0.5	<0.5	<1.0	0-2.5	<50	170	210	380-430
B-15-35'	10/22/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-16-32'	10/22/2010	<0.5	2.9	1.6	13	17.5-18	260	130	150	540
B-16-45'	10/22/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-17-33'	10/22/2010	<0.1	<0.1	0.12	1.2	1.32-1.52	31	51	78	160
B-17-45'	10/22/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-18-33'	10/25/2010	<0.2	0.79	0.98	7.7	9.47-9.67	230	110	120	460
B-18-40'	10/25/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-19-33'	10/25/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	14	18	<50	32-82
B-19-45'	10/25/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-20-30'	10/26/2010	<1	7.9	6.5	50	64.4-65.4	1,900	450	420	2,770
B-20-40'	10/26/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-21-23'	10/27/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-21-40'	10/27/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-22-42'	10/28/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65

TABLE 2

SOIL ANALYTICAL RESULTS - BTEX & TPH
LINDRITH COMPRESSOR STATION
ENTERPRISE FIELD SERVICES, LLC

Sample ID	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)
NMOCD Standard		10	n/e	n/e	n/e	50	n/e	n/e	n/e	100
B-22-24'	10/28/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-23-33'	10/29/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-23-40'	10/29/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-24-29'	10/29/2010	<0.25	1.6	0.73	6.9	9.23-9.48	230	63	210	503
B-24-45'	10/29/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
BH-25-39'	11/1/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-26-29'	11/2/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-26-45'	11/2/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
B-27-12'	11/2/2010	<0.05	<0.05	<0.05	0.11	0.11-0.26	<25	100	290	390-415
B-27-33'	11/2/2010	<0.05	<0.05	<0.05	0.26	0.26-0.41	30	33	98	161
BH-27-45'	11/3/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
BH-28-30'	11/3/2010	<0.05	<0.05	0.22	2.4	2.62-2.72	110	360	680	1,150
BH-28-45'	11/3/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	<10	<50	0-65
BH-29-27'	11/4/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	<5	100	130	230-235
BH-29-40'	11/4/2010	<0.05	<0.05	<0.05	<0.1	0-0.25	6.6	<10	<50	6.6-66.6

Notes:

mg/kg - milligram per kilogram

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - Diesel Range Organics

MRO - Motor Oil Range Organics

GRO - Gasoline Range Organics

TPH - total petroleum hydrocarbons

NMOCD - New Mexico Oil Conservation Division

' - feet

n/e - not established

Bold values exceed the recommended remediation action levels for this site.

TPH analyzed by USEPA Modified Method 8015B.

Benzene, toluene, ethylbenzene, and total xylenes analyzed by USEPA Method 8021B.



TABLE 3

**SOIL ANALYTICAL RESULTS - VOCs
LINDRITH COMPRESSOR STATION
ENTERPRISE FIELD SERVICES, LLC**

Analyte	Units	Sample ID: B-27-12'	Sample ID: B-27-33'
Benzene	mg/kg	<0.050	<0.050
Toluene	mg/kg	<0.050	<0.050
ethylbenzene	mg/kg	<0.050	<0.050
methyl-t-butyl ether	mg/kg	<0.050	<0.050
1,2,4-Trimethylbenzene	mg/kg	0.81	0.19
1,3,5-Trimethylbenzene	mg/kg	0.89	0.13
1,2-Dichlorethane	mg/kg	<0.050	<0.050
1,2-dibromoethane	mg/kg	<0.050	<0.050
Napthalene	mg/kg	0.23	<0.10
1-Methylnapthalene	mg/kg	<0.20	<0.20
2-Methylnaphthalene	mg/kg	0.20	<0.20
Acetone	mg/kg	<0.75	<0.75
Bromobenzene	mg/kg	<0.050	<0.050
bromodichloromethane	mg/kg	<0.050	<0.050
Bromoform	mg/kg	<0.050	<0.050
Bromomethane	mg/kg	<0.15	<0.15
2-Butanone	mg/kg	<0.50	<0.50
Carbon Disulfide	mg/kg	<0.50	<0.50
carbon tetrachloride	mg/kg	<0.10	<0.10
Chlorobenzene	mg/kg	<0.050	<0.050
Chloroethane	mg/kg	<0.10	<0.10
Chloroform	mg/kg	<0.050	<0.050
Chloromethane	mg/kg	<0.15	<0.15
2-Chlorotoluene	mg/kg	<0.050	<0.050
4-Chlorotoluene	mg/kg	<0.050	<0.050
cis-1,2-DCE	mg/kg	<0.050	<0.050
cis-1,3-dichloroporpene	mg/kg	<0.050	<0.050
1,2-Dibromo-3-chloropropane	mg/kg	<0.10	<0.10
dibromochloromethane	mg/kg	<0.050	<0.050
dibromomethane	mg/kg	<0.10	<0.10
1,2-dichlorobenzene	mg/kg	<0.050	<0.050
1,3-dichlorobenzene	mg/kg	<0.050	<0.050
1,4-dichlorobenzene	mg/kg	<0.050	<0.050
Dichlorodifluoromethane	mg/kg	<0.050	<0.050
1,1-Dichloroethane	mg/kg	<0.10	<0.10
1,1-Dichloroethene	mg/kg	<0.050	<0.050
1,2-Dichloropropane	mg/kg	<0.050	<0.050
1,3-Dichloropropane	mg/kg	<0.050	<0.050
2,2-Dichloropropane	mg/kg	<0.10	<0.10
1,1-Dichloropropene	mg/kg	<0.10	<0.10
Hexachlorobutadene	mg/kg	<0.10	<0.10
2-Hexanone	mg/kg	<0.50	<0.50



TABLE 3

**SOIL ANALYTICAL RESULTS - VOCs
LINDRITH COMPRESSOR STATION
ENTERPRISE FIELD SERVICES, LLC**

Analyte	Units	Sample ID: B-27-12'	Sample ID: B-27-33'
Isopropylbenzene	mg/kg	<0.050	<0.050
4-Isopropyltoluene	mg/kg	0.12	<0.050
4-Methyl-2-pentanone	mg/kg	<0.50	<0.50
Methylene Chloride	mg/kg	<0.15	<0.15
n-Butylbenzene	mg/kg	<0.050	<0.050
n-Propylbenzene	mg/kg	0.056	<0.050
sec-Butylbenzene	mg/kg	0.088	<0.050
Styrene	mg/kg	<0.050	<0.050
tert-Butylbenzene	mg/kg	<0.050	<0.050
1,1,1,2-Tetrachloroethane	mg/kg	<0.050	<0.050
1,1,2,2-Tetrachloroethane	mg/kg	<0.050	<0.050
Tetrachloroethene	mg/kg	<0.050	<0.050
trans-1,2-DCE	mg/kg	<0.050	<0.050
trans-1,3-Dichloropropene	mg/kg	<0.050	<0.050
1,2,3-Trichlorobenzene	mg/kg	<0.10	<0.10
1,2,4-Trichlorobenzene	mg/kg	<0.050	<0.050
1,1,1-Trichloroethane	mg/kg	<0.050	<0.050
1,1,2-Trichloroethane	mg/kg	<0.050	<0.050
Trichloroethene	mg/kg	<0.050	<0.050
Trichlorofluoromethane	mg/kg	<0.050	<0.050
1,2,3-Trichloropropane	mg/kg	<0.10	<0.10
Vinyl Chloride	mg/kg	<0.050	<0.050
Total Xylenes	mg/kg	0.11	0.26

Notes:

VOCs - volatile organic compounds

mg/kg - milligrams per kilogram

< - less than the laboratory detection limit

' - feet

VOCs analyzed by USEPA Method 8260.□

TABLE 4

**GLYCOL ANALYTICAL RESULTS
LINDRITH COMPRESSOR STATION
ENTERPRISE FIELD SERVICES, LLC**

Sample ID	Date Sampled	Ethylene Glycol (mg/kg)	Propylene Glycol (mg/kg)
B-21-23'	10/27/2010	<5.0	<5.0

Notes:

mg/kg - milligrams per kilogram

< - less than the detection limit

TABLE 5

**GROUNDWATER ELEVATIONS
LINDRITH COMPRESSOR STATION
ENTERPRISE FIELD SERVICES, LLC**

Well ID	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	TOC Elevation (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-1R	11/11/2010	31.73	32.29	0.56	6,494.62	6,462.78
MW-1R	11/15/2010	31.93	32.86	0.93	6,494.62	6,462.50
MW-2	11/11/2010	30.12	30.15	0.03	6,491.08	6,460.95
MW-2	11/15/2010	29.86	29.90	0.04	6,491.08	6,461.21
MW-3	11/11/2010	0.00	32.08	n/a	6,492.78	6,460.70
MW-3	11/15/2010	0.00	32.96	n/a	6,492.78	6,459.82
MW-4	11/11/2010	0.00	33.31	n/a	6,493.99	6,460.68
MW-4	11/15/2010	0.00	33.10	n/a	6,493.99	6,460.89
MW-5	11/11/2010	0.00	34.37	n/a	6,496.06	6,461.69
MW-5	11/15/2010	0.00	35.64		6,496.06	6,460.42
MW-6	11/11/2010	0.00	33.79	n/a	6,494.72	6,460.93
MW-6	11/15/2010	0.00	33.63	n/a	6,494.72	6,461.09
MW-7	11/11/2010	0.00	36.65	n/a	6,492.49	6,455.84
MW-7	11/15/2010	0.00	34.70	n/a	6,492.49	6,457.79
MW-8	11/11/2010	0.00	34.39	n/a	6,493.10	6,458.71
MW-8	11/15/2010	0.00	32.16	n/a	6,493.10	6,460.94
MW-9	11/11/2010	29.46	30.34	0.88	6,491.17	6,461.53
MW-9	11/15/2010	30.47	31.24	0.77	6,491.17	6,460.55
MW-10	11/11/2010	0.00	29.85	n/a	6,492.39	6,462.54
MW-10	11/15/2010	0.00	31.83	n/a	6,492.39	6,460.56
MW-11	11/11/2010	0.00	34.05	n/a	6,489.84	6,455.79
MW-11	11/15/2010	0.00	35.05	n/a	6,489.84	6,454.79
MW-12	11/11/2010	0.00	32.04	n/a	6,487.95	6,455.91
MW-12	11/15/2010	0.00	32.74	n/a	6,487.95	6,455.21

Notes:

BTOC - below top of casing

AMSL - above mean sea level

TOC - top of casing

* - Corrected for presence of phase separated hydrocarbon using an estimated density correction factor of 0.8

n/a - not applicable

TABLE 6

GROUNDWATER LABORATORY ANALYTICAL RESULTS
LINDRITH COMPRESSOR STATION
ENTERPRISE FIELD SERVICES, LLC

Well ID	Date Sampled	Benzene (ug/l)	Toluene (ug/l)	Ethyl Benzene (ug/l)	Total Xylenes (ug/l)	Total BTEX (ug/l)	Gasoline Range Organics (ug/l)	Diesel Range Organics (ug/l)	Motor Oil Range Organics (ug/l)	pH (Standard Units)	Nitrate + Nitrite (mg/l)	Iron (mg/l)
NMWQCC Standard		10	750	750	620	50	n/e	n/e	n/e	6-9	10.0	1.0*
MW-1R	12/30/2009	1,900	2,600	120	870	5,490	N/A	N/A	N/A	N/A	N/A	N/A
MW-1R	11/16/2010	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/A	N/A	N/A
MW-2	12/30/2009	3,000	3,200	270	1,900	8,370	N/A	N/A	N/A	N/A	N/A	N/A
MW-2	11/16/2010	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/A	N/A	N/A
MW-3	12/30/2009	130	370	76	530	1,106	N/A	N/A	N/A	N/A	N/A	N/A
MW-3	11/16/2010	5,500	62	350	1,000	6,912	0.016	<0.0001	<0.005	7.16	<1.0	210
MW-4	11/16/2010	2,600	1,600	280	1,700	6,180	0.00035	0.0031	<0.005	6.93	<1.0	470
MW-5	11/15/2010	4.4	<1	6.3	22	33.7	0.0022	0.0014	<0.005	6.82	<1.0	47
MW-6	11/16/2010	2,400	65	230	1,200	3,895	0.00042	0.0014	<0.005	6.57	<1.0	140
MW-7	11/16/2010	8.9	2.6	5.9	50	67.4	0.0015	<0.0001	<0.005	7.29	<1.0	53
MW-8	11/15/2010	<1	<1	<1	<2	<5	<0.00005	<0.0001	<0.005	7.36	<1.0	7.8
MW-9	11/16/2010	n/a	n/s	n/s	n/s	n/a	n/s	n/s	n/s	n/a	n/a	n/a
MW-10	11/15/2010	<1	<1	<1	<2	<5	<0.00005	<0.0001	<0.005	7.57	<1.0	52
MW-11	11/16/2010	<1	<1	<1	<2	<5	<0.00005	<0.0001	<0.005	7.09	<1.0	13
MW-12	11/15/2010	23	16	13	84	136	0.0013	<0.005	<0.005	7.28	<1.0	39

Notes:

NMWQCC - New Mexico Water Quality Control Commission

ug/l - micrograms per liter

mg/l - milligrams per liter

n/s - not sampled

n/a - not analyzed

n/e - not established

< - less than the detection limit

BOLD values exceed the NMWQCC groundwater standards

* - Value based on NMWQCC Standards for Domestic Water Supply

APPENDIX A
LITHOLOGIC LOGS AND WELL COMPLETION DIAGRAMS





Compliance • Engineering • Remediation
 LT Environmental, Inc.
 2243 Main Avenue, Suite 3
 Durango, Colorado 81301

Boring/Well Number:

B-10/MW-1R

Date:

11/10/10

Project:

Lindrith

Project Number:

GMS 1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Latitude: 37° 45' 28.5" N

Elevation: 6491.62

Detector: PID

Drilling Method: Hollow Stem

Sampling Method: Split Spoon

Hole Diameter: 6"

Total Depth: 45'

Casing Type: PVC

Casing Diameter: 4"

Casing Length: 47'

Slot Size: 0.02

Slot Length: 20'

Depth to Water: 40'

Gravel Pack: 40' - 20.6

Seal: 20.6 - 17.4

Grout: 19.9 - 0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY	DRY	0.4	Ø		0				
					1				
					2		ML	1.5-2.75' unconsolidated sandy silt, poorly sorted backfill 10YR 6-2 light grayish brown	
					3				
EASY	DRY				4		ML	2.75-5' same as above	
					5				
		0.3	Ø		6			5'-10' silty clay, 10YR 6/2 backfill	
					7				
EASY		0.4	Ø		8				
					9				
					10				
EASY		0.3	Ø		11				



Compliance Engineering Remediation
 LT Environmental, Inc.
 2243 Main Avenue, Suite 3
 Durango, Colorado 81301

Boring/Well Number:
 B-10 / MW-12
 Project:
 Lindrith
 Logged By:
 DH

Date:
 10/18/10
 Project Number:
 GMS 1001
 Drilled By:
 Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Latitude: UTM 1932074.85 - 2851775.3	Elevation: 6491.62	Detector: PID	Drilling Method: Hollow stem	Sampling Method: Split Spoon	Hole Diameter: 6"	Total Depth: 45'
Casing Type: ALC	Casing Diameter: 4"	Casing Length: 47'	Slot Size: 0.02	Slot Length: 20'	Depth to Water: 40'	

Gravel Pack:
44' - 20.6'

Seal:
20.6' - 17.9'

Grout:
17.9' - 0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Dry	0.5			11		SM	10' - 13.75' silty sand, poorly sorted backfill 10yr 6/2	
					12				
					13				
					14		ML	13.75' - 14.5' clayey silt, slightly damp 1042 4 1/2 dark grayish brown	
EAST	Damp	2.8 1,327	Black		15		ML	14.5' - 15' clayey silt, 40% clay, 50% silt, 10% fine sand, stained black, Hc odor	
					16				
					17			NR	
					18		ML	17.5' - 20' Sandy silt sand 40% silt, 30% fine sand, stained, 1042 6/1 gray	
	Damp	1,669	Gray Black		19				
					20				
Easy		704			21			NR	
					22				

- Bentonite
17.9

- SAND
20.6



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LT Environmental, Inc.
 2243 Main Avenue, Suite 3
 Durango, Colorado 81301

Boring/Well Number:
 B-10/MW-12

Date:
 11/4/10

Project:
 Lindrieth

Project Number:
 Gms 1001

Logged By:
 DH

Drilled By:
 Envo Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Location: LTM 1132744-85-2851745.33	Elevation: 6491.62	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon	Hole Diameter:	Total Depth:
Casing Type: PVC	Casing Diameter: 4"	Casing Length: 47'	Slot Size: 0.02	Slot Length: 20'	Depth to Water:	40'
Gravel Pack: 44'-20.6'	Seal: 20.6-17.9	Grout: 17.9-0'	Comments:			

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Dry		Black		22		SP	21.75' - 23.75'	
					23			Sand, poorly sorted 50% fine sand, 10% med sand, 40% silt, black staining, HC odor	
	Dry	1,082			24		sm	23.75' - 25'	
					25			Silty sand 1042 w/2 light brownish gray 50% sand medium grained sand 20% fine sand 30% silt	
					26			NR	
					27				
Easy	Dry	1,501			28		SP	27.5' - 30' 2.5 4R	
					29			50% coarse grained, 30% med sand, 20% fine, HC odor, stained gray	
					30				
	Dry	1,426			31				
					32		SP	31.5' - 31.75'	
					33		sm	Same as above	
Easy		55.5						31.75' - 33	
								Silty sand 50% silt, 40% fine grained sand, 10% med sand, 1042 5/2 grayish brown	
								semi consolidated	



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 LT Environmental, Inc.
 2243 Main Avenue, Suite 3
 Durango, Colorado 81301

Boring/Well Number:

MW-12

Date:

11/4/10

Project:

Lindrith

Project Number:

6ms1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Location: UTM

1432074.85-285175

Elevation:

86491.62

Detector:

PID

Drilling Method:

Hollow stem

Sampling Method:

SPLIT SPOON

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

PVC

Casing Diameter:

4"

Casing Length:

47'

Slot Size:

0.02

Slot Length:

20'

Depth to Water:

40'

Gravel Pack:

44'-20.6'

Seal:

20.6'-17.9'

Grout:

17.9'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY	Dry	2.2	RED (Fe) GRAY		33		SW	33'-35' Fvs 1042 6/4 yellowish brown, med grained sand, 90% well sorted, 10% coarse	
					34				
	Damp		Black RED GRAY		35		SP	35'-36.25' coarse sand, black staining, 40% coarse sand, 60% med. fine grained 1042 6/1 gray	
		871			36		SC	36.25'-36.5'	
EASY					37			Clayey sand, med-poor plasticity 1042 6/4 yellowish brown	
		1,227			38		SP	36.5'-40' 1042 6/4 light yellowish brown, loamed sand, 70% fine sand, 10% silt	
					39				
	Sat	34.6	BLACK		40		SC	40'-41.5' clayey sand, no odor, black stains, 25% clay, 40% coarse sand 1042 5/3 brown	
					41				
		896	SPOTTED BLACK		42		SP	41.5'-42.5' MED to coarse sand 1042 5/3 brown, 60% fine sand, 30% med sand, 10% coarse minor silt	
EASY					43		SP	42.5'-45' Same as above - no staining	
		638			44				

48.1

B-10
45'

TB-45'



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LT Environmental, Inc.
2243 Main Avenue, Suite 3
Durango, Colorado 81301

Boring/Well Number:

B-11

Date:

10/19/10

Project:

Linderoth Delineation

Project Number:

Gms 1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Enviro: UTM

2831853, 1932027.54

Elevation:

6491.8

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~ 35'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY					0				
					1				
					2			NR	
					3				
					4				
	DH	1.2	Ø		5		ML	Sandy silt sand 7.5 4/3 70% silt, 25% fine sand, 5% med sand, moderately sorted, loose	
					6				
EASY					7				
					8				
					9			NR	
					10				
EASY	DH	2.3	Ø		11		ML	Sandy silt sand, 7.5 4/3 60% silt, 25% fine sand, 10% med sand, 5% clay minor sand	



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LT Environmental, Inc.
 2243 Main Avenue, Suite 3
 Durango, Colorado 81301

Boring/Well Number:

B-11

Date:

10/19/10

Project:

Landfill

Project Number:

Gms 1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Latitude: UTM

193702 754 - 285185 3.16

Elevation:

6491.8

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

—

Casing Diameter:

—

Casing Length:

—

Slot Size:

—

Slot Length:

—

Depth to Water:

~35'

Gravel Pack:

—

Seal:

—

Grout:

—

Comments:

—

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Damp	7.4	Ø		11			NR	
					12				
					13		SM	Silty Sand, 7.5 yr 6/4 light brown, Poorly sorted, loose. 35% silt, 40% fine sand, 100% med sand 15% coarse sand	
					14				
					15				
					16				
					17			NR	
					18				
Easy	Damp	1.7	Ø		19		ML	17.5-18' sandy silt sand 7.5 yr 6/12 light brown 85% silt, 14% fine sand, 18 med sand	
					20			18'-19.5' sandy silt 5 yr 5/8 60% silt, 25% fine sand, 15% med sand	
		3.2			21		ML	19.5'-20' same as above	
Easy			Ø		22			2.54 7/13 pale yellow	



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 LT Environmental, Inc.
 2243 Main Avenue, Suite 3
 Durango, Colorado 81301

Boring/Well Number:

B-11

Date:

10/19/10

Project:

Underth

Project Number:

Ems 1001

Logged By:

DA

Drilled By:

Enrico Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: UTM

1932027.54-2851453.16

Elevation:

10491.8

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

-35'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Det/Damp	2	NONE		22			2.54 1/3 light yellow brown	
					23		SM	Sandy silty w/ minor clay stringers, 30% silt, 30% fine sand, 30% med sand, 10% coarse minor clay	
					24				
		1.16			25		SP	25'-27.5' Poorly sorted sand w/ minor silt, 60% med sand, 10% silt, 10% fine sand, 20% coarse sand	
					26				
		4.2			27		SP	27.5-30	
					28			same as above	
Easy	Damp/Det		Minor Red (Fe)		29				
		3.16			30				
					31			NR	
					32				
		15			33		SM	Silty sand, poorly sorted 7.542 1/3, 60% fine sand, 30% silt, 10% med sand	



Compliance • Engineering • Remediation
 LT Environmental, Inc.
 2243 Main Avenue, Suite 3
 Durango, Colorado 81301

Boring/Well Number:

B-11

Date:

10/19/10

Project:

Lindr. th

Project Number:

Gms 1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Tool/Lane: UTM

1732027.54 - 2651853.16

Elevation:

6491.8

Detector:

RED

Drilling Method:

Hollow Stem

Sampling Method:

SPLIT SPOON

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

- 35'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Moist	51.5	Gray/Black		33		SP	33'-35' Poorly sorted sand 30% med sand, 20% coarse sand 20% fine sand, 30% silt, stained Black/gray w/strong odor	
		1929		B-11 35'	34				
					35		SP	35.5'-37.5' Sand 70% med sand grains to coarse sand, 25% fine sand, 5% silt stained gray to black w/ reddish color (FE)	
Easy	WET	88.6			36				
					37				
					38		Sm	37.5'-40' Sandy silt 40% silt, 50% med grained sand, 10% fine sand, heavily stained Black strong HC odor	
		162	Black		39				
Easy	DAMP		RED		40		SA	40'-42.5' 60% med sand grains, 35% coarse sand, 5% silt, heavily stained red (FE) minor thin clay inclusions	
		14.2			41				
					42				
Easy	Dry	13.7			43		Sm	42.5'-45' silty sand 60% fine/very fine 30% silt 10% med sand, minor clay, gray odor, no odor, confining layer	
		1.2			44				

B-11
45'



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Boring/Well Number: B-12-MW 4	Date: 10/20/10
Project: Lundrith	Project Number: GRMs 1001
Logged By: DH	Drilled By: Enviro Drill
Drilling Method: Hollow Stem	Sampling Method: Split Spoon
Slot Size: 0.02	Slot Length: 20'
Gravel Pack: 48'-21'	Seal: 21'-19.5'
Casing Type: PVC	Casing Diameter: 2"
Casing Length: 46'	Slot Size: 0.02
Grout: 19.3'-0'	Comments:
Elevation: TOL	Detector:
19219 33.94-2857960.68	6493.99
Hole Diameter: 6"	Total Depth: 48'
Depth to Water: 36'	

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	DRY	0.0	NONE		0				
					1				
					2				
					3		ML	Sandy silt 7.54R 4/4 brown, 75% silt, 15% fine sand grains, 10% med sand moderately sorted	
					4				
					5				
					6				
					7				
					8				
Easy	DRY	2.9	NONE		9		ML	7.54R 5/3 Brown clayey silt, 70% silt, 15% clay, 10% fine sand, 5% med sand, low plasticity, some cohesion observed, med sorting	
					10				
					11				

Boring/Well Number: B-12 / MW-4

Date: 10/20/10

Project: Lindrith

Project Number: Gms 1001

Logged By: DH

Drilled By: Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: 0+00	Elevation: 702 6493.99	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon	Hole Diameter: 6"	Total Depth: 48'
Casing Type: PVC	Casing Diameter: 2"	Casing Length: 46'	Slot Size: 0.02	Slot Length: 20'	Depth to Water: 36'	

Gravel Pack: 48'-21'	Seal: 21-19.3'	Grout: 19.3'-0'	Comments:
-------------------------	-------------------	--------------------	-----------

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Dry	56	None		11		ML	10'-11' 7.5 YR 5/3 Brown Clayey silt, med - sorted	
					12			75% silt, 15% clay, 10% fine sand, minor med grains	
					13		sm	11'-15' Sandy silt, 2.5 YR 6/4 light yellowish brown	
Easy	Dry	44	None		14			45% silt, 35% small grains	
					15			20% med grains - minor coarse grains, packed tight semi-consolidated	
		60.9			16		sm	Sandy silt, 2.5 YR 6/3 light yellowish brown, 50% silt,	
					17			30% fine sand, 20% med sand, minor coarse grained	
					18			minor oxidized Fe staining	
	Damp	33.1	Grey		19			minor gray material associated w/ staining	
					20			Dark gray 2.5 YR 4/3	
Easy			Dark Grey		21		Sm	21'-21.5' Sandy silt, 40% silt, 40% med grained	
					22			20% fine grained, minor coarse grains, stained dark gray, light odor	

BENTON
19.3'

SAND
PAUL



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Boring/Well Number:
B-12 / MW-4

Date:
10/20/10

Project:
Lundrith

Project Number:
Gms 1001

Logged By:
DH

Drilled By:
Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Location: UTM 1931973.54 - 2881966.168	Elevation: 7800 6493.99	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon	Hole Diameter: 6"	Total Depth: 48'
Casing Type: PVC	Casing Diameter: 2"	Casing Length: 46'	Slot Size: 0.02	Slot Length: 20'	Depth to Water: 36'	

Gravel Pack: 48'-21'
Seal: 21'-19.3'
Grout: 19.3'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY	DRY	265	Ø		22		Sm	22'-25' 2.5 y 1/2 light gray sandy silt, poorly to med sorted, 40% silt, 30% med sand, 30% fine sand minor coarse	
		12.0			23				
					24				
					25				
					26		Sm	26'-29.5' 10 y 6/14 light yellow brown, silty sand, 30% silt, 30% fine sand, 40% med sand	
					27				
EASY	DRY	28	Ø		28				
					29				
					30			29.5-30 Silty fine sand Same as above Heavily stained black, strong HC odor	
		550	Black		31				
					32				
EASY	Damp		Black		33				



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Boring/Well Number:
 B-12 / MW-4

Date:
 10/20/10

Project:
 Lindrieth

Project Number:
 Gms/col

Logged By:
 DH

Drilled By:
 Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Probe Log: UTM
 1931973.94-2851960.08

Elevation: 702
 60493.99

Detector:
 PID

Drilling Method:
 Hollow Stem

Sampling Method:
 Split Spoon

Hole Diameter: 6"
 Total Depth: 48'

Casing Type:
 PVC

Casing Diameter:
 2"

Casing Length:
 40'

Slot Size:
 0.02

Slot Length:
 20'

Depth to Water:
 30'

Gravel Pack:
 48'-21'

Seal:
 21'-19.3'

Grout:
 19.3'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY	DRY / Damp	2735	Heavy Black Staining Red/White	B-12 33.5	33		Sm	34'-35' Sandy silt, 40% silt, 30% med, 30% fine, minor coarse, minor clay lenses 1-5 mm thick. Stained black/white & Red (Fe). Strong odor	
		1595			34				
					35				
					36				
	SAT	1497	Black		37		Sm	35'-40' silt, sand 40% silt, 30% med sand grains 20% fine sand, 10% coarse stained black, HC odor	
					38				
					39				
					40				
					41				
					42		Sm	41.5'-43' Same as above	
	DRY @ 43' ↓	3600	Black		43		ML	43'-45' Sandy silt, semi-consolidated, tightly packed grains, gray color no odor in confining layer. 70% silt 20% fine 10% med sand	
EASY					44				



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Boring/Well Number:

B-12 / MW-4

Date:

10/20/10

Project:

Lindrieth

Project Number:

Gms 1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Latitude: 37.4

193.473.74-185.1760.68

Elevation: 700

6493.49

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

48'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

46'

Slot Size:

0.02

Slot Length:

20"

Depth to Water:

36'

Gravel Pack:

48-21'

Seal:

21'-15.3'

Grout:

19.3'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
REFUSE @ 48'	DAMP	215	STAINED GREEN TO BLACK	B-12 48'	45		Sm/SL	silty sand grading to clayey fine sand. soil staining odor smells more degraded than above soils	
		212			46			70% fine sand, 10% silt, 20% clay	
		165			47				
					48				
					4				
					5				
					6				
					7				
					8				
					9				
					10				
					11				



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Boring/Well Number:

Date:

Project:

Project Number:

Logged By:

Drilled By:

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long:

Elevation:

Detector:

Drilling Method:

Sampling Method:

Hole Diameter:

Total Depth:

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				



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Boring/Well Number:
 B-13 /mw-5
 Project:
 Lindrith
 Logged By:
 DA

Date:
 10/20/10
 Project Number:
 Gms1001
 Drilled By:
 Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Well/Lower: UTM 1937036.4 - 2851776.89	Elevation: FOL 6496.06	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon	Hole Diameter: 6"	Total Depth: 45'
Casing Type: PVC	Casing Diameter: 2"	Casing Length: 35'	Slot Size: 0.01	Slot Length: 15'	Depth to Water:	
Gravel Pack: 36'-18.5'	Seal: 18.5'-17.5'	Grout: 17.5'-0'	Comments:			

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY	DRY				0				
					1				
					2				
					3		SM/ML	2.5'-3' Gravel	
			NONE		4			3'-4' 5YR 5/3 reddish brown silty sand / sandy silt 80% silt, 20% fine sand minor med sand, med to well sorted	
		Ø			5		ML	4'-5' sandy silt 70% silt, 30% clay, low plasticity, slightly cohesive	
EASY	DRY	Ø			6				
					7		SM	6.5'-9' 5YR 5/3 reddish brown 50% silt, 40% fine sand, 10% med sand, minor coarse med sorted	
		Ø	NONE		8				
		Ø			9		ML	9'-10' 5YR 3/3 dark reddish brown, silty sand 60% silt, 40% clay medium plasticity	
		Ø			10				
					11				



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Boring/Well Number:

B-13 - MW5

Date:

10/20/10

Project:

Lind. r. th

Project Number:

Gms 1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Location: UTM

1432076.4+2851996.89

Elevation: TOL

6496.06

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

PVC

Casing Diameter:

Casing Length:

39'

Slot Size:

0.01

Slot Length:

15'

Depth to Water:

Gravel Pack:

36'-18.5'

Seal:

18.5'-17.5'

Grout:

17.5'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY	DRY	Ø	NONE		11		ML/SM	10.5'-12' 5YR 3/4 dark reddish brown sandy silt - silty fine sand 50% fine sand, 50% silty clay	
			NONE		12			12'-14' 10YR 4/6 dark yellowish brown	
					13				
		Ø			14			14'-15' 5Y 6/4 pale olive	
EASY	DRY	2	NONE		15		SM	15'-17' 5Y 6/4 pale olive silty fine sand, 60% fine sand, 40% loose silt	
					16				
					17		SM	17'-20' 5Y 6/4 Pale olive Silty sand 40% silt, 30% fine sand, 30% med sand, poorly to med sorted (loose)	
		7			18				
					19				
					20				
EASY	DRY	10	NONE		21		SM	silty sand 2.5Y 6/3 light yellowish brown 35% med grains, 40% fine grains, 5% coarse 20% silt, poorly sorted loose to minor consolidated	
		Ø			22				



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Boring/Well Number:

B-13 / MW-5

Date:

10/20/10

Project:

Lindrieth

Project Number:

Gms1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

East Long: UTM

1932636.4 - 285976.89

Elevation: TGL

6496.06

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

39'

Slot Size:

0.101

Slot Length:

15'

Depth to Water:

Gravel Pack:

30' - 18.5'

Seal:

18.5' - 17.5'

Grout:

17.5' - 0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
		Ø			22				
		Ø			23				
		Ø			24				
Easy	Day	Ø			25		Sm	24.8-25' minor gray staining	
		NR			26			NR	
		10.8			27		Sm	26-28' silty sand, minor gray staining HC odor, smells like older contamination	
		597			28		Sm	28'-30' silty sand 40% silt, 20% med sand, 40% fine sand & semi-consolidated staining Black, gray, Fe oxidized, red! white banded	
Easy	Day	3732	Red Black White Gray Banded	B-13-30'	30			NR	
					31		Sm	30'-35' silty sand same as above staining and same banded zones. Bottom foot of core is more consolidated & harder than upper 4' of core	
	DRY / Damp	30			32				
					33				



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Boring/Well Number:

B-13 / MW-5

Date:

10/20/10

Project:

Lindrith

Project Number:

GMS 1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Est/Log: UTM

Elevation: TBL

Detector:

Drilling Method:

Sampling Method:

Hole Diameter:

Total Depth:

Casing Type: PVC

Casing Diameter: 2"

Casing Length: 39'

Slot Size: 0.01

Slot Length: 15'

Depth to Water:

Gravel Pack: 20'-18.5'

Seal: 18.5'-17.5'

Grout: 17.5'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
	Wet	4			33				
					34				
					35				
		15			36		SM	Silty fine sand 60% silt 30% fine sand 54 g/l light gray tightly packed/ semi-consolidated making it hard to break apart	
					37				
		15			38			Slight order seems to be acting as confining layer	
					39				
		45			40				
					41		SM	Same as above	
		18			42				
					43				
		4			44				

34

B-13

45

45'



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Boring/Well Number:
B-14 / MW6

Date:
10/21/10

Project:
Lindrieth

Project Number:
Ems1001

Logged By:
DH

Drilled By:
Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Land Use: UTM
1932119.09 - 2851882

Elevation: TGL
6494.72

Detector:
PID

Drilling Method:
Hollow Stem

Sampling Method:
Split Spoon

Hole Diameter:
6"

Total Depth:
40'

Casing Type:
PVC

Casing Diameter:
2"

Casing Length:
43'

Slot Size:
0.01

Slot Length:
20'

Depth to Water:
~34'

Gravel Pack:
40'-17'

Seal:
17'-14'

Grout:
14'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				
					1				
EASY	DRY				2		SM	2'-2.5' 7.542 7/16 Strong brown, silty sand 40% silt, 40% fine sand, 15% med sand, 5% coarse, minor gravel loose, poorly sorted	
					3				
	DRY		MINOR Fe Oxidation		4		CL	2.5'-5' silty clay 20% silt 80% clay med plasticity, minor oxidized Fe staining	
					5				
					6				
					7		CL	6'-6.5' same as above	
					8		SM/CL	6.5'-10' 7.542 4/4 brown silty fine sand to clayey fine sand, 40% silt, 50% fine to very fine sand 10% clay very low plasticity	
					9				
					10				
		3.2			11				



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Boring/Well Number

B-14 / MW-6

Date:

10/21/10

Project:

Lind. th

Project Number:

6ms1001

Logged By:

DH

Drilled By:

Erwiro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Last Log: LTM

1932118.09-285.002

Elevation: TOL

6494.72

Detector:

PID

Drilling Method:

Hollow stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

43'

Slot Size:

0.01

Slot Length:

20'

Depth to Water:

~34'

Gravel Pack:

40'-17'

Seal:

17'-14'

Grout:

14'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					11				
					12				
					13		SM	12.5'-14.5' 7.5%R 4/4 brown silty sand 45% silt, 35% fine sand, 20% med sand minor coarse grains, loose med sorting	
					14		ML	14.5'-15' 7.5%R 3/4 brown sandy silt, 70% silt, 30% clay slight plasticity	
		1.0			15				
					16		ML	15.5'-16' same as above	
		3.6			17		C2	16'-17.5' clay, low plasticity, presence of mica, minor Fe oxidized stains	
	DRY				18		SM	17.5'-20' silty sand 45% silt, 30% fine sand 25% med sand, minor coarse sand, poorly sorted, grayish green, H.C. odor	
		12	GREEN GRAY		19				
					20				
		5.4			21				
	DRY				22		SM	21-22.75 silty sand - same as above	



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Boring/Well Number:

B-14 / MW-6

Date:

10/21/10

Project:

Lundrith

Project Number:

GMS1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Test Log: UTM

1932118.09-2851882

Elevation: TOL

6494.72

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

43'

Slot Size:

0.01

Slot Length:

20'

Depth to Water:

~ 34'

Gravel Pack:

40'-17'

Seal:

17'-14'

Grout:

14'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY	DRY	12	White		22		CL	22.75' - 25'	
			Black		23			clay, med-low plasticity,	
		11.3			24			clay is dry & crumbly, lots	
					25			of small fractures containing	
					26			Fe staining, minor black	
		14.5			27		SM	staining	
					28		ML	26'-26.5' silty sand	
		3750		B-14-28	29			30% silt, 60% med sand, 10%	
					30		SM	fine sand, poorly sorted loose	
		3054	RED		31			stained grayish/green	
			BLACK		32			26.5' - 27' clayey silt, slight	
		3083	WHITE		33			plasticity 50% silt 50% clay,	
								no staining present	
								27.5' - 30' silty sand, 60%	
								med sand, 20% fine sand, 10%	
								coarse, 10% silt, tight semi-	
								consolidated, poorly sorted,	
								strong HC odor	
								30.75' - 32.75'	
								silty sand, 10% silt, 50% med	
								sand, 20% coarse sand, 20%	
								fine loose sand, stained gray/	
								black/red/white	



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Boring/Well Numbers

B-14/MW6

Date:

10/21/10

Project:

Lindri.th

Project Number:

ems 1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: UTM

1932118.09-2851882

Elevation: TGL

6494.72

Detector:

PID

Drilling Method:

Hydram

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

43'

Slot Size:

0.01

Slot Length:

20'

Depth to Water:

~34'

Gravel Pack:

40'-17'

Seal:

17'-14'

Grout:

14'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	SAT @ 34'	2.687	Black		33		SC	Sandy clay mixture, 40% clay, 30% med sand, 30% coarse sand to minor sand, tight fairly compact	
		2.398	Grey		34				
			Red		35				
					36				
					37				
					38				
Easy	SAT.	35.0			39		Sm	37.5'-40' Silty sand, 20% silt, 50% med sand, 20% fine sand, 10% coarse sand, semi-consolidated to loose black staining in top 5' of core, Fe oxidation staining at the bottom of core	
					40				
					41				
					42				
					43				
					44				



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Boring/Well Number:

B-15

Date:

10/21/10

Project:

Lindrith

Project Number:

Gms1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Elevation: UTM

Elevation:

6493.6

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

35'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Damp		NONE		0				
					1				
					2		SM	1.75'-2.75' 7.5YR 4/4 brown silty sand, top soil, 50% silt 30% fine sand, 10% med sand 10% coarse sand, minor gravel loose poorly sorted	
					3				
Easy	Damp	8	NONE		4		CL	2.75'-5' clay, med plasticity 15% silt, minor fine sand 7.5YR 4/3 brown	
					5				
					6				
					7				
					8				
					9		ML/SC	clayey silt to clayey fine sand 70% silt, 20% fine sand 10% clay, loose, low plasticity	
Easy	Dry		NONE		10			7.5YR 5/3 brown	
					11				



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Boring/Well Number:

B-15

Date:

10/2/10

Project:

Lindrith

Project Number:

GMS1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Latitude: 37° 19' 24.28" N

Longitude: -108° 51' 29.04" W

Elevation:

6493.6

Detector:

PTD

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

35'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Dry		None		11				
					12				
					13		SM	Silty Sand 7.5yr 6/4 brown 20% silt, 60% fine sand, 20% med sand, loose med-well sorted	
		Ø			14				
		Ø			15				
		Ø			16		SM	16-17' same as above silty sand	
		Ø			17		SC	17-20' Clayey fine sand, 20% clay 80% fine sand	
		Ø			18			17-18' 7.5yr 3/2 dark brown	
		Ø			19			18-19' 10yr 6/8 brownish yellow	
		Ø			20			19-20' 10yr 6/2 light brownish grey	
		Ø			21		ML/SL	20-22' Clayey-silt to clayey sand	
		Ø			22			10yr 6/6 yellowish brown	



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Boring/Well Number:

B-15

Date:

10/21 - 10/22/10

Project:

Lindrieth

Project Number:

Gms 1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: UTM 1932184.98 - 7851929.57	Elevation: 6493.16	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon	Hole Diameter: 6"	Total Depth: 35'
Casing Type: -	Casing Diameter: -	Casing Length: -	Slot Size: -	Slot Length: -	Depth to Water: -	

Gravel Pack: -	Seal: -	Grout: -	Comments:
-------------------	------------	-------------	-----------

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Damp	5			22		SP	22'-23' 70% med sand, 10% coarse sand, 20% fine minor silt	
					23		SP	23'-24' same as above	
					24			24'-25' same as above	
					25				
					26				
Tuff	DRY	4.9			27		Sm	26.5'-27.5' silty sand 10% silt, 40% med sand, 50% fine sand, minor coarse	
					28			27.5'-30' sand 50% med sand grains, 20% coarse grains, 30% fine grains	
					29			sand lens, increasing coarse	
					30				
					31				
					32		SP	31.5'-32' 70% med sand, 28% fine sand, 2% silt, minor coarse grains	
					33			brownish green staining	

33



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Boring/Well Number:

B-15

Date:

10/21 - 22/10

Project:

Lindrith

Project Number:

GMS1001

Logged By:

DH

Drilled By:

Envirodrill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Case: 0 TM

1752184.88 - 28579290

Elevation:

6493.6

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

Total Depth:

35'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Tuff	Dry	31	B-15-35	Black	33		SP	32 - 33.75 Same as above, stained Black	
					34	SM	33.75 - 34.25 Confining Layer Silty fine sand		
		35			SM	70% fine sand, 27% silt, minor medium grain sand, semi-consolidated, no staining 10YR 7/4 very Pale Brown			
		36				34.25 - 35 Same as above. Different color			
		37				2.5Y 7/1 light gray - layer is tight			
		38							
		39							
		40							
		41							
		42							
43									
44									



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Boring/Well Number:

B-16

Date:

10/22/10

Project:

Lundrith

Project Number:

Gms 1001

Logged By:

DH

Drilled By:

Envirow Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Tool Joint: UTM

Elevation:

6491.57

Detector:

PID

Drilling Method: Auger

Yellow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~ 35'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Damp Surface	○	None		0				
					1				
					2		SM	1.5'-3.25' silty sand, 40% silt, 50% fine sand, 10% med sand, minor coarse grains, loose	
					3			104R 5/4 Yellowish Brown	
					4		CL	3.25'-4.5' 7.54R 4 1/2 Brown Clay med plasticity, tight compact clay, minor silt content	
		○			5		SM	4.5'-5' clayey fine sand to silty fine sand 70% fine sand, 20% silt, 10% clay, mod-consolidated	
					6				
					7				
					8		SM	7.25'-8' Same as above	
		○			9		SM	8'-10' Silty sand 85% fine sand, 10% silt 5% med sand, loose med sorted w/minor clay content (small inclusions)	
Easy	Dry	○	None		10			7.54R 5/3 Brown	
					11				



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Boring/Well Number:

B-116

Date:

10/22/10

Project:

Lindri.th

Project Number:

CMS1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Last Log: UTM

Elevation:

Detector:

Drilling Method: Auger

Sampling Method:

Hole Diameter:

Total Depth:

1932116111-2851829.24

6491.57

PID

Hollow Stem

Split Spoon

45

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~35

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
11					11				
12					12				
13					13		SM	12.5'-14.5' same as above	
14					14		SM	14.5'-15' same as above Slightly more consolidated/ compact	
15					15				
16					16				
17					17				
18					18		SM	18'-18.5' same as above	
19					19		SM	18.5'-19.75' silty fine sand, 30% silt, 70% fine sand, minor med grains - loose	
20					20		SM/SL	19.75'-20' silty-clayed fine sands 70% fine sand 25% silt 5% clay	
21					21		SM	20-24 10% c/b yellowish Brown silty fine sand 20% silt, 79% fine sand, 1% med sand - loose	
22					22				



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Boring/Well Number:

B-116

Date:

10/22/10

Project:

Lindrith Delineation

Project Number:

Gms1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Estimate: UTM

Elevation:

6491.57

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~35

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY	DRY	0	NONE		22		SM	Same as above	
					23				
		0			24		SM	Same as above, containing small black specks.	
		0			25				
		NR			26				
					27				
		NR			28		SM	27.5'-28' same as above	
		0			29		SC	28'-28.5' clayey fine sand 30% clay, 60% fine sand, 10% silt, Fe staining	
EASY	DRY	1511			30		SM	28.5'-30' silty sand, 50% silt, 80% med sand, 15% fine sand, minor coarse graining loose, stained gray black, strong odor, minor Fe staining, sand more coarse	
		3702	Dark Green/Black		31				
		NR			32		SP	31.75'-33.75' Sand 60% med sand 29% fine sand, 1% coarse sand minor silt, stained black/red (Fe ₂ O ₃)	
		3720		B-116-32	33				
		1702							



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Boring/Well Number: B-16 Date: 10/22/10

Project: Landrith Delineation Project Number: GMS1001

Logged By: DH Drilled By: Ewira Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: UTM Elevation: 6491.57 Detector: PID Drilling Method: Hollow Stem Sampling Method: Split Spoon Hole Diameter: 6" Total Depth: 45'
 Casing Type: Casing Diameter: Casing Length: Slot Size: Slot Length: Depth to Water: - 35'

Gravel Pack: Seal: Grout: Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Damp Moist	1702	Green		33			33.75-35' 10% silt light grey, silty sand, 10% silt, 75% fine sand, 15% med sand, grey color, loose slight HC odor	
		3504			34				
		67			35				
	SAT	N2			36				
		N2			37				
Easy	SAT	1431	Gray Black		38		SP	Sand, 60% med sand, 35% fine sand, 3% silt, 2% coarse sand, loose, slight odor, stained Black/grey	
		622			39				
		91			40				
		23			41				
Easy	SAT	80			42		ML	Sandy silt, 30% silt, 70% fine sand, loose, stained gray, more consolidation than upper units, confining layer	
	Dry	1160	Gray Black		43				
		60			44				

5 45 45



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Boring/Well Number:

B-17

Date:

10/22/10

Project:

Lindrieth Delineation

Project Number:

Enviro 1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lot/Lane: 07W

1932453-46-285798.87

Elevation:

6491.1

Detector:

PED

Drilling Method: Auger

Bottom Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~33'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy		NR			0				
					1				
					2				
					3		ML/SM	2.5'-4' 7.5YR 4/4 Brown silty fine sand, 50% silt, 50% fine sand, loose, minor surface gravel	
	Wet (surface)		NONE		4		CH	4'-5' 7.5YR 3/4 Dark Brown high plasticity, sticky clay	
					5				
		NR			6		SM	5.5'-8' 7.5YR 4/4 Brown silty fine sand, 40% silt, 60% fine sand, minor med sand, loose/unconsolidated	
Easy					7				
					8		CL	8'-10' 10YR 7/3 Brown silty clay, med plasticity 30% silt, 70% clay, minor fine sand	
					9				
					10				
					11				



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Boring/Well Number:

B-17

Date:

10/22/10

Project:

Landfill Delineation

Project Number:

6ms1001

Logged By:

DH

Drilled By:

Enuro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: UTM

1932183 46-255179882

Elevation:

6291.1

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

—

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

—

Depth to Water:

~33'

Gravel Pack:

—

Seal:

—

Grout:

—

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Dry/Damp	Ø	None		11				
					12		ML/SM	12-15' 10YR 4/3 Brown silty fine sand, 50% silt, 50% fine sand, minor med grains, loose/unconsolidated	
					13				
					14				
					15				
					16				
					17				
					18		ML/SM	17.5-19' 10YR 4/3 Brown Same as above	
Easy	Dry/Damp	Ø	None		19				
					20		SC	19-20' 10YR 4/3 Brown Clayey fine sand, silt content, 50% fine sand, 30% clay, 20% silt	
					21				
					22				



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Boring/Well Number:

B-17

Date:

10/22/10

Project:

Under the Delineation

Project Number:

EMS1001

Logged By:

DH

Drilled By:

Envero Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Latitude: 37° 46' 28.5" N

Elevation:

6491.1

Detector:

PED

Drilling Method:

Follow Stem

Sampling Method:

Split Spoon

Hole Diameter:

4.5"

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~ 33'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Damp	Ø	NONE		22		SM/ML	20'-23' 104% w/w Brownish yellow, silty fine sand, 50% silt, 50% fine sand	
					23			23'-25' 104% w/w Brownish yellow, silty sand, 40% silt, 30% fine sand, 30% med sand	
		Ø			24			loose to minor consolidate contains black / dark brown spots / speckles	
		NR			25				
					26			NR	
					27		SM	27'-28.5' slight gray staining silty sand, 70% fine sand, 25% med sand, 5% silt, loose, slight odor	
Easy	Damp	Ø			28		ML/SM	28.5'-29' silty fine sand, 50% silt, 50% fine sand, Fe staining, slight odor	
		343	GREEN		29			29'-29.5' silty clay, gray staining low/med plasticity	
		2104	GREEN BACK		30		CL	29.5'-30' silty sand, 30% fine sand, 50% med sand, 5% coarse sand, 15% silt, loose, stained Fe / black gray, odor	
	Wet				31		SM		
					32				
		4056	BLACK		33			NR	
				B-17-33					



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Boring/Well Number:

B-17

Date:

10/22/10

Project:

Underground Delineation

Project Number:

AMS1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Test Log: UTM

Elevation:

6491.1

Detector:

PID

Drilling Method: Auger

Hollow stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

33'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Wet	4050	Black	B-17-33	33		SP	32.5'-34" sand, 70% med grains, 25% fine sand, 5% coarse, loose, heavily stained black gray, strong H ₂ S odor	
		2939			34		SP	34'-35" sand, 10% silt, 30% fine sand, 60% med sand, loose, heavily stained black gray	
		383	Black gray		35				
					36				
	SAT	220	Black		37		GM	37'-37.5" silty / sandy gravel	
Easy		105	Black		38			5% gravel, 10% coarse sand, 40% med sand, 5% silt, heavily stained black / loose odor	
		209			39		SP	37.5'-40" sand, 10% silt, 40% med sand, 20% coarse sand, 30% fine sand, loose, stained black minor Fe staining	
		15			40				
					41				
					42				
	SAT				43		SP	42.5'-43" same as above	
Easy	dry @ 43'	305			43		SM	Confirming layer @ 43'	
					44			43'-45" silty fine sand, 60% silt, 40% fine sand, semi consolidated, 1042 G/B Brownish yellow & light gray	

B-17-45



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Boring/Well Number:

B-18

Date:

10/25/10

Project:

Undr.th

Project Number:

6ms1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Engine: UTM

Elevation:

6490.19

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

Total Depth:

40'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				
					1				
					2				
Easy	dry	○			3		SM	NR 3'-3.5' 7.5% 5/3 Brown silty sand, 30% silt, 65% fine sand, 5% med sand	
		○			4				
		○	Fe staining		5		CH	3.5'-5' 10% 4/3 Brown clay high plasticity, minor silt content, minor Fe staining	
					6				
					7				
					8				
					9				
		○					SM/SC	NR silty to clayed fine sand 50% fine sand, 25% silt, 25% clay, slight plasticity, loose	
Easy	dry	○			10				
		○							
					11				



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Boring/Well Number:

B-18

Date:

10/25/10

Project:

Lundrith

Project Number:

6ms1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Case/Zone: UTM

Elevation:

6490.19

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

46'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	DRY	○			11				
					12		Sm	12'-12.5' 7.54R 5/16 Strong Brown silty sand, 40% silt, 50% fine sand, 10% med sand	
		○			13		Sm	12.5'-15' 7.54R 6/4 light brown silty fine sand, 60% fine sand, 40% silt	
					14				
		○			15				
					16			NR	
		○			17				
					18		Sm	17.5'-18' same as above	
		○			19		Sm	18'-19.25' 104R 5/3 Brown silty sand, 10% silt, 60% fine sand, 30% med sand, loose, more coarse sand	
					20		SC	19.25'-20' clayey fine sand, slight plasticity, 60% fine sand, 40% clay	
Easy	DRY	○			21				
					22				



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LT Environmental, Inc.
2243 Main Avenue, Suite 3
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Boring/Well Number:

B-18

Date:

10/25/10

Project:

Lundrith

Project Number:

6ms1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: UTM

193223.39-285776.76

Elevation:

6490.19

Detector:

DIO

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Damp	0			22		SM	Silty sand, 80% fine sand, 20% silt, varying colors, yellow, green, black	
					23			21'-22' 2.5YR 5/6 light olive brown	
		12			24			22'-22.5' 4.5YR 6/4 light brown	
					25			22.5'-23.75 2.5YR 7/4	
					26			23.75-24.25 - 2.5Y 7/4 Pale yellow	
Easy	Damp	29	Minor Black/Brown		27		SM	27'-29' silty sand	
		2			28			2.5Y 7/4 pale yellow, minor red (Fe) staining	
Easy	Damp	0	Red (Fe)		29		SM	29'-30' silty sand	
		12			30			20% silt, 60% fine sand, 20% med sand, banded staining	
		1836			31			Fe (oxidized) black, gray, hc odor	
					32				
Easy		3672		B-18-33	33				



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Boring/Well Number:

B-18

Date:

10/25/10

Project:

Lind. th

Project Number:

Gms1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Location: UTM

Elevation:

6490.19

Detector:

PID

Drilling Method:

How Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	WET	2687	Black Grey		33		SP	32.5' - 34.5' sand, 5% silt, 20% fine sand, 70% med sand, 5% coarse sand, heavily stained black/gray HC odor	
		42.2			34				
					35		SM	34.5' - 35' 2.5 y 5/4 light olive brown, silty fine sand, no plasticity, 70% fine sand, 30% silt	
					36				
					37				
Good	Wet/Damp	22			38		SP	37.25' - 38.5' sand, 15% silt, 85% fine sand minor clay	
		11			39		SM	38.5' - 40' 2.5 y 7/11 light gray silty fine sand, 40% silt, 60% fine sand, semi consolidated, confining layer	
Easy	DRY	18		B-B-40'	40				
					41				
					42				
					43				
					44				



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Boring/Well Number:

B-19 / MW-7

Date:

10/25/10

Project:

Lindberth

Project Number:

GMS1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Estimate: LTM

Elevation: TOL

Detector:

Drilling Method:

Sampling Method:

Hole Diameter:

Total Depth:

19323376.740-2851578.11

6489.84

PID

Hollow Stem

Split Spoon

6"

45'

Casing Type:

PVL

Casing Diameter:

2"

Casing Length:

48'

Slot Size:

0.01

Slot Length:

20'

Depth to Water:

~ 37'

Gravel Pack:

45'-22.7'

Seal:

22.7'-20'

Grout:

20'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Damp Surface		None		0				
		0			1		SM	1'-1.5' silty fine sand, 40% silt, 60% fine sand, 7.5YR 5/4 Brown	
					2		CL	1.5'-3' silty clay, lean clay, med plasticity, minor sand content 7.5YR 4/3 Brown	
		0			3		SM	3'-5' silty fine sand, 40% silt, 60% fine sand, loose	
					4				
		0			5				
					6		SM	6.25'-7.5' Clayey fine sand, silty fine sand, slight plasticity, 40% fine sand, 20% silt, 20% clay	
		0			7				
					8				
		0			9				
					10				
		0			11				



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Boring/Well Number:
 B-19 / MW-7

Date:
 10/25/10

Project:
 Lindrith

Project Number:
 Ems1001

Logged By:
 DH

Drilled By:
 Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: <u>UTM</u> 1932331.76 - 765858.7	Elevation: <u>TOL</u> 6489.84	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon	Hole Diameter: 6"	Total Depth: 45'
Casing Type: PVC	Casing Diameter: 2"	Casing Length: 48'	Slot Size: 0.01	Slot Length: 20'	Depth to Water: ~ 37'	

Gravel Pack: 45'-22.7' Seal: 22.7'-20' Grout: 20'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					11				
					12		CL	11.5'-12.5' 7.5 YR 4/3 Brown silty clay, low plasticity 40% silt, 60% clay	
					13		SM	12.5'-15' silty fine sand, 45% silt, 55% fine sand, 7.5 YR 6/3 light Brown	
					14				
					15				
					16				
					17		SP	17'-18' 7.5 YR 5/2 Brown 5% silt, 60% fine sand, 35% med sand, minor coarse, loose	
					18			18'-20' 7.5 YR 5/6 Strong Brown 20% silt, 70% fine sand, 10% med sand, loose	
					19				
					20				
					21				
					22				

Hole
 PCH
 20'



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Boring/Well Number:

B-19/MW-7

Date:

10/25/10

Project:

Underth

Project Number:

GMS1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Estimate: LTM

Elevation: TOL

Detector:

Drilling Method:

Sampling Method:

Hole Diameter:

Total Depth:

1932333.76-2251578.51

6487.84

PED

Hollow Stem

Split Spoon

6"

45'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

48'

Slot Size:

0.01

Slot Length:

Depth to Water:

~ 37'

Gravel Pack:

45'-22.7'

Seal:

22.7'-20'

Groyt:

20'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Damp	0	Ø		22	X	SM	22.25'-25' 2.5% 6/4 light yellowish brown, silty fine sand, 30% silt, 70% fine sand, minor clay component, mod consolidated, hard to remove from spoon w/ hand	xxx xxx xxx xxx
Easy	Damp	0	Ø		23				
		0	Ø		24		SM	wild staining @ 23' black no odor	xxx xxx xxx xxx
		0	Ø		25	X			
		0	Ø		26	X			
		0	Ø		27		SM	26.5'-27.5' Same as above	xxx xxx xxx xxx
		0	Ø		28		SP	27.5'-30' Sand, 40% fine sand, 50% med sand, 5% silt, 5% coarse sand, loose, staining black/gray, minor Fe (oxidized), odor (old)	xxx xxx xxx xxx
Easy	Damp	2.5	Black Red (R)		29				
		2.3			30				
		11.68	Black Green		31				
		3.66	Black Green		32		SP	same as above stained black/gray	xxx xxx xxx xxx
				B-19-	33				

33



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Boring/Well Number: B-19/MW-7 Date: 10/25/10

Project: Linderoth Project Number: GMS1001

Logged By: DH Drilled By: Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Location: UTM Elevation: TOC 6489.84 Detector: PID Drilling Method: Hollow Stem Sampling Method: Split Spoon Hole Diameter: 6" Total Depth: 45'
 Casing Type: PVC Casing Diameter: 2" Casing Length: 48" Slot Size: 0.01 Slot Length: 20' Depth to Water: ~37'

Gravel Pack: 45'-22.7' Seal: 22.7'-20' Grout: 20'-0' Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
		3.6		B-19-33	33		SP	Same as above, stained black/gray, Hc odor (old)	
Easy	Damp	5			34		SM	34'-35' 2.5% 7/2	
		15			35			Silty sand, 30% silt, 20% med sand, 50% fine loose to moderately consolidated	
		127			36		SP	36'-38.5'	
	Wet	31			37			Sand, 80% med sand, 20% fine sand, minor coarse sand, banded staining, black/gray Fe (oxidized), some of the bands appear white and unstained	
		56			38				
		5			39		SM	38.5'-40'	
		5			40			Silty sand, 30% silt, 40% fine sand, 30% med sand, loose stained greenish/gray GIEY 2 S/L	
Tuff	Damp	7.5			41		SM	40'-45' sand, 10% fine sand, 25% med sand, 5% silt, loose to moderately consolidated GIEY 2 S/L greenish/gray confining layer	
		1.7			42				
					43				
					44				

2.8 B-19-45 45



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Boring/Well Number:

B-20

Date:

10/26/10

Project:

Lundrith

Project Number:

6ms/COI

Logged By:

D.H.

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: UTM

19S2218.74-2851602.32

Elevation:

6488.58

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

—

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

— 33'

Gravel Pack:

—

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	DRY	0	Ø		11		Sm	10'-15' silty fine sand, becomes semi-consolidated @ 14'-15'	
					12			104R 5/4 yellowish Brown	
					13				
					14				
Easy	DRY	0	Ø		15				
					16			NR	
					17		Sm	17'-18.5' 7.54R 5/4 Brown silty sand, 10% silt, 25% med sand, 65% fine sand, loose	
					18		Sm	18.5'-20' 7.54R 5/4 Brown silty sand, 20% silt, 40% fine sand, 20% med sand, poorly sorted, semi-consolidated	
EASY	DRY	0.2	Ø		19				
					20				
					21			NR	
					22				



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Boring/Well Number:

B-20

Date:

10/26/10

Project:

Lindri.th

Project Number:

GMS1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Est/Cont: UTM

1932218.74-285168-32

Elevation:

6488.58

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

Total Depth:

40'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~33'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Wet Surface				0			NR	
					1				
					2		Sm	1.5'-2.5' silty sand 10YR 4/4 Dark yellowish Brown	
					3		CL	2.5'-3.5' 7.5YR 4/4 Brown silty clay, med to high plasticity	
Easy	Dry				4		Sm	3.5'-5' 7.5YR 5/4 Brown silty fine sand, 30% silt, 70% fine sand	
					5				
					6			NR	
					7		Sm/sl	6.25'-9' 10YR 5/4 Yellow Brown silty fine sand to clayey fine sand 40% silt, 60% sand	
Easy	Dry				8				
					9				
					10		Sm	9'-10' silty fine sand 30% silt, 70% fine sand, loose 10YR 5/4 yellowish Brown	
					11				



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Boring/Well Number:

B-20

Date:

10/26/10

Project:

Landrith

Project Number:

GMS1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Location: UTM

193221B-74-285160-57

Elevation:

6488.58

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split spoon

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~ 33

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Dry	0	Ø		22		Sm	20.75' - 23.5' 1042 5/16 yellow Brown silty sand, 70% fine sand, 20% med sand, 10-15% silt	
					23			23.5' - 25' 1042 5/16 yellow Brown silty sand, 20% silt, 70% med sand, 10% fine sand, semi-consolidated light black staining @ 25'	
Easy	Damp	7.1	Minor Black		25				
					26				
		428	Black		27		Sm	26' - 26.5' silty sand, stained black 10% silt, 30% med sand, 50% fine sand, 5% gravel/coarse sand	
		35	Black/gray		28		Sm	26.5' - 30' silty sand, 70% fine sand, 10% silt, 20% med sand, loose, heavily stained, black/gray, HC odor	
Easy	Damp	20.7	Black		29				
		3616			30				
				B-20-30'	31				
					32				
					33				



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Boring/Well Number:

B-20

Date:

10/22/10

Project:

Lindrieth

Project Number:

Gms1001

Logged By:

DA

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: <u>UTM</u>	Elevation: <u>6488.58</u>	Detector: <u>PID</u>	Drilling Method: <u>Hollow Stem</u>	Sampling Method: <u>Split Spoon</u>	Hole Diameter: <u>6"</u>	Total Depth: <u>40'</u>
Casing Type: <u>-</u>	Casing Diameter: <u>-</u>	Casing Length: <u>-</u>	Slot Size: <u>-</u>	Slot Length: <u>-</u>	Depth to Water: <u>~33'</u>	

Gravel Pack: <u>-</u>	Seal: <u>-</u>	Grout: <u>-</u>	Comments:
-----------------------	----------------	-----------------	-----------

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY	SAT.	3035	BLACK GRAY RED		33		SP	32.5'-34' stained Black/Red (Fe) Gray, sand, 60% med sand, 35% fine sand, minor coarse grain, 5% silt, loose, HC odor	
		117	BLACK		34				
	DAMP	14			35		CH Sm	34'-tight clay, high plasticity, gray	
	SAT.				36			34.5'-35' silty sand, no odor, oxidized (Fe) red staining	
EASY		19	RED		37		SP	36.5'-39.5' Sand 80% med grains, 20% fine minor silt	
					38				
	SAT	43.8			39				
		1.8			40		SM	39.5'-40' Tight, gray, silty sand, 70% fine sand, 20% silt, 10% med sand, dry @ 39.5' confining layer	
EASY	Dry	39.2		B-20-40	41				
					42				
					43				
					44				



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Boring/Well Number:

B-21

Date:

10/27/10

Project:

Lindrith

Project Number:

Gms1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Latitude: 37.16

1932363.16 - 7851481.59

Elevation:

6488.27

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~ 38'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				
					1			NR	
					2				
Easy	Damp (surface)	○	NONE		3		SM	2.5'-3.5' silty sand, 15% silt, 50% fine sand, 30% med sand, 5% gravel (surface), loose	
					4			7.5' 5/4 Brown	
		○	NONE		5		CL	3.5'-5' 7.5' 3/4 Dark Brown silty clay, med plasticity	
					6				
					7		SM	6.5'-8' clayey fine sand to silty fine sand, 30% clay, 60% fine sand, 10% silt, slight plasticity	
Easy	DRY	○	NONE		8		ML/SM	8'-10' silty fine sand, 50% silt, 50% fine sand, loose	
					9				
					10				
					11				



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Boring/Well Number:

B-21

Date:

10/27/10

Project:

Undr. th

Project Number:

Gms1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: LTM

1932303, 116-2351481.59

Elevation:

6488.27

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

- 38'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	DRY	0			11	X	SM	11.5'-12.5'	
					12			silty fine sand to clayey fine sand / same as above	
					13		CL	12.5'-15' 7.5% 12 4/2 Browns	
					14			silty clay, 30% silt, 70% clay, low plasticity, clay becomes darker @ 15', slightly stained, w/ a faint odor	
Easy	DRY	0	White		15	X			
			Dark		16	X	CL	16'-17.5' same as above, strong odor & staining smells old	
		0	Grey		17				
			Brown		18		SM	17.5'-20' silty fine sand 30% silt, 70% fine sand, dark grey staining	
Easy	DRY	0			19				
					20	X			
					21	X			
					22				



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Boring/Well Number: **B-21** Date: **10/27/10**

Project: **Lindrieth** Project Number: **Gms1001**

Logged By: **DH** Drilled By: **Enviro Drill**

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Law/Cons: VTM	Elevation: 6488.27	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon	Hole Diameter: 6"	Total Depth: 40'
Casing Type: ---	Casing Diameter: ---	Casing Length: ---	Slot Size: ---	Slot Length: ---	Depth to Water: ~38'	

Gravel Pack: **---** Seal: **---** Grout: **---** Comments: **---**

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Firm	Damp	0.0	None		33		SM	33'-35' 2.5% silt light olive brown, silty fine sand, 30% silt, 70% fine sand, minor odor, tight/compact	
					34				
					35				
					36		NR		
					37		SP	37'-37.5' 70% fine sand, 20% med sand, 5% coarse, 5% gravel, soil stained greenish black	
Easy	SAT	0.0	Greenish Black		38		Sm	37.5'-38.5' silty fine sand	
					39		Sm	38.5'-40' silty fine sand, tight gray layer, confining layer	
Easy	DRY	0.0		B-21-40	40				
					41				
					42				
					43				
					44				



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Boring/Well Number:

B-21

Date:

10/27/10

Project:

Lindrith

Project Number:

Gms1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: UTM

1932303.16-2851401.59

Elevation:

6488.27

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

46'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~38'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
		0.0			22		SM	21'-24" silty fine sand, same as above, contains odor/staining	
				3-21-23	23			Sample Collected note: glycol tank (old) positioned 26' to the NW possible source for odor/staining	
					24		CL	24'-24.5" silty clay	
					25		SM	24.5'-26" silty sand, 70% fine grains	
		0.0			25			15% silt, 15% med grains, loose	
					26				
					27		SM	26.5'-27.5" 2.5% w/4 light yellow Brown, silty fine sand, 30% silt, 70% fine sand, loose minor Fe staining	
		0.0			28		SM	27.5'-30" 2.5% w/4 light yellow Brown, silty fine sand, 40% silt, 60% fine sand, tight compact, hard/impossible to remove w/ hand, minor Fe staining, black/gray, banded	
					29				
					30				
					31		SP	31'-33" 10% w/2 light brownish gray, sand, 70% fine sand, 25% med sand, 5% silt, loose, minor Fe (oxidized) staining	
					32				
		0.0			33				



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Boring/Well Number: B-22/mw-8
 Date: 10/28/10
 Project: Lindrith
 Project Number: Gms1001
 Logged By: DH
 Drilled By: Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: UTM 193191611-28575245
 Elevation: 6490.1
 Detector: PID
 Drilling Method: Hollow Stem
 Sampling Method: Split Spoon
 Hole Diameter: 42'
 Total Depth: 42'
 Casing Type: PVC
 Casing Diameter: 2"
 Casing Length: 45'
 Slot Size: 0.01
 Slot Length: 20'
 Depth to Water: ~30'
 Gravel Pack: 42'-18'
 Seal: 18'-14.1'
 Grout: 14.1'-0'
 Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	24	0.0			11		ML/SM	Silty fine sand, 50% silt, 50% fine sand to very fine sand, loose. 5/3 Brown	
		0.0			12				
		0.0	NONE		13				
		0.0			14		ML/SM	Same as above	
		0.0			15				
		0.0			16		ML/SM	16.5'-18" 7.54R 5/4 Silty fine sand, loose Same as above	
		0.0			17				
		0.0			18		SM	18'-20" 7.54R 5/4 Brown Silty Sand, 15% silt, 20% med sand, 65% fine sand, loose minor calcite cement - white Black specks @ 20"	
		11.9			19				
					20				
					21				
Tube					22				

Hole plug 14.10'

Sand @ 18'



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Durango, Colorado 81301

Boring/Well Number:

B-22 / MW-8

Date:

10/28/10

Project:

Lundrith

Project Number:

GMS1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: UTM

1931914.11 - 2851752.75

Elevation:

6490.1

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

42'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

45'

Slot Size:

0.01

Slot Length:

20'

Depth to Water:

~30'

Gravel Pack:

42'-18'

Seal:

18'-14.1'

Grout:

14.10'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY	DAMP SUGAR				0				
					1				
		0.0	Ø		2		SM	1.75'-4' 7.5 4R 5/4 Brown silty fine sand, 50% silt, 50% fine sand, loose	
					3		SM	4'-4.5' 7.5 5/4 Brown 25% silt, 30% med sand, 45% silt	
EAST	DRY	0.0	Ø		4		CL	4.5'-5' silty clay, low plasticity	
					5				
					6				
					7		ML	6.5'-7' 7.5 4R 5/4 Brown sandy silt, 60% silt, 40% fine sand	
EAST	DRY	0.0	Ø		8		CL	7'-8' 7.5 4R 4/3 Brown silty clay, low plasticity	
					9		SM	8'-10' 7.5 4R 5/3 Brown silty fine sand, loose	
		0.0	Ø		10				
					11				



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Boring/Well Number:

B-22 / MW-8

Date:

10/28/10

Project:

Lindrith

Project Number:

Gms 1001

Logged By:

DH

Drilled By:

Enrico Dr. II

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: UTM

1931961.11-2851752.95

Elevation:

6496.1

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

42'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

45'

Slot Size:

0.01

Slot Length:

20'

Depth to Water:

~30'

Gravel Pack:

42'-18'

Seal:

18'-14.10'

Grout:

14.10'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
		8.4	None		22		SP	22'-25' sand, 5% silt, 40% med sand, 55% fine sand, minor coarse, loose 7.54R 6/3 Pale Brown	
		39.5	None	BH-22-24'	24				
		16.0			25				
					26				
					27				
		1.6	None		28		SP	28'-29.5' sand, same as above 7.54R 6/3 Pale Brown	
					29				
		18.8	None		30		SM	29.5'-30' silty sand, 15% silt, 20% med sand, 65% fine sand 7.54R 5/6 Yellowish Brown	
					31				
					32				
					33				



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Boring/Well Number:

B-22/MW-8

Date:

10/28/10

Project:

Lindrith

Project Number:

Emstool

Logged By:

DH

Drilled By:

Enuro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Latitude: 37° 19' 11" N

113° 19' 11" W

Elevation:

6490.1

Detector:

PID

Drilling Method:

Hollow stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

42'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

45'

Slot Size:

0.01

Slot Length:

20'

Depth to Water:

~30'

Gravel Pack:

42'-18'

Seal:

18'-14.1'

Grout:

14.1'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
	WET	0.0			33		SM	Silty sand to sand varying silt content 30% med grains, 10% fine grains, Fe staining, Banded w/ light gray sand 1042 4/4 Dark Yellowish Brown	
		5.8			34				
					35				
					36			36'-38.5' shale @ 36' consolidated shale layer inter-fingered w/ silty clay	
		0.0			37				
					38		SP	Sand 70% fine sand, 30% med sand, minor silt, loose 1042 5/4 yellowish brown	
		0.5			39				
					40				
		0.0			41		SO	same as above	
					42				
					43				
					44				



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Boring/Well Number:
 BH-23/MW-10

Date:
 10/28/10

Project:
 Lindrith

Project Number:
 Erms 1001

Logged By:
 D.H.

Drilled By:
 Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Location: UTM 1932004.4 2851612.78	Elevation: TBL 6492.39	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon	Hole Diameter: 6"	Total Depth: 40'
Casing Type: PVC	Casing Diameter: 2"	Casing Length: 43'	Slot Size: 0.01	Slot Length: 20'	Depth to Water: ~33'	

Gravel Pack: 40'-17'	Seal: 17'-14.1'	Grout: 14.1'-0'
-------------------------	--------------------	--------------------

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				
EASY	DRY				1		SM	1-2' silty sand w/ minor amounts of surface gravel, loose	
					2			2-3' asphalt from surface	
		0.0	NONE		3		ML/SM	3'-5' 7.5 yr 4/3 Brown silty fine sand, 50% silt, 50% sand, loose	
EASY	DRY				4				
		0.0	NONE		5				
					6				
					7				
					8		ML/SM	7.5'-8.5' same as above, loose, 7.5 yr 4/3 Brown	
EASY	DRY	0.0	NONE		9			8.5'-10' silty fine sand, but semi-consolidated, very compact, had to use rock hammer to remove	
		0.0			10				
					11				



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Boring/Well Number:

B-23/MW-10

Date:

10/27/10

Project:

Lundrith

Project Number:

Envs1001

Logged By:

DH

Drilled By:

Enure Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: 37°

Elevation: 766

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

43'

Slot Size:

0.01

Slot Length:

20'

Depth to Water:

~38'

Gravel Pack:

40' - 17'

Seal:

17' - 14.1'

Grout:

14.1' - 0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY	DRY	0.0	NONE		11		SM	11.5' - 12.5' silty fine sand, 40% silt, 60% fine sand, loose 2.54R 5/4 Brown	
					12				
					13		ML	12.5' - 15' silty fine sand to clayey fine sand, 58% silt, 45% fine sand, 5% clay, slight plasticity	
EASY	DRY	0.0	NONE		14			7.54R 5/4 Brown	
					15				
					16				
		0.0			17				
		0.0			18		ML		
EASY	DRY		NONE		19			Sandy silt, 60% silt, 40% fine sand, loose, 7.54R 5/4 Brown	
		0.0			20				
					21				
					22				

Barbrite @ 14.1'

Seal @ 17'



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Boring/Well Number:
 B-23/mw-10

Date:
 10/27/10

Project:
 Lndr.th

Project Number:
 Gms1001

Logged By:
 DH

Drilled By:
 Enuro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Latitude: 37° 19' 22.2" N	Elevation: Tol. 6492.39	Detector: PED	Drilling Method: Hollow Stem	Sampling Method: Split Spoon	Hole Diameter: 6"	Total Depth: 40'
Casing Type: PVC	Casing Diameter: 2"	Casing Length: 43'	Slot Size: 0.01	Slot Length: 20'	Depth to Water: ~33'	
Gravel Pack: 40'-17"	Seal: 17'-14.1'	Grout: 14.1'-0'	Comments:			

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Dry	0	None		22		Sm	silty sand, 25% silt, 10% med sand, 65% fine sand, loose	
					23			10YR 5/4 Yellowish Brown	
		0			24		Sm	23.5'-25' silty sand, becomes more consolidated	
					25				
		0			26		Sm	26'-26.5' silty sand, 15% silt, 70% fine sand, 15% med sand	
Difficult	Damp				27		ML/CL	10YR 5/4 yellowish Brown	
		0			28			26.5'-28' clayey fine sand, to sandy clay, 40% clay, 60% fine sand, low plasticity	
					29		Sm	10YR 5/2 grayish brown	
		0			30			28'-30' silty fine sand, 40% silt, 60% fine sand, semi-consolidated	
					31			minor Fe staining (banded)	
		0			32				
Wier					33		Sm	32.5'-33.25' silty fine sand, 35% silt, 65% fine sand, loose w/ minor clay inclusions, 10YR 5/6 yellowish Brown	



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Boring/Well Number: B-23/MW-10
 Date: 10/28/10
 Project: Lindrieth
 Project Number: Gms 1001
 Logged By: DH
 Drilled By: Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Test Log: VTN
 Elevation: 7666
 Detector: PID
 Drilling Method: Hollow Stem
 Sampling Method: Split Spoon
 Hole Diameter: 6" Total Depth: 40'
 Casing Type: PVC Casing Diameter: 2" Casing Length: 43' Slot Size: 0.01 Slot Length: 20' Depth to Water: ~33'
 Gravel Pack: 40'-17' Seal: 17'-14.1' Grout: 14.1'-0' Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Tuff	Wet	0	NONE	B-23-33	33		SM	33.15' - 34.5'	
					34		CL	34.5' - 35'	
		0			35		ML	35' - 36.5'	
	Wet	0	NONE		36		SM	36.5' - 40'	
					37		SM/ML	40' - 41'	
Tuff	DEY	0	NONE		38			41' - 42'	
					39			42' - 43'	
		0		B-23-40	40			43' - 44'	
					41				
					42				
					43				
					44				



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Boring/Well Number: **B-24/MW-9** Date: **10-29-10**
 Project: **Lindrieth** Project Number: **Gms1001**

Logged By: **DH** Drilled By: **Enviro Drill**

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Estimate: **1932117.32 - 235148.07** Elevation: **5411.17** Detector: **PID** Drilling Method: **Hollow Stem** Sampling Method: **Split Spoon** Hole Diameter: **6"** Total Depth: **45'**
 Casing Type: **PVC** Casing Diameter: **2"** Casing Length: **46'** Slot Size: **0.01** Slot Length: **20'** Depth to Water: **~ 37'**
 Gravel Pack: **43'-21'** Seal: **21'-19'** Grout: **19'-0'** Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				
					1				
Easy	Dry	0	NONE		2		SM	1.5'-3' silty sand, 20% silt, 78% fine sand, 2% med sand, loose, 7.5 yr 5/16 strong Brown	
					3		CL	3'-4' silty clay 80% clay, 20% silt, low plasticity, roots present 7.5 yr 5/4 Dark Brown	
Easy	Dry	0	NONE		4		ML/SM	4'-5' silty, fine sand, 50% silt, 50% very fine sand, loose, 7.5 yr 5/16 strong Brown	
					5				
					6				
					7		ML/SM	silty fine sand w/ minor clay inclusions, 50% silt, 50% fine to very fine sand, loose 10 yr 5/4 light yellow Brown	
Easy	Dry	0	NONE		8				
					9				
					10				
					11				



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Boring/Well Number:

B-24/MW-9

Date:

10/29/10

Project:

Lundrith

Project Number:

Emms1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Latitude: UTM

19321722-2851482.04

Elevation: TGL

6491.17

Detector:

PID

Drilling Method:

Wallow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

46'

Slot Size:

0.01

Slot Length:

20'

Depth to Water:

~37'

Gravel Pack:

43'-21'

Seal:

21'-19'

Grout:

19'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
NONE	DRY	○	NONE		11				
					12		ML/SM	Silly fine sand same as above	
					13				
		○			14				
					15				
					16				
					17		SM/ML	16.5-20' Silly fine sand, 50% silt, 50% fine sand, loose @ 18.75' silty fine sand becomes more consolidated 10YR 5/4 yellowish brown	
					18				
		○			19				
					20				
		○			21				
					22		SM		



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Boring/Well Number:

B-24/MW-9

Date:

10/29/10

Project:

Landfill

Project Number:

Emis1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Last Core: 1532117-71-285482.07

Elevation: 10491.17

Detector: PED

Drilling Method: Hollowstem

Sampling Method: Split Spoon

Hole Diameter: 6"

Total Depth: 45'

Casing Type: PVC

Casing Diameter: 2"

Casing Length: 46'

Slot Size: 0.01

Slot Length: 20'

Depth to Water: ~37'

Gravel Pack: 43'-21'

Seal: 21'-19'

Grout: 19'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
22					22		Sm	21.5'-24' silty fine sand, same as above	
23					23				
24			Fe		24		Sm	24'-25' silty sand, 40% silt, 50% fine sand, 10% med sand, minor Fe staining, loose	
25					25			1042 g/l Brownish yellow	
26					26				
27					27		Sm	26.5'-27' silty sand, 15% silt, 35% med grained, 50% fine sand, loose	
28					28		SP	27'-30' sand, 50% med grained, 45% fine grained, 5% silt, loose	
29					29			Banded black, white, gray, red staining begins @ 28.5'-30', HC odor (smells new)	
30					30				
31					31		Sm	31'-31.5' silty fine sand, 30% silt, 70% fine sand, clay inclusions loose	
32					32				
33					33				



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Boring/Well Number:

B24/mw-9

Date:

10/29/10

Project:

Lindr.th

Project Number:

Cmslcool

Logged By:

DH

Drilled By:

Envero Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: UTM

1932117.72 - 7851482.0

Elevation: TUC

6491.17

Detector:

PID

Drilling Method: Auger

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

46'

Slot Size:

0.01

Slot Length:

20'

Depth to Water:

~ 37'

Gravel Pack:

43'-21'

Seal:

21'-19'

Grout:

19'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
	Wet	37			33		CL	31.5' - 32.75' silty clay, low plasticity	
					34		Sm	20% silt content	
	Dry	28	None		35			32.75' - 35' silty fine sand, 40% silt, 60% fine sand, loose	
					36		ML/Sm	to 39' @ 34' becomes dry	
					37			confining layer @ 34'	
					38			35' - 40' silty fine sand, 50% silt, 50% fine sand, has H ₂ S odor, moderate compaction	
MUD	SAT		None		39				
					40		ML/Sm	40' - 45' same as above	
MUD	Wet/SAT		None		41			10% silt gray, not as wet, slight odor	
					42				
					43				
					44				

B-24-45



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Boring/Well Number:

B-25

Date:

11/1/10

Project:

Lindrieth

Project Number:

6ms1001

Logged By:

DH

Drilled By:

Enviro Dr. II

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: 37°32'17.72" - 28°54'42.67"

Elevation:

6485.96

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~ 35'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				
					1		SM	1-3' 7.54R 6/3 light brown silty to clayey fine sands	
					2			3-4' 7.54R 4/4 Brown silty clay, low plasticity	
					3		ML/SM	4-5' silty fine sand 50% silt, 50% fine sand	
					4				
					5				
					6		ML/SM	5.75'-6.5' same as above	
					7		SM	6.5'-7' clayey fine sand, 20% clay, 10% silt, 70% fine sand	
					8		SM	7-10' 7.54R 6/3 light brown silty fine sand, 40% silt, 60% fine sand	
					9				
					10				
					11				



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2243 Main Avenue, Suite 3
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Boring/Well Number:

B-25

Date:

11/1/10

Project:

Lundrith

Project Number:

Gms1001

Logged By:

DH

Drilled By:

Enrico Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: ~~UTM~~

1932117.72 - 2851482.87

Elevation:

6485.96

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~ 35'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY	DRY	0.0	None		11	X			
EASY	DRY	0.0	None		12				
					13		Sm	Same as above, loose	
EASY	DRY	0.0	None		14				
					15	X			
					16				
					17	X	Sm	17'-17.5' same as above	
EASY	DRY	0.0			18			17.5'-18.5' 7.5% 6/3 light brown silty sand, 20% silt, 50% fine sand, 20% med sand, 10% coarse, loose	
					19		Sm	18.5'-20' silty fine sand, 30% silt, 70% fine sand, slightly consolidated	
	DRY	0.0			20				
					21				
TOFF					22				



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LT Environmental, Inc.
2243 Main Avenue, Suite 3
Durango, Colorado 81301

Boring/Well Number:

B-25

Date:

11/1/10

Project:

Lindrith

Project Number:

Ems 1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Tool Log: LTM

Elevation:

6485.96

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

-35'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Tuff					22				
	DEY	1.2	Ø		23		ML/SM	50% silt, 50% fine sand, loose 7.5 YR 6/3 light brown	
					24				
VERY TUFF	DEY	0.0	Ø		25		SP	25'-26.5' 70% fine sand, 25% mud sand, 5% silt, minor coarse sand 7.5 YR 6/6 Reddish Yellow	
	Damp				26		Sm	26.5'-30' silty fine sand 40% silt, 60% fine sand, semi- consolidated, minor Fe (oxidized) staining 10YR 6/3 Pale Brown	
		0.0	Ø		27				
					28				
		0.0	Ø		29				
					30		Sm	30'-32.5' same as above	
					31				
		0.0	Ø		32		Sm	32.5'-35' silty fine sand, 70% fine sand, 30% silt, 10 YR 6/1 gray, semi- consolidated, confining layer	
					33				



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Boring/Well Number:

B-25

Date:

11/11/10

Project:

Lind.ith

Project Number:

6ms1001

Logged By:

DH

Drilled By:

Enuro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: UTM

1932117.72 - 2851482.07

Elevation:

6485.96

Detector:

PID

Drilling Method:

ollow stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~35'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Very Hard	Dry	0.0			33				
Very Hard	Damp	0.0			34		sm/sc	silty to clayey sand same as above	
					35				
					36				
					37				
Very Hard	Damp	0.0			38		sm/sc	silty to clayey sand, gray, same as above	
		0.0		B25-39'	39				
					40				
					41				
					42				
					43				
					44				



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Boring/Well Number:

B-26/mw-11

Date:

11/1/10

Project:

Linderoth

Project Number:

Gms 1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: UTM

1732219.98-2851459.72

Elevation: TOL

6489.84

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

48'

Slot Size:

0.01

Slot Length:

20'

Depth to Water:

Gravel Pack:

45'-21.9'

Seal:

21.9'-18.6'

Grout:

18.6'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY					0				
					1				
	Damp (surface)	0.0	NONE		2		SM	2'-3' 7.5% 4/3 Brown silty sand, 30% silt, 20% med sand, 5% coarse, 45% fine sand	
					3		CL	3'-4' silty clay, 30% silt, 70% clay, low plasticity	
EASY	DRY	0.0	NONE		4		ML/SM	4'-5' silty fine sand, 50% silt, 50% fine sand 7.5% 4/3	
					5				
					6				
					7		ML	6.5'-7.5' 7.5% 4/3 Brown silt, 90% loose silt, 10% fine sand	
		0.0			8			7.5'-8.5' clayey silt, 30% clay, 70% silt, slight plasticity	
					9		ML	8.5'-10' sandy silt, 60% silt, 40% fine sand, loose	
		0.0			10			7.5% 4/3 Brown	
					11				



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Boring/Well Number:

B-26/mw-11

Date:

11/1/10

Project:

Lindrith

Project Number:

Gms 1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Last Log: JTT

Elevation: TOL

Detector:

Drilling Method:

Sampling Method:

Hole Diameter:

Total Depth:

1932.19.78 - 2243.1457.78

6489.84

PID

Hollow Stem

Split Spoon

6"

45'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

48'

Slot Size:

0.01

Slot Length:

20'

Depth to Water:

Gravel Pack:

45' - 21.9'

Seal:

21.9' - 18.6'

Grout:

18.6' - 0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
		0.0			11				
		0.0			12		ML	11.5' - 15' silt, 80% silt, 20% fine sand, loose 7.5YR 4/3 Brown	
		0.0			13				
		0.0			14				
		0.0			15				
		0.0			16				
		0.0			17		SM	17' - 18.75' 7.5YR 4/3 Brown silty fine sand, 70% fine sand, 30% silt, minor med grains, loose	
		0.0			18				
		0.0			19		ML	18.75' - 20' 7.5YR 4/3 Brown silt, 80% silt, 20% fine sand, more consolidated	
		0.0			20				
		0.0			21				
		0.0			22				

Barbuto @ 18.6'

sand @ 21.9'



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Boring/Well Number:

B-26 / MW-11

Date:

11/1/10

Project:

Lindrieth

Project Number:

Gms1001

Logged By:

D.H.

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Latitude: 37° 19' 48" N

Elevation: 7206

Detector:

PID

Drilling Method:

Blow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

48'

Slot Size:

0.01

Slot Length:

20'

Depth to Water:

Gravel Pack:

45'-21.9'

Seal:

21.9'-18.6'

Grout:

18.6'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY	DRY	0.0	NONE		22		SM	21.5'-22.75' s. 1/4 sand, 20% silt, 40% med sand, 40% fine sand	
					23				
					24		SM	22.75'-25' 10YR 5/4 yellowish Brown, silty sand, 20% silt 80% fine sand, loose at top becoming tighter / more confined towards 25'	
TUFF	DRY	0.0	NONE		25				
					26		SM	26'-27.5' silty sand, 10% silt, 80% fine sand, 10% med sand loose, Fe (oxidized) stains	
		0.0			27				
					28		CL	27.5'-28' sandy clay, 30% med-fine grain, 70% clay, med to high plasticity	
TUFF		0.0			29		SP	28'-29' Same as above	
		0.0		B-26 29'	30		SM	29'-30' silty fine sand, mod consolidated	
					31				
					32				
					33				

Sand @ 21.9'



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Boring/Well Number:

B-26 / MW-11

Date:

11/1/10

Project:

Lundrith

Project Number:

Gms1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Location: UTA

Elevation: TOL

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

40'

Slot Size:

0.01

Slot Length:

20'

Depth to Water:

Gravel Pack:

45'-21.9'

Seal:

21.9'-18.6'

Grout:

18.6'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Tuff	Dry	0	Fe		33		SM/SL	30.25'-34.25' silty fine sand to clayey fine sand, 60% fine sand, 30% silt, 10% clay loose, Fe staining	
	DAMP	0	WAVE		34				
		0			35		SM	34.25'-35' silty fine sand, semi-consolidated, 70% fine sand, 30% silt, confining layer	
		0			36			1042 w/ gray	
		0			37				
		0			38		SM	same as above	
VERY Tuff	DRY	0	Ø		39				
		0			40				
		0			41		SM	41'-42.5' 1042 5/6 yellowish brown silty fine sand, loose, 20% silt, 80% fine sand	
		0			42		sand-stone	42.5'-42.75' sandstone	
		0			43		SM	42.75'-43.5' silty fine sand, semi-consolidated	
		0	Ø		43		sand-stone	43.5'-43.75' sandstone	
		0			44		SM	43.75'- silty fine sand	

B-26- 45'



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Boring/Well Number:

B-27

Date:

11/2/10

Project:

Lundrith

Project Number:

Gms 1001

Logged By:

DH

Drilled By:

Envera Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: UTM

1931927.7-2852031.94

Elevation:

6492.84

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~ 35

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY	DRY	○	NONE		0				
					1				
					2		SM	silly fine sand, 60% silt, 40% fine sand, loose 7.54R 5/4 Brown	
					3				
		○			4				
					5				
					5.25'		SM	5.25'-6.5' silly fine sand, same as above	
EASY	DRY	○			6				
					6.5'		SM/SC	6.5'-9' silly fine sand to clayey fine sand, 70% fine sand, 30% silt, 10% clay	
					7				
					8				
					9		SM	9'-10' 2.54 6/2 light brown gray, silly fine sand, 70% fine sand, 30% silt, slight odor, unsure what the odor is, loose	
					10				
					11				



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Boring/Well Number:

B-27

Date:

11/2/10

Project:

Undr. th

Project Number:

Guns local

Logged By:

DH

Drilled By:

Enuro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Well Name: <u>UTM</u>	Elevation: <u>6492.84</u>	Detector: <u>PID</u>	Drilling Method: <u>Hollow Stem</u>	Sampling Method: <u>Split Spoon</u>	Hole Diameter: <u>6"</u>	Total Depth: <u>45'</u>
Casing Type: <u>-</u>	Casing Diameter: <u>-</u>	Casing Length: <u>-</u>	Slot Size: <u>-</u>	Slot Length: <u>-</u>	Depth to Water: <u>-35'</u>	
Gravel Pack: <u>-</u>	Seal: <u>-</u>	Grout: <u>-</u>	Comments:			

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY	DRY	7445		B-27 12	11		SM	2.54 7/13 Pale yellow, silty fine sand, 70% fine sand, 30% silt, strong odor, loose	
		6396			12				
		4999			13				
		6205			14				
EASY	DRY	6205	Dark Grey		15		SM	15'-17.5' silty sand, 80% fine sand, 5% med sand, 15% silt, loose, very strong odor	
		3636			16				
		4202	Dark Grey		17		SP	17.5'-18.5' sand, 5% silt, 30% med sand, 65% fine sand, black specks present, strong odor	
		5006			18				
EASY	DRY	4202	Dark Grey		19			18.5'-20' silty sand, 80% fine sand, 5% med sand, 15% silt, strong odor stained dark gray	
					20				
					21				
					22				

* initial PID reading 9999+



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Boring/Well Number:

B-27

Date:

11/2/10

Project:

Underth

Project Number:

Ems1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: LTM

43.1927.7-1852087.74

Elevation:

6492.84

Detector:

PJD

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~35'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Very Hard	Damp	5600	Dark Grey		22		Sm	21.5'-25' silty fine sand, same as above, becomes very tight @ 22.75', strong odor throughout	
		5500			23				
					24				
Hard Damp	Damp	4008			25		SP	25'-27.5' fine to med sand 70% fine sand, 30% med sand, minor silt, loose, strong odor	
					26				
					27				
		2590			28		Sm	27.5'-30' silty fine sand, 70% silt, 80% fine sand minor med, becomes more consolidated @ 28.5', banded staining black, gray, red (Fe)	
					29				
					30				
		2101			31				
					32		Sm	31.25' silty sand, 80% fine sand, 10% med sand, 10% silt	
		4080			33				
		4483							



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Boring/Well Number:

B-27

Date:

11/2/10

Project:

Lindri.th

Project Number:

Gms 1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lot/Bore:

1931977.7-2857037.74

Elevation:

6492.84

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

45'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~35'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Tuff	WET	4483		B-27-33	33		SM	fine sand, same as above, stained black, gray, red, orange, (Fe), strong odor becomes more consolidated @ 32.5'-35'	
		2218	Black Gray Orange Red		34				
		3281			35				
					36				
		2218			37		SP	med grained sand, to fine grained sand, 40% fine grained, 40% med grained, 10% coarse grained, becomes increasingly compact/consolidated towards 40', minor clay inclusions, stained, Fe, gray, black, becoming gray @ 39', gray layer @ bottom resembles gray confining layer found in other bore holes	
Tuff	SAT	2470			38				
		3425	BLACK GRAY ORGANIC		39				
		117			40				
					41				
					42		SP	same as above, gray, becomes heavily stained black @ 44', strong odor throughout	
Tuff	SAT		BLACK GRAY		43				
					44				

BH-27-45



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Boring/Well Number:

B-20/MW-12

Date:

11/3/10

Project:

Lind. th

Project Number:

Emscool

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Location: LTM

Elevation: TOL

Detector:

Drilling Method:

Sampling Method:

Hole Diameter:

Total Depth:

1532238.78-205/3+2.12

6487.95

PED

16" hollow stem

split spoon

6"

45'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

46'

Slot Size:

Slot Length:

20.5

Depth to Water:

~33'

Gravel Pack:

43'-20'

Seal:

17.4'-20'

Grout:

17.4'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				
					1				
					2				
					3		ml/sm	7.542 5/8 Brown, silty fine sand to silt, 50-70% silt, 50-30% fine sand, loose, presence of roots	
					4				
					5				
					6				
					7		ml/sm	7.542 5/8 Brown, silty sand, 50% silt, 50% fine sand, loose	
					8				
					9				
					10				
					11				



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Boring/Well Number:

B-28/mw-12

Date:

11/3/10

Project:

Lundrith

Project Number:

Gms1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: 37°32'23.8"N - 108°28'51.3"W	Elevation: TOL 6487.75'	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon	Hole Diameter: 6"	Total Depth: 45'
Casing Type: PVC	Casing Diameter: 2"	Casing Length: 46'	Slot Size:	Slot Length: 20.5	Depth to Water: -35'	
Gravel Pack: 43'-20'	Seal: 20'-17.4'	Grout: 17.4'-0'	Comments:			

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
		1.7			11				
					12				
Emul	DEI		None		13		ML/SM	7.542 5/3 Brown same as above, becomes more consolidated @ 14'	
		0.0			14				
					15				
		0.0			16		ML	7.542 5/3 Brown clayey silt to clayey fine sand, to silty fine sand	
					17		SM	16'-17' silty fine sand	
		0.0			18			17'-18.5' clayey silt, slight plasticity	xxx xxx xxx xxx
					19			18.5'-20' silty to clayey fine sand, 30% silt, 30% clay, 40% fine sand, 7.542 5/3 Brown	xxx xxx xxx xxx xxx xxx
		0.0			20				xxx xxx xxx xxx
					21				xxx xxx xxx xxx
					22				xxx xxx xxx xxx

Bentonite @ 17.4'-20'



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Boring/Well Number:
B-28/mw-12

Date:
11/3/10

Project:
Lindri.th

Project Number:
Emstool

Logged By:
DH

Drilled By:
Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lab Name: <u>LT</u>	Elevation: <u>TC</u>	Detector: <u>PID</u>	Drilling Method: <u>Hollow Stem</u>	Sampling Method: <u>Split Spoon</u>	Hole Diameter: <u>6"</u>	Total Depth: <u>45'</u>
Case No: <u>1932238-2851352.78</u>	<u>6481.95</u>					
Casing Type: <u>DVC</u>	Casing Diameter: <u>2"</u>	Casing Length: <u>46'</u>	Slot Size: <u>0.01</u>	Slot Length: <u>20.5</u>	Depth to Water: <u>-33'</u>	
Gravel Pack: <u>43'-20'</u>	Seal: <u>20-17.4'</u>	Grout: <u>17.4'-0'</u>	Comments:			

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	Dry	0.0	None		22		SM/SL	Silty fine sand to clayey fine sand, same as above	
		0.0			23				
					24				
					25				
					26				
					27		SM	7.5 yd 5/3 Brown, silty fine sand, 80% fine sand, 20% silt, loose, heavily stained, black @ 29', strong odor	
					28				
					29				
Easy	Damp	288			30				
		4723	Black	BH-28	30				
				30'	31				
					32				
					33				

Screen @ 23'



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Boring/Well Number:

B-28 / mw-12

Date:

11/3/10

Project:

Lindrieth

Project Number:

Emislaol

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Last Log: 10/11/10

Elevation: TOL

Detector:

Drilling Method:

Sampling Method:

Hole Diameter:

Total Depth:

1932238.78 - 1951387.78

6487.95

PID

Hollow Stem

Split Spoon

6"

45'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

46'

Slot Size:

0.01

Slot Length:

20.5

Depth to Water:

~33'

Gravel Pack:

43'-20'

Seal:

20'-17.4'

Grout:

17.4'-0'

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
East	SAT	3.0			33		Sm	32.5' - 34' same as above, stained black strong odor	
		4.5			34			34'-35' not stained but contains odor	
	SAT	3.5			35				
					36				
					37				
		37.6			38		SP	sand, med grained sand, 30% med grains, 65% fine sand 5% silt, black specks present	
East	SAT	34.7			39			39'-40' fine sand, 80% fine sand, 20% med sand, semi-consolidated, 10.4R 616	
		6.0			40				
					41				
Top	SAT	18.0			42				
					43				
		3.0			44				



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Boring/Well Number:

B-29

Date:

11/4/10

Project:

Lindrieth

Project Number:

Ems1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long:

1932129.96-285170.25

Elevation:

6490.3

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon / Brass Rings

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

-30'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
EASY	Damp Surface	○	None		0				
					1				
					2		SM	1.5'-2' silty sand w/ surface gravel	
	DRY	○			3		CH	2'-4' clay medium to high plasticity	
		○	None		4		CL	4'-5' silty clay, 20% silt, 80% clay, med-low plasticity	
					5			7.5YR 4/3 brown	
		○			6		SM/CL	6'-7.5' silty to clayey fine sand, 90% silt, to 30% clay, rest fine sand, slight plasticity	
					7				
		○			8		CH	7.5'-8.5' clay med-high plasticity 7.5YR 3/3 Dark Brown	
					9		SC	8.5'-10' 7.5YR 4/3 Brown 30% clay, 70% fine sand, minor silt, slight plasticity	
		○			10				
					11				



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LT Environmental, Inc.
2243 Main Avenue, Suite 3
Durango, Colorado 81301

Boring/Well Number:

B-29

Date:

11/4/10

Project:

Underth

Project Number:

Gmslcool

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Latitude: 37°

Elevation:

6490.3

Detector:

PID

Drilling Method:

Hand Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~30'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					11		sm/sl	7.542 4/3 Brown silty to clayey fine sand, slight plasticity, 40% silt, 30% clay, 30% fine sand.	
					12				
					13				
					14				
					15		sm	15'-16.5' silty fine sand, 20% silt, 80% fine sand, loose, 7.542 4/3 brown	
					16				
					17		cl	16.5'-19' silty clay, 30% silt, 70% clay, 7.542 4/2 brown	
					18				
					19		sm	19'-20' silty fine sand, 30% silt, 70% fine sand, minor clay content, slight to no plasticity	
					20				
					21				
					22				



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 Durango, Colorado 81301

Boring/Well Number:

B-29

Date:

11/4/10

Project:

Lundrith

Project Number:

GRMS1001

Logged By:

DH

Drilled By:

Enviro Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Latitude: 37.46

112.29.96 - 28.571342.05

Elevation:

6490.3

Detector:

PID

Drilling Method:

Hollow Stem

Sampling Method:

Split Spoon

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~30'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy	dry	0.0	yes		22		SM	silty fine sand, 40% silt, 60% fine sand, becomes more consolidated @ 24', stained throughout, banded, red, orange, green, gray, black, yellow, slight odor	
		18.8			23				
		1190			24				
		3443			25		SM	silty fine sand	
100 Blows 5 inch	wet				26				
					27		SP	med to fine sand @ 26'	
150 Blows 6 inch					28			30' - begin geotech sampling NR geotech sample 1 - stained gray black odor geotech sample 2 - stained gray black odor	
130 Blows 5 inch	SAT				29				
163 Blows 6 inch					30				
150 Blows 4 inch					31				
					32			NR groundwater, encountered, not allowing recovery in sampling rings	
					33				



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 2243 Main Avenue, Suite 3
 Durango, Colorado 81301

Boring/Well Number:

B-29

Date:

11/4/10

Project:

Lindrieth

Project Number:

Emo 1001

Logged By:

DH

Drilled By:

Enure Drill

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: UTM

Elevation:

16490.3

Detector:

PID

Drilling Method:

Blow Stem

Sampling Method:

Split Spoon / Brass

Hole Diameter:

6"

Total Depth:

40'

Casing Type:

Casing Diameter:

Casing Length:

Slot Size:

Slot Length:

Depth to Water:

~ 30'

Gravel Pack:

Seal:

Grout:

Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
Easy		888			33				
					34		SP	33.5' - 34.25' med to fine loose sand, 30% med grains, 70% fine sand, stained gray, heavy odor	
		4198			35		SP	34.25' - 35' tight fine sand, 10% silt, 90% fine sand, semi-consolidated 10% U/G Brownish yellow	
Tuff		269			36		SP	35' - 39' med - fine sand, 30% med grains, 70% fine grain, loose, stained gray, strong odor	
		138			37				
					38				
					39		SM	39' - 40' silty fine sand, 40% silt, 60% fine, tight, slight plasticity (confining layer) 10% 7/1 light gray	
150 Blows 6 inch		470			40			geotech sample collected @ 40'	
					41				
					42				
					43				
					44				

APPENDIX B
GROUNDWATER SAMPLING FORMS





Project Name: Lindrith Compressor Station Location: Lindrith C.S. Well No: MW-3
 Client: Enterprise Field Services Date: 11/16/2010 Time: 10:50
 Project Manager: Ashley Ager Sampler's Name: B. Herb / S. LaRue

Measuring Point: TOC Depth to Water: 32.96 ft Depth to Product: 0 ft
 Well Diameter: 2" Total Depth: 41.44 ft Product Thickness: 0 ft
 Water Column Height: 8.48 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			
Gallons of water per foot	Feet of water in well	Gallons of water in well	3 casing volumes to be removed
0.1631	8.48	1.383088	4.15

Time (military)	pH (su)	EC (ms)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (Gal)	Comments/Flow Rate
11:02	6.92	2.75	14.7				0.25	Clear grey, strong HC odor
11:05	6.94	2.76	14.6				0.5	darker black/grey, strong HC odor
11:07	6.93	2.82	14.6				0.75	no change
11:09	6.95	2.79	14.7				1	cloudier dark black/grey, strong HC odor
11:11	6.94	2.80	14.5				1.25	no change
11:13	6.96	2.77	14.6				1.5	cloudy dark grey/black, strong HC odor
11:17	6.94	2.76	14.4				2	no change
11:19	6.98	2.75	14.6				2.5	no change
11:20	6.98	2.73	14.4				3	no change
11:21	6.98	2.69	14.3				3.5	no change
11:22	6.96	2.70	14.4				4	no change
11:25	6.95	2.67	14.5				4.25	no change
11:26	6.95	2.67	14.5				4.5	no change
11:27	6.94	2.65	14.4				4.75	no change
11:28	6.94	2.68	14.5				5	no change
Final:	6.94	2.68	14.5				5	

COMMENTS:

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

Water Disposal: on site sump

Sample ID: MW-3 Sample Time: 11:31

Analysis Requested: ☒ BTEX ☐ VOCs ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☒ Nitrate ☒ Nitrite ☐ Metals
☒ Other TPH, Iron, pH

Trip Blank: Yes

Duplicate Sample: No



Project Name: Lindrith Compressor Station Location: Lindrith C.S. Well No: MW-4
 Client: Enterprise Field Services Date: 11/16/2010 Time: 10:50
 Project Manager: Ashley Ager Sampler's Name: B. Herb / S. LaRue

Measuring Point: TOC Depth to Water: 33.1 ft Depth to Product: 0 ft
 Well Diameter: 2" Total Depth: 43.77 ft Product Thickness: 0 ft
 Water Column Height: 10.67 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			
Gallons of water per foot	Feet of water in well	Gallons of water in well	3 casing volumes to be removed
0.1631	10.67	1.740277	5.22

Time (military)	pH (su)	EC (ms)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (Gal)	Comments/Flow Rate
13:16	6.66	2.43	13.9				0.25	Brownish grey color, strong HC odor
13:17	6.68	2.45	13.8				0.5	no change
13:18	6.69	2.41	13.8				0.75	no change
13:20	6.69	2.45	13.7				1	no change
13:24	6.72	2.41	13.7				1.25	darker grey black, HC odor
13:26	6.73	2.43	13.7				1.5	no change
13:27	6.73	2.39	13.7				1.75	cloudy, dark grey/black, HC odor
13:28	6.75	2.43	13.6				2	no change
13:29	6.74	2.41	13.6				2.25	cloudy, grey/black, HC odor
13:30	6.74	2.43	13.6				2.5	no change
13:31	6.75	2.43	13.7				3	no change
13:32	6.76	2.42	13.6				3.5	no change
13:34	6.78	2.43	13.6				4	no change
13:36	6.81	2.41	13.6				4.5	no change
13:38	6.79	2.41	13.6				5	no change
13:40	6.8	2.41	13.6				5.25	no change
13:41	6.8	2.42	13.6				5.5	no change
Final:	6.80	2.42	13.6				5.5	

COMMENTS:

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

Water Disposal: on site sump

Sample ID: MW-4 Sample Time: 13:42

Analysis Requested: ☒ BTEX ☐ VOCs ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☒ Nitrate ☒ Nitrite ☐ Metals
☒ Other TPH, Iron, pH

Trip Blank: Yes

Duplicate Sample: No





Project Name: Lindrith Compressor Station
Client: Enterprise Field Services
Project Manager: Ashley Ager

Location: Lindrith C.S.
Date: 11/16/2010
Sampler's Name: B. Herb / S. LaRue

Well No: MW-6
Time: 14:00

Measuring Point: TOC Depth to Water: 33.63 ft Depth to Product: 0 ft
Well Diameter: 2" Total Depth: 41.45 ft Product Thickness: 0 ft
Water Column Height: 7.82 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			
Gallons of water per foot	Feet of water in well	Gallons of water in well	3 casing volumes to be removed
0.1631	7.82	1.275442	3.83

Time (military)	pH (su)	EC (ms)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (Gal)	Comments/Flow Rate
14:05	6.54	3.00	14.4				0.25	HC odor, Cloudy silty, dark gray
14:08	6.56	3.03	14.4				0.5	no change
14:10	6.57	2.95	14.4				0.75	no change
14:13	6.54	3.09	14.2				1	no change
14:15	6.55	2.99	14.2				1.25	no change
14:16	6.56	3.07	14.1				1.5	no change
14:17	6.56	3.02	14.1				1.75	no change
14:19	6.55	3.06	14.1				2	slightly less turbid, dark gray to grayish brown, HC odor
14:21	6.55	3.05	14.1				2.25	no change
14:22	6.54	3.11	14.1				2.75	no change
14:24	6.55	3.08	14.1				3.25	no change
14:25	6.54	3.13	14.1				3.75	no change
14:26	6.53	3.08	14.1				4.25	no change
14:27	6.52	3.10	14.1				4.5	no change
14:28	6.52	3.11	14.1				4.75	no change
Final: 14:29	6.52	3.11	14.0				5	no change

COMMENTS:

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

Water Disposal: on site sump

Sample ID: MW-6

Sample Time: 14:30

Analysis Requested: ☒ BTEX ☐ VOCs ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☒ Nitrate ☒ Nitrite ☐ Metals
☒ Other TPH, Iron, pH

Trip Blank: Yes

Duplicate Sample: No



Project Name: Lindrith Compressor Station
Client: Enterprise Field Services
Project Manager: Ashley Ager

Location: Lindrith C.S.
Date: 11/16/2010
Sampler's Name: B. Herb / S. LaRue

Well No: MW-7
Time: 12:05

Measuring Point: TOC
Well Diameter: 2"
Depth to Water: 34.7 ft
Total Depth: 45.15 ft
Water Column Height: 10.45 ft
Depth to Product: 0 ft
Product Thickness: 0 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			
Gallons of water per foot	Feet of water in well	Gallons of water in well	3 casing volumes to be removed
0.1631	10.45	1.704395	5.11

Time (military)	pH (su)	EC (ms)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (Gal)	Comments/Flow Rate
12:08	6.89	1.76	14.3				0.25	slight odor, cloudy, grayish brown, silty
12:09	6.99	1.90	14.4				0.5	no change
12:10	7.01	1.85	14.3				0.75	no change
12:12	7.03	1.89	14.3				1	no change
12:13	7.03	1.86	14.4				1.25	slightly siltier, darker
12:14	7.03	1.86	14.3				1.5	no change
12:15	7.06	1.84	14.2				1.75	no change
12:16	7.04	1.87	14.2				2	no change
12:17	7.06	1.88	14.2				2.25	no change
12:18	7.07	1.84	14.1				2.5	no change
12:19	7.07	1.86	14.1				2.75	no change
12:21	7.07	1.82	14.1				3.25	no change
12:26	7.08	1.87	14.4				3.75	no change
12:28	7.09	1.91	14.3				4.25	no change
12:30	7.09	1.91	14.2				4.75	no change
12:31	7.09	1.93	14.2				5.25	no change
12:32	7.1	1.93	14.1				5.5	no change
12:33	7.09	1.95	14.1				5.75	no change
Final:	7.09	1.95	14.1				5.75	

COMMENTS:

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

Water Disposal: on site sump

Sample ID: MW-7

Sample Time: 12:35

Analysis Requested: ☒ BTEX ☐ VOC ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☒ Nitrate ☒ Nitrite ☐ Metals
☒ Other TPH, Iron, pH

Trip Blank: Yes

Duplicate Sample: No



Project Name: Lindrith Compressor Station Location: Lindrith C.S. Well No: MW-8
 Client: Enterprise Field Services Date: 11/15/2010 Time: 10:40
 Project Manager: Ashley Ager Sampler's Name: B. Herb / S. LaRue

Measuring Point: TOC Depth to Water: 32.16 ft Depth to Product: 0 ft
 Well Diameter: 2" Total Depth: 41.95 ft Product Thickness: 0 ft
 Water Column Height: 9.79 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			
Gallons of water per foot	Feet of water in well	Gallons of water in well	3 casing volumes to be removed
0.1631	9.79	1.596749	4.79

Time (military)	pH (su)	EC (ms)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (Gal)	Comments/Flow Rate
10:52	6.80	2.87	12.3				0.25	light brown, minor silt, no odor
10:53	6.92	2.92	13.1				0.5	no change
10:55	6.93	2.98	13.2				0.75	more silt
10:57	6.94	2.94	13.1				1	no change
10:58	6.93	2.97	13.2				1.25	no change
10:59	6.94	2.92	13.3				1.5	no change
11:00	6.94	2.93	13.3				1.75	no change
11:01	6.94	2.91	13.3				2	no change
11:02	6.96	2.91	13.2				2.25	no change
11:03	6.95	2.87	13.2				2.5	no change
11:04	6.94	2.88	13.3				2.75	no change
11:06	6.94	2.85	13.2				3	no change
11:07	6.97	2.88	13.3				3.25	no change
11:09	7.05	2.87	12.9				3.75	Bailing down
11:12	7.14	2.90	12				4	Bailing down
11:15	7.12	2.81	12.6				4.25	Bailing down
11:16	7.14	2.84	12.6				4.5	Bailing down
11:18	7.13	2.85	12.7				4.75	Bailing down
11:19	7.17	2.92	12.6				5	Bailing down
Final:	7.17	2.92	12.6				5	

COMMENTS:

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

Water Disposal: on site sump

Sample ID: MW-8 Sample Time: 11:43

Analysis Requested: ☒ BTEX ☐ VOC: ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☒ Nitrate ☒ Nitrite ☐ Metals
☒ Other TPH, Iron, pH

Trip Blank: Yes

Duplicate Sample: No





Project Name: Lindrith Compressor Station Location: Lindrith C.S. Well No: MW-10
 Client: Enterprise Field Services Date: 11/15/2010 Time: 12:13
 Project Manager: Ashley Ager Sampler's Name: B. Herb / S. LaRue

Measuring Point: TOC Depth to Water: 31.83 ft Depth to Product: 0 ft
 Well Diameter: 2" Total Depth: 42.61 ft Product Thickness: 0 ft
 Water Column Height: 10.78 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			
Gallons of water per foot	Feet of water in well	Gallons of water in well	3 casing volumes to be removed
0.1631	10.78	1.758218	5.27

Time (military)	pH (su)	EC (ms)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (Gal)	Comments/Flow Rate
12:22	6.93	3.68	13.4				0.25	light brown, silty, slight HC odor
12:25	6.97	3.57	13.1				0.5	siltier, brown, no odor
12:26	6.99	3.68	13.3				0.75	no change
12:27	7.04	3.66	13.2				1	no change
12:28	7.06	3.76	13.3				1.25	no change
12:30	7.06	3.72	13.3				1.5	no change
12:31	7.13	3.80	13.3				1.75	cloudy brown, no odor
12:32	7.14	3.84	13.4				20	no change
12:33	7.26	3.91	13.4				2.25	no change
12:35	7.29	3.92	13.1				2.5	no change
12:36	7.31	3.94	13.2				2.75	no change
12:38	7.34	3.93	13.3				3	less cloudy, light brown
12:39	7.37	3.98	13.3				3.25	no change
12:40	7.39	3.95	13.2				3.5	no change
12:41	7.42	3.98	13.2				3.75	no change
12:42	7.45	4.00	13.1				4	no change
12:43	7.46	3.98	13.2				4.25	no change
12:44	7.45	3.98	13.2				4.5	no change
12:46	7.45	3.98	13.2				5	no change
12:47	7.46	3.95	13.2				5.5	bailing down
12:52	7.47	3.92	13.1				5.75	bailing down
Final:	7.47	3.92	13.1				5.75	

COMMENTS:

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

Water Disposal: on site sump

Sample ID: MW-10 Sample Time: 13:05

Analysis Requested: ☒ BTEX ☐ VOC ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☒ Nitrate ☒ Nitrite ☐ Metals
☒ Other TPH, Iron, pH

Trip Blank: Yes

Duplicate Sample: No



Project Name: Lindrith Compressor Station Location: Lindrith C.S. Well No: MW-11
 Client: Enterprise Field Services Date: 11/16/2010 Time: 13:30
 Project Manager: Ashley Ager Sampler's Name: B. Herb / S. LaRue

Measuring Point: TOC Depth to Water: 35.05 ft Depth to Product: 0 ft
 Well Diameter: 2" Total Depth: 46.95 ft Product Thickness: 0 ft
 Water Column Height: 11.9 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			
Gallons of water per foot	Feet of water in well	Gallons of water in well	3 casing volumes to be removed
0.1631	11.9	1.94089	5.82

Time (military)	pH (su)	EC (ms)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (Gal)	Comments/Flow Rate
16:01	6.79	2.82	14.0				0.25	slightly clear, very little silt, no odor
16:03	6.88	2.88	14.1				0.5	no change
16:04	6.88	2.83	14.0				0.75	no change
16:05	6.89	2.86	13.9				1	cloudy clear, no odor
16:06	6.90	2.84	13.9				1.25	no change
16:07	6.92	2.93	13.9				1.5	no change
16:08	6.91	2.90	13.9				1.75	no change
16:09	6.95	2.89	13.8				2	no change
16:10	6.94	2.85	13.8				2.25	no change
16:10	6.93	2.89	13.8				2.5	no change
16:12	6.92	2.89	13.8				3	no change
16:14	6.95	2.77	13.3				3.5	no change
16:15	6.95	2.84	13.7				3.75	no change
16:17	6.95	2.83	13.5				4	bailing dry
16:18	6.97	2.78	13.6				4.25	no change
16:20	6.95	2.83	13.6				4.5	clear to cloudy light brown
16:21	6.98	2.76	13.6				4.75	bailing dry
16:22	6.98	2.79	13.6				5	bailing dry
16:23	6.99	2.85	13.5				5.25	bailing dry
16:24	6.98	2.86	13.7				5.5	bailing dry
16:26	6.96	2.86	13.4				5.75	bailing dry
16:27	6.96	2.89	13.5				6	bailing dry
16:29	6.96	2.89	13.5				6.25	bailing dry
Final:	6.96	2.89	13.5				6.25	

COMMENTS:

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

Water Disposal: on site sump

Sample ID: MW-11 Sample Time: 16:35

Analysis Requested: ☒ BTEX ☐ VOC ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☒ Nitrate ☒ Nitrite ☐ Metals
☒ Other TPH, Iron, pH

Trip Blank: Yes

Duplicate Sample: No



Project Name: Lindrith Compressor Station Location: Lindrith C.S. Well No: MW-12
 Client: Enterprise Field Services Date: 11/15/2010 Time: 13:30
 Project Manager: Ashley Ager Sampler's Name: B. Herb / S. LaRue

Measuring Point: TOC Depth to Water: 32.74 ft Depth to Product: 0 ft.
 Well Diameter: 2" Total Depth: 44.81 ft Product Thickness: 0 ft
 Water Column Height: 12.07 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			
Gallons of water per foot	Feet of water in well	Gallons of water in well	3 casing volumes to be removed
0.1631	12.07	1.968617	5.91

Time (military)	pH (su)	EC (ms)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (Gal)	Comments/Flow Rate
14:52	7.27	2.50	14.1				0.25	Cloudy clear, brown, no odor
14:55	7.28	2.55	14.3				0.5	more silt content
14:57	7.26	2.62	14.3				0.75	strange odor, cloudy, light brown
14:58	7.31	2.67	14.6				1	no change
14:59	7.29	2.62	14.3				1.25	no change
15:01	7.29	2.69	14.7				1.5	no change
15:02	7.29	2.64	14.5				1.75	no change
15:04	7.30	2.60	14.5				2	no change
15:05	7.31	2.62	14.4				2.25	no change
15:07	7.31	2.59	14.4				2.75	no change
15:13	7.28	2.72	14.5				3.25	no change
15:15	7.3	2.66	14.4				3.75	more silt content
15:17	7.31	2.72	14.5				4.25	slightly darker and cloudy
15:19	7.31	2.68	14.3				4.75	no change
15:23	7.3	2.73	14.4				5.25	no change
15:26	7.31	2.65	14.4				5.75	no change
15:27	7.33	2.70	14.4				6	no change
15:28	7.33	2.68	14.4				6.25	no change
Final:	7.33	2.68	14.4				6.25	

COMMENTS:

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

Water Disposal: on site sump

Sample ID: MW-12 Sample Time: 15:35

Analysis Requested: ☒ BTEX ☐ VOC ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☒ Nitrate ☒ Nitrite ☐ Metals
☒ Other TPH, Iron, pH

Trip Blank: Yes

Duplicate Sample: No



APPENDIX C
SOIL LABORATORY REPORTS



COVER LETTER

Thursday, October 28, 2010

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

RE: Lindrith CS

Order No.: 1010999

Dear Ashley Ager:

Hall Environmental Analysis Laboratory, Inc. received 10 sample(s) on 10/22/2010 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: 28-Oct-10

CLIENT: LTE
Lab Order: 1010999
Project: Lindrith CS
Lab ID: 1010999-01

Client Sample ID: B-10-22
Collection Date: 10/18/2010 12:00:00 PM
Date Received: 10/22/2010
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	10/26/2010 5:30:23 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/26/2010 5:30:23 PM
Surr: DNOP	106	81.7-135		%REC	1	10/26/2010 5:30:23 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	64	25		mg/Kg	5	10/25/2010 9:35:54 PM
Surr: BFB	112	93.1-120		%REC	5	10/25/2010 9:35:54 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.25		mg/Kg	5	10/25/2010 9:35:54 PM
Toluene	1.0	0.25		mg/Kg	5	10/25/2010 9:35:54 PM
Ethylbenzene	0.30	0.25		mg/Kg	5	10/25/2010 9:35:54 PM
Xylenes, Total	3.4	0.50		mg/Kg	5	10/25/2010 9:35:54 PM
Surr: 4-Bromofluorobenzene	124	88.9-151		%REC	5	10/25/2010 9:35:54 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: 28-Oct-10

CLIENT: LTE
Lab Order: 1010999
Project: Lindrith CS
Lab ID: 1010999-02

Client Sample ID: B-10-45
Collection Date: 10/18/2010 2:00:00 PM
Date Received: 10/22/2010
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	10/26/2010 7:12:44 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/26/2010 7:12:44 PM
Surr: DNOP	106	61.7-135		%REC	1	10/26/2010 7:12:44 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/25/2010 10:06:22 PM
Surr: BFB	112	93.1-120		%REC	1	10/25/2010 10:06:22 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	10/25/2010 10:06:22 PM
Toluene	ND	0.050		mg/Kg	1	10/25/2010 10:06:22 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/25/2010 10:06:22 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/25/2010 10:06:22 PM
Surr: 4-Bromofluorobenzene	132	88.9-151		%REC	1	10/25/2010 10:06:22 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: 28-Oct-10

CLIENT: LTE
Lab Order: 1010999
Project: Lindrith CS
Lab ID: 1010999-03

Client Sample ID: B-11-35
Collection Date: 10/19/2010 1:35:00 PM
Date Received: 10/22/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	18	10		mg/Kg	1	10/26/2010 7:46:38 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/26/2010 7:46:38 PM
Surr: DNOP	100	61.7-135		%REC	1	10/26/2010 7:46:38 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	1000	100		mg/Kg	20	10/25/2010 10:36:49 PM
Surr: BFB	119	93.1-120		%REC	20	10/25/2010 10:36:49 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	2.6	1.0		mg/Kg	20	10/25/2010 10:36:49 PM
Toluene	15	1.0		mg/Kg	20	10/25/2010 10:36:49 PM
Ethylbenzene	3.3	1.0		mg/Kg	20	10/25/2010 10:36:49 PM
Xylenes, Total	28	2.0		mg/Kg	20	10/25/2010 10:36:49 PM
Surr: 4-Bromofluorobenzene	124	88.9-151		%REC	20	10/25/2010 10:36:49 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: 28-Oct-10

CLIENT: LTE
Lab Order: 1010999
Project: Lindrith CS
Lab ID: 1010999-04

Client Sample ID: B-11-45
Collection Date: 10/19/2010 2:05:00 PM
Date Received: 10/22/2010
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	10/26/2010 8:20:29 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/26/2010 8:20:29 PM
Surr: DNOP	99.7	61.7-135		%REC	1	10/26/2010 8:20:29 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/25/2010 11:37:55 PM
Surr: BFB	112	93.1-120		%REC	1	10/25/2010 11:37:55 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	10/25/2010 11:37:55 PM
Toluene	ND	0.050		mg/Kg	1	10/25/2010 11:37:55 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/25/2010 11:37:55 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/25/2010 11:37:55 PM
Surr: 4-Bromofluorobenzene	129	88.9-151		%REC	1	10/25/2010 11:37:55 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: 28-Oct-10

CLIENT: LTE
Lab Order: 1010999
Project: Lindrith CS
Lab ID: 1010999-05

Client Sample ID: B-12-33.5
Collection Date: 10/20/2010 10:28:00 AM
Date Received: 10/22/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	15	10		mg/Kg	1	10/26/2010 8:54:20 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/26/2010 8:54:20 PM
Surr: DNOP	101	61.7-135		%REC	1	10/26/2010 8:54:20 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	130	25		mg/Kg	5	10/26/2010 10:10:41 PM
Surr: BFB	132	93.1-120	S	%REC	5	10/26/2010 10:10:41 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	0.31	0.25		mg/Kg	5	10/26/2010 10:10:41 PM
Toluene	1.8	0.25		mg/Kg	5	10/26/2010 10:10:41 PM
Ethylbenzene	0.75	0.25		mg/Kg	5	10/26/2010 10:10:41 PM
Xylenes, Total	5.4	0.50		mg/Kg	5	10/26/2010 10:10:41 PM
Surr: 4-Bromofluorobenzene	122	88.9-151		%REC	5	10/26/2010 10:10:41 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: 28-Oct-10

CLIENT: LTE
 Lab Order: 1010999
 Project: Lindrith CS
 Lab ID: 1010999-06

Client Sample ID: B-12-48
 Collection Date: 10/20/2010 11:49:00 AM
 Date Received: 10/22/2010
 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	10/26/2010 10:02:02 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/26/2010 10:02:02 PM
Surr: DNOP	107	61.7-135		%REC	1	10/26/2010 10:02:02 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/26/2010 12:39:03 AM
Surr: BFB	107	93.1-120		%REC	1	10/26/2010 12:39:03 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	10/26/2010 12:39:03 AM
Toluene	ND	0.050		mg/Kg	1	10/26/2010 12:39:03 AM
Ethylbenzene	ND	0.050		mg/Kg	1	10/26/2010 12:39:03 AM
Xylenes, Total	ND	0.10		mg/Kg	1	10/26/2010 12:39:03 AM
Surr: 4-Bromofluorobenzene	122	88.9-151		%REC	1	10/26/2010 12:39:03 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: 28-Oct-10

CLIENT: LTE
Lab Order: 1010999
Project: Lindrith CS
Lab ID: 1010999-07

Client Sample ID: B-13-30
Collection Date: 10/20/2010 3:00:00 PM
Date Received: 10/22/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	400	100		mg/Kg	10	10/27/2010 11:24:30 PM
Motor Oil Range Organics (MRO)	810	500		mg/Kg	10	10/27/2010 11:24:30 PM
Surr: DNOP	0	61.7-135	S	%REC	10	10/27/2010 11:24:30 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	1000	250		mg/Kg	50	10/26/2010 1:09:34 AM
Surr: BFB	121	93.1-120	S	%REC	50	10/26/2010 1:09:34 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	2.5		mg/Kg	50	10/26/2010 1:09:34 AM
Toluene	17	2.5		mg/Kg	50	10/26/2010 1:09:34 AM
Ethylbenzene	9.0	2.5		mg/Kg	50	10/26/2010 1:09:34 AM
Xylenes, Total	57	5.0		mg/Kg	50	10/26/2010 1:09:34 AM
Surr: 4-Bromofluorobenzene	118	88.9-151		%REC	50	10/26/2010 1:09:34 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: 28-Oct-10

CLIENT: LTE
Lab Order: 1010999
Project: Lindrith CS
Lab ID: 1010999-08

Client Sample ID: B-13-45
Collection Date: 10/20/2010 3:35:00 PM
Date Received: 10/22/2010
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	10/26/2010 10:35:38 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/26/2010 10:35:38 PM
Surr: DNOP	101	61.7-135		%REC	1	10/26/2010 10:35:38 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/24/2010 10:43:10 PM
Surr: BFB	107	93.1-120		%REC	1	10/24/2010 10:43:10 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	10/24/2010 10:43:10 PM
Toluene	ND	0.050		mg/Kg	1	10/24/2010 10:43:10 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/24/2010 10:43:10 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/24/2010 10:43:10 PM
Surr: 4-Bromofluorobenzene	127	88.9-151		%REC	1	10/24/2010 10:43:10 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: 28-Oct-10

CLIENT: LTE
Lab Order: 1010999
Project: Lindrith CS
Lab ID: 1010999-09

Client Sample ID: B-14-28
Collection Date: 10/21/2010 12:35:00 PM
Date Received: 10/22/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	30	10		mg/Kg	1	10/26/2010 11:09:14 PM
Motor Oil Range Organics (MRO)	74	50		mg/Kg	1	10/26/2010 11:09:14 PM
Surr: DNOP	102	61.7-135		%REC	1	10/26/2010 11:09:14 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	13	5.0		mg/Kg	1	10/26/2010 1:39:58 AM
Surr: BFB	168	93.1-120	S	%REC	1	10/26/2010 1:39:58 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	10/26/2010 1:39:58 AM
Toluene	0.067	0.050		mg/Kg	1	10/26/2010 1:39:58 AM
Ethylbenzene	ND	0.050		mg/Kg	1	10/26/2010 1:39:58 AM
Xylenes, Total	0.37	0.10		mg/Kg	1	10/26/2010 1:39:58 AM
Surr: 4-Bromofluorobenzene	125	88.9-151		%REC	1	10/26/2010 1:39:58 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: 28-Oct-10

CLIENT: LTE
Lab Order: 1010999
Project: Lindrith CS
Lab ID: 1010999-10

Client Sample ID: B-14-40
Collection Date: 10/21/2010 1:10:00 PM
Date Received: 10/22/2010
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	10/26/2010 11:42:49 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/26/2010 11:42:49 PM
Surr: DNOP	98.9	61.7-135		%REC	1	10/26/2010 11:42:49 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/25/2010 5:19:48 AM
Surr: BFB	104	93.1-120		%REC	1	10/25/2010 5:19:48 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	10/25/2010 5:19:48 AM
Toluene	ND	0.050		mg/Kg	1	10/25/2010 5:19:48 AM
Ethylbenzene	ND	0.050		mg/Kg	1	10/25/2010 5:19:48 AM
Xylenes, Total	ND	0.10		mg/Kg	1	10/25/2010 5:19:48 AM
Surr: 4-Bromofluorobenzene	120	88.9-151		%REC	1	10/25/2010 5:19:48 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

QA/QC SUMMARY REPORT

Client: LTE
Project: Lindrith CS

Work Order: 1010999

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range Organics											
Sample ID: 1010999-01AMSD	MSD					Batch ID: 24251	Analysis Date: 10/26/2010 6:38:37 PM				
Diesel Range Organics (DRO)	46.52	mg/Kg	10	50	0	93.0	67.4	117	4.79	17.4	
Sample ID: MB-24251	MBLK					Batch ID: 24251	Analysis Date: 10/26/2010 3:47:46 PM				
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Motor Oil Range Organics (MRO)	ND	mg/Kg	50								
Sample ID: LCS-24251	LCS					Batch ID: 24251	Analysis Date: 10/26/2010 4:22:09 PM				
Diesel Range Organics (DRO)	46.67	mg/Kg	10	50	0	93.3	64.6	116			
Sample ID: LCSD-24251	LCSD					Batch ID: 24251	Analysis Date: 10/26/2010 4:56:17 PM				
Diesel Range Organics (DRO)	44.79	mg/Kg	10	50	0	89.6	64.6	116	4.13	17.4	
Sample ID: 1010999-01AMS	MS					Batch ID: 24251	Analysis Date: 10/26/2010 6:04:29 PM				
Diesel Range Organics (DRO)	44.34	mg/Kg	10	50	0	88.7	67.4	117			
Method: EPA Method 8015B: Gasoline Range											
Sample ID: 1010999-08A MSD	MSD					Batch ID: 24233	Analysis Date: 10/24/2010 11:44:13 PM				
Gasoline Range Organics (GRO)	33.45	mg/Kg	5.0	25	1.81	127	69.2	144	4.62	20.5	
Sample ID: MB-24233	MBLK					Batch ID: 24233	Analysis Date: 10/25/2010 2:16:57 AM				
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-24233	LCS					Batch ID: 24233	Analysis Date: 10/25/2010 4:30:51 PM				
Gasoline Range Organics (GRO)	28.01	mg/Kg	5.0	25	0	112	95.7	120			
Sample ID: 1010999-08A MS	MS					Batch ID: 24233	Analysis Date: 10/24/2010 11:13:41 PM				
Gasoline Range Organics (GRO)	31.94	mg/Kg	5.0	25	1.81	121	69.2	144			
Method: EPA Method 8021B: Volatiles											
Sample ID: 1010999-10A MSD	MSD					Batch ID: 24233	Analysis Date: 10/25/2010 1:16:03 AM				
Benzene	1.012	mg/Kg	0.050	1	0	101	67.2	113	1.88	14.3	
Toluene	1.064	mg/Kg	0.050	1	0	106	62.1	116	2.28	15.9	
Ethylbenzene	1.189	mg/Kg	0.050	1	0	119	67.9	127	1.49	14.4	
Xylenes, Total	3.751	mg/Kg	0.10	3	0	125	60.6	134	2.89	12.6	
Sample ID: MB-24233	MBLK					Batch ID: 24233	Analysis Date: 10/25/2010 2:16:57 AM				
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-24233	LCS					Batch ID: 24233	Analysis Date: 10/25/2010 5:01:22 PM				
Benzene	1.014	mg/Kg	0.050	1	0	101	83.3	107			
Toluene	1.075	mg/Kg	0.050	1	0.0109	106	74.3	115			
Ethylbenzene	1.169	mg/Kg	0.050	1	0	117	80.9	122			
Xylenes, Total	3.670	mg/Kg	0.10	3	0	122	85.2	123			
Sample ID: 1010999-10A MS	MS					Batch ID: 24233	Analysis Date: 10/25/2010 12:45:33 AM				
Benzene	1.031	mg/Kg	0.050	1	0	103	67.2	113			
Toluene	1.089	mg/Kg	0.050	1	0	109	62.1	116			
Ethylbenzene	1.207	mg/Kg	0.050	1	0	121	67.9	127			
Xylenes, Total	3.861	mg/Kg	0.10	3	0	129	60.6	134			

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:

10/22/2010

Work Order Number 1010999

Received by: MLW

Checklist completed by:

Signature

10/22/10

Date

Sample ID labels checked by:

Initials

Matrix:

Carrier name: Courier

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 ☐

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 ☒

Number of preserved bottles checked for pH:

<2 >12 unless noted below.

Container/Temp Blank temperature?

5.0°

<6° C Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action



COVER LETTER

Thursday, November 18, 2010

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

RE: Lindrith CS

Order No.: 1010B10

Dear Ashley Ager:

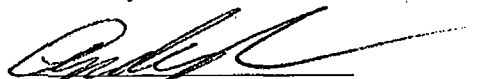
Hall Environmental Analysis Laboratory, Inc. received 10 sample(s) on 10/26/2010 for the analyses presented in the following report.

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: 18-Nov-10

CLIENT: LTE
Lab Order: 1010B10
Project: Lindrith CS
Lab ID: 1010B10-01

Client Sample ID: B-15-33
Collection Date: 10/22/2010 10:27:00 AM
Date Received: 10/26/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	170	10		mg/Kg	1	10/30/2010 1:46:11 PM
Motor Oil Range Organics (MRO)	210	50		mg/Kg	1	10/30/2010 1:46:11 PM
Surr: DNOP	107	61.7-135		%REC	1	10/30/2010 1:46:11 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	50		mg/Kg	10	10/30/2010 10:18:41 AM
Surr: BFB	121	93.1-120	S	%REC	10	10/30/2010 10:18:41 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		mg/Kg	10	10/30/2010 10:18:41 AM
Toluene	ND	0.50		mg/Kg	10	10/30/2010 10:18:41 AM
Ethylbenzene	ND	0.50		mg/Kg	10	10/30/2010 10:18:41 AM
Xylenes, Total	ND	1.0		mg/Kg	10	10/30/2010 10:18:41 AM
Surr: 4-Bromofluorobenzene	101	88.9-151		%REC	10	10/30/2010 10:18:41 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: 18-Nov-10

CLIENT: LTE
Lab Order: 1010B10
Project: Lindriith CS
Lab ID: 1010B10-02

Client Sample ID: B-15-35
Collection Date: 10/22/2010 10:25:00 AM
Date Received: 10/26/2010
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	10/30/2010 3:27:44 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/30/2010 3:27:44 PM
Surr: DNOP	101	61.7-135		%REC	1	10/30/2010 3:27:44 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/30/2010 10:49:11 AM
Surr: BFB	116	93.1-120		%REC	1	10/30/2010 10:49:11 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	10/30/2010 10:49:11 AM
Toluene	ND	0.050		mg/Kg	1	10/30/2010 10:49:11 AM
Ethylbenzene	ND	0.050		mg/Kg	1	10/30/2010 10:49:11 AM
Xylenes, Total	ND	0.10		mg/Kg	1	10/30/2010 10:49:11 AM
Surr: 4-Bromofluorobenzene	125	88.9-151		%REC	1	10/30/2010 10:49:11 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: 18-Nov-10

CLIENT: LTE
Lab Order: 1010B10
Project: Lindrith CS
Lab ID: 1010B10-03

Client Sample ID: B-16-32
Collection Date: 10/22/2010 12:46:00 PM
Date Received: 10/26/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	130	10		mg/Kg	1	10/30/2010 4:01:52 PM
Motor Oil Range Organics (MRO)	150	50		mg/Kg	1	10/30/2010 4:01:52 PM
Surr: DNOP	103	61.7-135		%REC	1	10/30/2010 4:01:52 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	260	50		mg/Kg	10	10/30/2010 11:19:37 AM
Surr: BFB	142	93.1-120	S	%REC	10	10/30/2010 11:19:37 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		mg/Kg	10	10/30/2010 11:19:37 AM
Toluene	2.9	0.50		mg/Kg	10	10/30/2010 11:19:37 AM
Ethylbenzene	1.6	0.50		mg/Kg	10	10/30/2010 11:19:37 AM
Xylenes, Total	13	1.0		mg/Kg	10	10/30/2010 11:19:37 AM
Surr: 4-Bromofluorobenzene	131	88.9-151		%REC	10	10/30/2010 11:19:37 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: 18-Nov-10

CLIENT: LTE
Lab Order: 1010B10
Project: Lindrith CS
Lab ID: 1010B10-04

Client Sample ID: B-16-45
Collection Date: 10/22/2010 1:20:00 PM
Date Received: 10/26/2010
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	10/30/2010 4:35:59 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/30/2010 4:35:59 PM
Surr: DNOP	101	61.7-135		%REC	1	10/30/2010 4:35:59 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/30/2010 11:50:02 AM
Surr: BFB	119	93.1-120		%REC	1	10/30/2010 11:50:02 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	10/30/2010 11:50:02 AM
Toluene	ND	0.050		mg/Kg	1	10/30/2010 11:50:02 AM
Ethylbenzene	ND	0.050		mg/Kg	1	10/30/2010 11:50:02 AM
Xylenes, Total	ND	0.10		mg/Kg	1	10/30/2010 11:50:02 AM
Surr: 4-Bromofluorobenzene	134	88.9-151		%REC	1	10/30/2010 11:50:02 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: 18-Nov-10

CLIENT: LTE
Lab Order: 1010B10
Project: Lindrith CS
Lab ID: 1010B10-05

Client Sample ID: B-17-33
Collection Date: 10/22/2010 3:37:00 PM
Date Received: 10/26/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	51	10		mg/Kg	1	10/30/2010 5:44:12 PM
Motor Oil Range Organics (MRO)	78	50		mg/Kg	1	10/30/2010 5:44:12 PM
Surr: DNOP	99.1	61.7-135		%REC	1	10/30/2010 5:44:12 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	31	10		mg/Kg	2	11/5/2010 12:03:07 PM
Surr: BFB	199	93.1-120	S	%REC	2	11/5/2010 12:03:07 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: MMS
Benzene	ND	0.10		mg/Kg	2	11/4/2010 12:55:56 PM
Toluene	ND	0.10		mg/Kg	2	11/4/2010 12:55:56 PM
Ethylbenzene	0.12	0.10		mg/Kg	2	11/4/2010 12:55:56 PM
Xylenes, Total	1.2	0.20		mg/Kg	2	11/4/2010 12:55:56 PM
Surr: 4-Bromofluorobenzene	80.8	82.2-105	S	%REC	2	11/4/2010 12:55:56 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: 18-Nov-10

CLIENT: LTE
Lab Order: 1010B10
Project: Lindrith CS
Lab ID: 1010B10-06

Client Sample ID: B-17-45
Collection Date: 10/22/2010 3:58:00 PM
Date Received: 10/26/2010
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	10/30/2010 6:18:18 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/30/2010 6:18:18 PM
Surr: DNOP	101	61.7-135		%REC	1	10/30/2010 6:18:18 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/30/2010 12:50:40 PM
Surr: BFB	107	93.1-120		%REC	1	10/30/2010 12:50:40 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	10/30/2010 12:50:40 PM
Toluene	ND	0.050		mg/Kg	1	10/30/2010 12:50:40 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/30/2010 12:50:40 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/30/2010 12:50:40 PM
Surr: 4-Bromofluorobenzene	120	88.9-151		%REC	1	10/30/2010 12:50:40 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: 18-Nov-10

CLIENT: LTE
Lab Order: 1010B10
Project: Lindrith CS
Lab ID: 1010B10-07

Client Sample ID: B-18-33
Collection Date: 10/25/2010 11:06:00 AM
Date Received: 10/26/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	110	10		mg/Kg	1	10/30/2010 6:52:26 PM
Motor Oil Range Organics (MRO)	120	50		mg/Kg	1	10/30/2010 6:52:26 PM
Surr: DNOP	99.9	61.7-135		%REC	1	10/30/2010 6:52:26 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	230	20		mg/Kg	4	11/5/2010 3:53:27 PM
Surr: BFB	254	93.1-120	S	%REC	4	11/5/2010 3:53:27 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: MMS
Benzene	ND	0.20		mg/Kg	4	11/4/2010 1:24:26 PM
Toluene	0.79	0.20		mg/Kg	4	11/4/2010 1:24:26 PM
Ethylbenzene	0.98	0.20		mg/Kg	4	11/4/2010 1:24:26 PM
Xylenes, Total	7.7	0.40		mg/Kg	4	11/4/2010 1:24:26 PM
Surr: 4-Bromofluorobenzene	88.1	82.2-105		%REC	4	11/4/2010 1:24:26 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: 18-Nov-10

CLIENT: LTE
Lab Order: 1010B10
Project: Lindrith CS
Lab ID: 1010B10-08

Client Sample ID: B-18-40
Collection Date: 10/25/2010 11:15:00 AM
Date Received: 10/26/2010
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	10/30/2010 7:26:33 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/30/2010 7:26:33 PM
Surr: DNOP	96.4	61.7-135		%REC	1	10/30/2010 7:26:33 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/30/2010 1:51:36 PM
Surr: BFB	112	93.1-120		%REC	1	10/30/2010 1:51:36 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	10/30/2010 1:51:36 PM
Toluene	ND	0.050		mg/Kg	1	10/30/2010 1:51:36 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/30/2010 1:51:36 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/30/2010 1:51:36 PM
Surr: 4-Bromofluorobenzene	129	88.9-151		%REC	1	10/30/2010 1:51:36 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: 18-Nov-10

CLIENT: LTE
Lab Order: 1010B10
Project: Lindrith CS
Lab ID: 1010B10-09

Client Sample ID: B-19-33
Collection Date: 10/25/2010 1:22:00 PM
Date Received: 10/26/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	18	10		mg/Kg	1	10/30/2010 8:00:40 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/30/2010 8:00:40 PM
Surr: DNOP	102	61.7-135		%REC	1	10/30/2010 8:00:40 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	14	5.0		mg/Kg	1	11/5/2010 4:50:49 PM
Surr: BFB	159	93.1-120	S	%REC	1	11/5/2010 4:50:49 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: MMS
Benzene	ND	0.050		mg/Kg	1	11/4/2010 1:53:33 PM
Toluene	ND	0.050		mg/Kg	1	11/4/2010 1:53:33 PM
Ethylbenzene	ND	0.050		mg/Kg	1	11/4/2010 1:53:33 PM
Xylenes, Total	ND	0.10		mg/Kg	1	11/4/2010 1:53:33 PM
Surr: 4-Bromofluorobenzene	79.2	82.2-105	S	%REC	1	11/4/2010 1:53:33 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: 18-Nov-10

CLIENT: LTE
Lab Order: 1010B10
Project: Lindrith CS
Lab ID: 1010B10-10

Client Sample ID: B-19-45
Collection Date: 10/25/2010 1:30:00 PM
Date Received: 10/26/2010
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	10/30/2010 8:34:47 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/30/2010 8:34:47 PM
Surr: DNOP	100	61.7-135		%REC	1	10/30/2010 8:34:47 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/30/2010 2:52:27 PM
Surr: BFB	109	93.1-120		%REC	1	10/30/2010 2:52:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	10/30/2010 2:52:27 PM
Toluene	ND	0.050		mg/Kg	1	10/30/2010 2:52:27 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/30/2010 2:52:27 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/30/2010 2:52:27 PM
Surr: 4-Bromofluorobenzene	128	88.9-151		%REC	1	10/30/2010 2:52:27 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

QA/QC SUMMARY REPORT

Client: LTE
Project: Lindrith CS

Work Order: 1010B10

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range Organics											
Sample ID: 1010B10-01AMSD		MSD				Batch ID: 24303	Analysis Date: 10/30/2010 2:53:37 PM				
Diesel Range Organics (DRO)	289.8	mg/Kg	10	50	172.1	235	67.4	117	53.1	17.4	SR
Sample ID: MB-24303		MBLK				Batch ID: 24303	Analysis Date: 10/30/2010 12:04:39 PM				
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Motor Oil Range Organics (MRO)	ND	mg/Kg	50								
Sample ID: LCS-24303		LCS				Batch ID: 24303	Analysis Date: 10/30/2010 12:38:30 PM				
Diesel Range Organics (DRO)	41.52	mg/Kg	10	50	0	83.0	64.6	116			
Sample ID: LCSD-24303		LCSD				Batch ID: 24303	Analysis Date: 10/30/2010 1:12:20 PM				
Diesel Range Organics (DRO)	43.96	mg/Kg	10	50	0	87.9	64.6	116	5.71	17.4	
Sample ID: 1010B10-01AMS		MS				Batch ID: 24303	Analysis Date: 10/30/2010 2:19:31 PM				
Diesel Range Organics (DRO)	168.3	mg/Kg	10	50	172.1	-7.66	67.4	117			S
Method: EPA Method 8015B: Gasoline Range											
Sample ID: 1010B10-04A MSD		MSD				Batch ID: 24290	Analysis Date: 10/30/2010 5:13:51 AM				
Gasoline Range Organics (GRO)	30.97	mg/Kg	5.0	25	3.46	110	69.2	144	2.35	20.5	
Sample ID: MB-24290		MBLK				Batch ID: 24290	Analysis Date: 10/30/2010 7:45:56 AM				
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-24290		LCS				Batch ID: 24290	Analysis Date: 10/30/2010 5:44:19 AM				
Gasoline Range Organics (GRO)	28.51	mg/Kg	5.0	25	0	114	95.7	120			
Sample ID: 1010B10-04A MS		MS				Batch ID: 24290	Analysis Date: 10/30/2010 4:43:21 AM				
Gasoline Range Organics (GRO)	30.25	mg/Kg	5.0	25	3.46	107	69.2	144			
Method: EPA Method 8021B: Volatiles											
Sample ID: 1010B10-02A MSD		MSD				Batch ID: 24290	Analysis Date: 10/30/2010 6:45:10 AM				
Benzene	1.136	mg/Kg	0.050	1	0	114	67.2	113	3.60	14.3	S
Toluene	1.206	mg/Kg	0.050	1	0	121	62.1	116	2.91	15.9	S
Ethylbenzene	1.392	mg/Kg	0.050	1	0	139	67.9	127	6.17	14.4	S
Xylenes, Total	4.326	mg/Kg	0.10	3	0	144	60.6	134	5.79	12.6	S
Sample ID: MB-24290		MBLK				Batch ID: 24290	Analysis Date: 10/30/2010 7:45:56 AM				
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-24290		LCS				Batch ID: 24290	Analysis Date: 10/30/2010 7:15:42 AM				
Benzene	1.040	mg/Kg	0.050	1	0	104	83.3	107			
Toluene	1.065	mg/Kg	0.050	1	0.0103	106	74.3	115			
Ethylbenzene	1.241	mg/Kg	0.050	1	0.0138	123	80.9	122			S
Xylenes, Total	3.841	mg/Kg	0.10	3	0	128	85.2	123			S
Sample ID: 1010B10-02A MS		MS				Batch ID: 24290	Analysis Date: 10/30/2010 6:14:49 AM				
Benzene	1.096	mg/Kg	0.050	1	0	110	67.2	113			
Toluene	1.172	mg/Kg	0.050	1	0	117	62.1	116			S
Ethylbenzene	1.309	mg/Kg	0.050	1	0	131	67.9	127			S
Xylenes, Total	4.083	mg/Kg	0.10	3	0	136	60.6	134			S

Qualifiers:

E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded
NC Non-Chlorinated
R RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: LTE
Project: Lindrith CS

Work Order: 1010B10

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: Volatiles Short List											
Sample ID: mb-24290	MBLK		Batch ID: 24290 Analysis Date: 11/4/2010 12:27:37 PM								
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Aromatics, Total	ND	mg/Kg	0.10								
Sample ID: lcs-24290	LCS		Batch ID: 24290 Analysis Date: 11/4/2010 11:59:20 AM								
Benzene	0.9782	mg/Kg	0.050	1	0	97.8	73.3	116			
Toluene	0.9908	mg/Kg	0.050	1	0	99.1	90.5	117			

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:

10/26/2010

Work Order Number 1010B10

Received by: AMG

Checklist completed by:

Signature

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 ☐

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 ☒

Container/Temp Blank temperature?

4.7°

<6° C Acceptable

If given sufficient time to cool.

Number of preserved
bottles checked for
pH:<2 >12 unless noted
below.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action

Chain-of-Custody Record

Client: LTE

Attn: Julie Linn, RG

Mailing Address: 2243 N. Main #3

Durango, CO 81301

Phone #: (970) 385-1096

email or Fax#: jlinn@ltenv.com

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

Accreditation ☐ NELAP ☐ Other

EDD (Type) XLS, pdf

Turn-Around Time: ☒ Standard ☐ Rush

Project Name: Lindrieth CS

Project #: GMS1001

Project Manager: Julie Linn / Ashley Ager

Sampler: Julie Linn

Container Type and # 1403 jar NONE

Preservative Type NONE

Sample Temperature 24

Date	Time	Matrix	Sample Request ID
10/22/10	1027	Soil	B-15-33
10/22/10	1025	Soil	B-15-35
10/22/10	1246	Soil	B-16-32
10/22/10	1320	Soil	B-16-45
10/22/10	1537	Soil	B-17-33
10/22/10	1558	Soil	B-17-45
10/25/10	1106	Soil	B-18-33
10/25/10	1115	Soil	B-18-40
10/25/10	1322	Soil	B-19-33
10/25/10	1330	Soil	B-19-45

Relinquished by: Julie Linn Date: 10/25/10 Time: 2130

Received by: [Signature] Date: 10/26/10 Time: 1013

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Analysis Request												Remarks:
☒ BTEX + MTBE + TMBs (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)	



COVER LETTER

Thursday, November 18, 2010

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

RE: Lindrith CS

Order No.: 1010C45

Dear Ashley Ager:

Hall Environmental Analysis Laboratory, Inc. received 6 sample(s) on 10/29/2010 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,

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

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: 18-Nov-10

CLIENT: LTE
Project: Lindrith CS
Lab Order: 1010C45

CASE NARRATIVE

Analytical Comments for METHOD 8015GRO_S, SAMPLE 1010C45-01A: Surrogate "S" flag due to matrix interference.

Hall Environmental Analysis Laboratory, Inc.

Date: 18-Nov-10

CLIENT: LTE
Lab Order: 1010C45
Project: Lindrith CS
Lab ID: 1010C45-01

Client Sample ID: B20-30'
Collection Date: 10/26/2010 2:40:00 PM
Date Received: 10/29/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	450	10		mg/Kg	1	11/1/2010 1:35:06 PM
Motor Oil Range Organics (MRO)	420	50		mg/Kg	1	11/1/2010 1:35:06 PM
Surr: DNOP	112	61.7-135		%REC	1	11/1/2010 1:35:06 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	1900	50		mg/Kg	10	11/5/2010 12:13:25 AM
Surr: BFB	572	93.1-120	S	%REC	10	11/5/2010 12:13:25 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: DAM
Benzene	ND	1.0		mg/Kg	20	11/6/2010 11:39:01 AM
Toluene	7.9	1.0		mg/Kg	20	11/6/2010 11:39:01 AM
Ethylbenzene	6.5	1.0		mg/Kg	20	11/6/2010 11:39:01 AM
Xylenes, Total	50	2.0		mg/Kg	20	11/6/2010 11:39:01 AM
Surr: 4-Bromofluorobenzene	85.6	82.2-105		%REC	20	11/6/2010 11:39:01 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

Page 1 of 6

Hall Environmental Analysis Laboratory, Inc.

Date: 18-Nov-10

CLIENT: LTE
Lab Order: 1010C45
Project: Lindrith CS
Lab ID: 1010C45-02

Client Sample ID: B20-40'
Collection Date: 10/26/2010 2:45:00 PM
Date Received: 10/29/2010
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	11/1/2010 2:08:58 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/1/2010 2:08:58 PM
Surr: DNOP	103	61.7-135		%REC	1	11/1/2010 2:08:58 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/5/2010 5:48:44 PM
Surr: BFB	101	93.1-120		%REC	1	11/5/2010 5:48:44 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: DAM
Benzene	ND	0.050		mg/Kg	1	11/6/2010 12:07:13 PM
Toluene	ND	0.050		mg/Kg	1	11/6/2010 12:07:13 PM
Ethylbenzene	ND	0.050		mg/Kg	1	11/6/2010 12:07:13 PM
Xylenes, Total	ND	0.10		mg/Kg	1	11/6/2010 12:07:13 PM
Surr: 4-Bromofluorobenzene	98.2	82.2-105		%REC	1	11/6/2010 12:07:13 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: 18-Nov-10

CLIENT: LTE
Lab Order: 1010C45
Project: Lindrith CS
Lab ID: 1010C45-03

Client Sample ID: B21-23'
Collection Date: 10/27/2010 11:35:00 AM
Date Received: 10/29/2010
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	11/1/2010 2:42:48 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/1/2010 2:42:48 PM
Surr: DNOP	101	61.7-135		%REC	1	11/1/2010 2:42:48 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/5/2010 1:11:16 AM
Surr: BFB	110	93.1-120		%REC	1	11/5/2010 1:11:16 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: DAM
Benzene	ND	0.050		mg/Kg	1	11/6/2010 12:35:28 PM
Toluene	ND	0.050		mg/Kg	1	11/6/2010 12:35:28 PM
Ethylbenzene	ND	0.050		mg/Kg	1	11/6/2010 12:35:28 PM
Xylenes, Total	ND	0.10		mg/Kg	1	11/6/2010 12:35:28 PM
Surr: 4-Bromofluorobenzene	95.9	82.2-105		%REC	1	11/6/2010 12:35:28 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: 18-Nov-10

CLIENT: LTE
Lab Order: 1010C45
Project: Lindrith CS
Lab ID: 1010C45-04

Client Sample ID: B21-40'
Collection Date: 10/27/2010 2:00:00 PM
Date Received: 10/29/2010
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	11/1/2010 3:16:56 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/1/2010 3:16:56 PM
Surr: DNOP	104	61.7-135		%REC	1	11/1/2010 3:16:56 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/5/2010 1:40:07 AM
Surr: BFB	105	93.1-120		%REC	1	11/5/2010 1:40:07 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: DAM
Benzene	ND	0.050		mg/Kg	1	11/6/2010 1:03:50 PM
Toluene	ND	0.050		mg/Kg	1	11/6/2010 1:03:50 PM
Ethylbenzene	ND	0.050		mg/Kg	1	11/6/2010 1:03:50 PM
Xylenes, Total	ND	0.10		mg/Kg	1	11/6/2010 1:03:50 PM
Surr: 4-Bromofluorobenzene	94.4	82.2-105		%REC	1	11/6/2010 1:03:50 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: 18-Nov-10

CLIENT: LTE
Lab Order: 1010C45
Project: Lindrith CS
Lab ID: 1010C45-05

Client Sample ID: B22-42'
Collection Date: 10/27/2010 2:01:00 PM
Date Received: 10/29/2010
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	11/1/2010 3:51:03 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/1/2010 3:51:03 PM
Surr: DNOP	102	61.7-135		%REC	1	11/1/2010 3:51:03 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/5/2010 2:09:00 AM
Surr: BFB	104	93.1-120		%REC	1	11/5/2010 2:09:00 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: DAM
Benzene	ND	0.050		mg/Kg	1	11/6/2010 1:32:11 PM
Toluene	ND	0.050		mg/Kg	1	11/6/2010 1:32:11 PM
Ethylbenzene	ND	0.050		mg/Kg	1	11/6/2010 1:32:11 PM
Xylenes, Total	ND	0.10		mg/Kg	1	11/6/2010 1:32:11 PM
Surr: 4-Bromofluorobenzene	95.3	82.2-105		%REC	1	11/6/2010 1:32:11 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: 18-Nov-10

CLIENT: LTE
Lab Order: 1010C45
Project: Lindrith CS
Lab ID: 1010C45-06

Client Sample ID: B22-24'
Collection Date: 10/28/2010 2:05:00 PM
Date Received: 10/29/2010
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	11/1/2010 4:25:28 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/1/2010 4:25:28 PM
Surr: DNOP	101	61.7-135		%REC	1	11/1/2010 4:25:28 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/5/2010 2:38:00 AM
Surr: BFB	103	93.1-120		%REC	1	11/5/2010 2:38:00 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: DAM
Benzene	ND	0.050		mg/Kg	1	11/6/2010 2:00:38 PM
Toluene	ND	0.050		mg/Kg	1	11/6/2010 2:00:38 PM
Ethylbenzene	ND	0.050		mg/Kg	1	11/6/2010 2:00:38 PM
Xylenes, Total	ND	0.10		mg/Kg	1	11/6/2010 2:00:38 PM
Surr: 4-Bromofluorobenzene	94.3	82.2-105		%REC	1	11/6/2010 2:00:38 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



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Billings, WY 866-886-7175 • Rapid City, SD 888-672-1225 • College Station, TX 888-890-2218

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Project: 1010C45
Lab ID: B10110988-001
Client Sample ID 1010C45-03B B21-23 Ft

Report Date: 11/16/10
Collection Date: 10/27/10 11:35
Date Received: 11/10/10
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	11	wt%		0.2		SW3550A	11/16/10 06:43 / amn
GLYCOL BY GC/FID							
Ethylene Glycol	ND	mg/kg		5.0		SW8015B	11/15/10 11:31 / jp
Propylene Glycol	ND	mg/kg		5.0		SW8015B	11/15/10 11:31 / jp
Surr: 2-Butoxyethanol	94.0	%REC		70-130		SW8015B	11/15/10 11:31 / jp

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

 Client: Hall Environmental
 Project: 1010C45

 Report Date: 11/16/10
 Work Order: B10110988

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8015B										Batch: 50487
Sample ID: LCS-50487	3	Laboratory Control Sample				Run: GCFID-HP1-B_101115A			11/15/10 10:49	
Ethylene Glycol		107	mg/kg	5.0	107	70	130			
Propylene Glycol		105	mg/kg	5.0	105	70	130			
Surr: 2-Butoxyethanol				1.0	95	70	130			
Sample ID: MB-50487	3	Method Blank				Run: GCFID-HP1-B_101115A			11/15/10 11:08	
Ethylene Glycol		ND	mg/kg	5.0						
Propylene Glycol		ND	mg/kg	5.0						
Surr: 2-Butoxyethanol				1.0	98	70	130			
Sample ID: B10110988-001AMS	3	Sample Matrix Spike				Run: GCFID-HP1-B_101115A			11/15/10 11:50	
Ethylene Glycol		81.8	mg/kg	5.0	82	70	130			
Propylene Glycol		85.9	mg/kg	5.0	86	70	130			
Surr: 2-Butoxyethanol				1.0	91	70	130			
Sample ID: B10110988-001AMSD	3	Sample Matrix Spike Duplicate				Run: GCFID-HP1-B_101115A			11/15/10 12:09	
Ethylene Glycol		83.9	mg/kg	5.0	84	70	130	2.6	20	
Propylene Glycol		87.5	mg/kg	5.0	87	70	130	1.8	20	
Surr: 2-Butoxyethanol				1.0	98	70	130			
Method: SW8015B										Analytical Run: R157206
Sample ID: CCV_1115HG104r-W	3	Continuing Calibration Verification Standard							11/15/10 10:15	
Ethylene Glycol		112	mg/kg	5.0	112	85	115			
Propylene Glycol		100	mg/kg	5.0	100	85	115			
Surr: 2-Butoxyethanol				1.0	109	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC SUMMARY REPORT

Client: LTE
Project: Lindrith CS

Work Order: 1010C45

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range Organics											
Sample ID: MB-24326		MBLK									
				Batch ID: 24326		Analysis Date: 11/1/2010 6:45:49 AM					
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Motor Oil Range Organics (MRO)	ND	mg/Kg	50								
Sample ID: LCS-24326		LCS									
				Batch ID: 24326		Analysis Date: 11/1/2010 7:20:11 AM					
Diesel Range Organics (DRO)	44.30	mg/Kg	10	50	0	88.6	64.6	116			
Sample ID: LCSD-24326		LCSD									
				Batch ID: 24326		Analysis Date: 11/1/2010 7:54:35 AM					
Diesel Range Organics (DRO)	44.11	mg/Kg	10	50	0	88.2	64.6	116	0.419	17.4	
Method: EPA Method 8015B: Gasoline Range											
Sample ID: 1010C45-06A MSD		MSD									
				Batch ID: 24307		Analysis Date: 11/5/2010 11:34:12 AM					
Gasoline Range Organics (GRO)	29.68	mg/Kg	5.0	25	0	119	69.2	144	7.63	20.5	
Sample ID: MB-24307		MBLK									
				Batch ID: 24307		Analysis Date: 11/4/2010 11:44:29 PM					
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-24307		LCS									
				Batch ID: 24307		Analysis Date: 11/5/2010 10:36:17 AM					
Gasoline Range Organics (GRO)	28.97	mg/Kg	5.0	25	0	116	95.7	120			
Sample ID: 1010C45-06A MS		MS									
				Batch ID: 24307		Analysis Date: 11/5/2010 11:05:15 AM					
Gasoline Range Organics (GRO)	27.50	mg/Kg	5.0	25	0	110	69.2	144			
Method: EPA Method 8260B: Volatiles Short List											
Sample ID: 1010c45-06a msd		MSD									
				Batch ID: 24307		Analysis Date: 11/6/2010 2:57:03 PM					
Benzene	1.152	mg/Kg	0.050	1	0	115	62.3	118	14.0	20	
Toluene	1.209	mg/Kg	0.050	1	0	121	76.4	120	19.4	12.5	SR
Sample ID: mb-24307		MBLK									
				Batch ID: 24307		Analysis Date: 11/6/2010 3:53:55 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-24307		LCS									
				Batch ID: 24307		Analysis Date: 11/6/2010 3:25:32 PM					
Benzene	1.101	mg/Kg	0.050	1	0	110	73.3	116			
Toluene	1.159	mg/Kg	0.050	1	0	116	90.5	117			
Sample ID: 1010c45-06a ms		MS									
				Batch ID: 24307		Analysis Date: 11/6/2010 2:28:48 PM					
Benzene	1.001	mg/Kg	0.050	1	0	100	62.3	118			
Toluene	0.9960	mg/Kg	0.050	1	0	99.6	76.4	120			

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:

10/29/2010

Work Order Number 1010C45

Received by: LNM

Sample ID labels checked by:

Checklist completed by:

Signature

Date

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 ☐

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 ☒

Container/Temp Blank temperature?

8.8°

<6° C Acceptable

If given sufficient time to cool.

Number of preserved bottles checked for pH:

<2 >12 unless noted below.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action

Chain-of-Custody Record

Client: LTE
 Attn: Julie Linn, Rg
 Mailing Address: 2243 N. Main #3
Durango, CO 81301
 Phone #: (970) 385-1096
 email or Fax#:

QA/QC Package:
☒ Standard
☐ Level 4 (Full Validation)
 Accreditation
☒ NELAP
☐ Other
 EDD (Type) PDF/XLS

Date	Time	Matrix	Sample Request ID
10/26/10	1440	Soil	B20-30'
10/26/10	1445		B20 40'
10/27/10	1135		B-21-23'
10/27/10	1400		B21-40'
10/28/10	1408		B22-42'
10/28/10	1405	✓	B-22-24'

Date: 10/28 Time: 2100
 Relinquished by: Julie Linn
 Date: 10/28 Time: 2100
 Relinquished by: Julie Linn

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Lindriph CS

Project #:

GMS 100

Project Manager:

Julie Linn / Ashley Aggs

Sampler: D. Hernandez, B. Harb

On Ice: ☒ Yes ☐ No

Sample Temperature: 5.8

Container Type and #
 Preservative Type
 HEADLINE
 ID10045

1 403 Soil NONE
 2
 3
 4
 5
 6
 7

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Analysis Request

BTEX + MTBE + TMB (8021)	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)
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Remarks:

Ethylene Glycol added to -3 per AA
1/11/09/10



COVER LETTER

Wednesday, January 19, 2011

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

RE: Lindrith C.S.

Order No.: 1011146

Dear Ashley Ager:

Hall Environmental Analysis Laboratory, Inc. received 9 sample(s) on 11/3/2010 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued November 12, 2010.

No determination of compounds below these (denoted by the ND or < sign) has been made.

Reporting limits are determined by EPA methodology.

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

Sincerely,



Andy Freeman, Laboratory Manager

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



Hall Environmental Analysis Laboratory, Inc.

Date: 19-Jan-11

CLIENT: LTE
Lab Order: 1011146
Project: Lindrith C.S.
Lab ID: 1011146-01

Client Sample ID: B-23-33
Collection Date: 10/29/2010 11:28:00 AM
Date Received: 11/3/2010
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	11/6/2010 7:16:33 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/6/2010 7:16:33 PM
Surr: DNOP	100	61.7-135		%REC	1	11/6/2010 7:16:33 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/9/2010 3:37:10 AM
Surr: BFB	104	93.1-120		%REC	1	11/9/2010 3:37:10 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: MMS
Benzene	ND	0.050		mg/Kg	1	11/9/2010 12:05:55 AM
Toluene	ND	0.050		mg/Kg	1	11/9/2010 12:05:55 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/9/2010 12:05:55 AM
Xylenes, Total	ND	0.10		mg/Kg	1	11/9/2010 12:05:55 AM
Surr: 4-Bromofluorobenzene	99.0	82.2-105		%REC	1	11/9/2010 12:05:55 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011146
Project: Lindrith C.S.
Lab ID: 1011146-02

Client Sample ID: B-23-40
Collection Date: 10/29/2010 11:38:00 AM
Date Received: 11/3/2010
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	11/6/2010 8:58:26 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/6/2010 8:58:26 PM
Surr: DNOP	106	61.7-135		%REC	1	11/6/2010 8:58:26 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/9/2010 4:06:11 AM
Surr: BFB	102	93.1-120		%REC	1	11/9/2010 4:06:11 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: MMS
Benzene	ND	0.050		mg/Kg	1	11/9/2010 12:34:13 AM
Toluene	ND	0.050		mg/Kg	1	11/9/2010 12:34:13 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/9/2010 12:34:13 AM
Xylenes, Total	ND	0.10		mg/Kg	1	11/9/2010 12:34:13 AM
Surr: 4-Bromofluorobenzene	94.9	82.2-105		%REC	1	11/9/2010 12:34:13 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011146
Project: Lindrith C.S.
Lab ID: 1011146-03

Client Sample ID: B-24-29
Collection Date: 10/29/2010 12:45:00 PM
Date Received: 11/3/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	63	10		mg/Kg	1	11/6/2010 9:32:19 PM
Motor Oil Range Organics (MRO)	210	50		mg/Kg	1	11/6/2010 9:32:19 PM
Surr: DNOP	104	61.7-135		%REC	1	11/6/2010 9:32:19 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	230	10		mg/Kg	2	11/9/2010 4:35:08 AM
Surr: BFB	456	93.1-120	S	%REC	2	11/9/2010 4:35:08 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: MMS
Benzene	ND	0.25		mg/Kg	5	11/9/2010 1:02:23 AM
Toluene	1.6	0.25		mg/Kg	5	11/9/2010 1:02:23 AM
Ethylbenzene	0.73	0.25		mg/Kg	5	11/9/2010 1:02:23 AM
Xylenes, Total	6.9	0.50		mg/Kg	5	11/9/2010 1:02:23 AM
Surr: 4-Bromofluorobenzene	89.3	82.2-105		%REC	5	11/9/2010 1:02:23 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011146
Project: Lindrith C.S.
Lab ID: 1011146-04

Client Sample ID: B-24-45
Collection Date: 10/29/2010 1:40:00 PM
Date Received: 11/3/2010
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	11/6/2010 10:06:11 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/6/2010 10:06:11 PM
Surr: DNOP	103	61.7-135		%REC	1	11/6/2010 10:06:11 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/9/2010 7:06:42 PM
Surr: BFB	102	93.1-120		%REC	1	11/9/2010 7:06:42 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: MMS
Benzene	ND	0.050		mg/Kg	1	11/9/2010 1:30:28 AM
Toluene	ND	0.050		mg/Kg	1	11/9/2010 1:30:28 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/9/2010 1:30:28 AM
Xylenes, Total	ND	0.10		mg/Kg	1	11/9/2010 1:30:28 AM
Surr: 4-Bromofluorobenzene	88.0	82.2-105		%REC	1	11/9/2010 1:30:28 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011146
Project: Lindrith C.S.
Lab ID: 1011146-05

Client Sample ID: BH-25-39
Collection Date: 11/1/2010 1:20:00 PM
Date Received: 11/3/2010
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	11/6/2010 11:14:26 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/6/2010 11:14:26 PM
Surr: DNOP	102	61.7-135		%REC	1	11/6/2010 11:14:26 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/9/2010 7:35:44 PM
Surr: BFB	102	93.1-120		%REC	1	11/9/2010 7:35:44 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: MMS
Benzene	ND	0.050		mg/Kg	1	11/9/2010 1:58:57 AM
Toluene	ND	0.050		mg/Kg	1	11/9/2010 1:58:57 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/9/2010 1:58:57 AM
Xylenes, Total	ND	0.10		mg/Kg	1	11/9/2010 1:58:57 AM
Surr: 4-Bromofluorobenzene	91.6	82.2-105		%REC	1	11/9/2010 1:58:57 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011146
Project: Lindrith C.S.
Lab ID: 1011146-06

Client Sample ID: B-26-29
Collection Date: 11/2/2010 9:50:00 AM
Date Received: 11/3/2010
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	11/6/2010 11:48:16 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/6/2010 11:48:16 PM
Surr: DNOP	100	61.7-135		%REC	1	11/6/2010 11:48:16 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/9/2010 8:04:40 PM
Surr: BFB	103	93.1-120		%REC	1	11/9/2010 8:04:40 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: MMS
Benzene	ND	0.050		mg/Kg	1	11/9/2010 2:27:14 AM
Toluene	ND	0.050		mg/Kg	1	11/9/2010 2:27:14 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/9/2010 2:27:14 AM
Xylenes, Total	ND	0.10		mg/Kg	1	11/9/2010 2:27:14 AM
Surr: 4-Bromofluorobenzene	93.0	82.2-105		%REC	1	11/9/2010 2:27:14 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011146
Project: Lindrith C.S.
Lab ID: 1011146-07

Client Sample ID: B-26-45
Collection Date: 11/2/2010 10:58:00 AM
Date Received: 11/3/2010
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	11/7/2010 12:22:07 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/7/2010 12:22:07 AM
Surr: DNOP	100	61.7-135		%REC	1	11/7/2010 12:22:07 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/9/2010 8:33:41 PM
Surr: BFB	102	93.1-120		%REC	1	11/9/2010 8:33:41 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: MMS
Benzene	ND	0.050		mg/Kg	1	11/9/2010 2:55:36 AM
Toluene	ND	0.050		mg/Kg	1	11/9/2010 2:55:36 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/9/2010 2:55:36 AM
Xylenes, Total	ND	0.10		mg/Kg	1	11/9/2010 2:55:36 AM
Surr: 4-Bromofluorobenzene	95.8	82.2-105		%REC	1	11/9/2010 2:55:36 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011146
Project: Lindrith C.S.
Lab ID: 1011146-08

Client Sample ID: B-27-12
Collection Date: 11/2/2010 2:12:00 PM
Date Received: 11/3/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	100	10		mg/Kg	1	11/7/2010 12:55:58 AM
Motor Oil Range Organics (MRO)	290	50		mg/Kg	1	11/7/2010 12:55:58 AM
Surr: DNOP	113	61.7-135		%REC	1	11/7/2010 12:55:58 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	11/9/2010 9:02:38 PM
Surr: BFB	169	93.1-120	S	%REC	5	11/9/2010 9:02:38 PM
EPA METHOD 8260B: VOLATILES						Analyst: DAM
Benzene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
Toluene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
Ethylbenzene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
1,2,4-Trimethylbenzene	0.81	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
1,3,5-Trimethylbenzene	0.89	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
Naphthalene	0.23	0.10		mg/Kg	1	11/6/2010 4:22:10 PM
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/6/2010 4:22:10 PM
2-Methylnaphthalene	0.20	0.20		mg/Kg	1	11/6/2010 4:22:10 PM
Acetone	ND	0.75		mg/Kg	1	11/6/2010 4:22:10 PM
Bromobenzene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
Bromodichloromethane	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
Bromoform	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
Bromomethane	ND	0.15		mg/Kg	1	11/6/2010 4:22:10 PM
2-Butanone	ND	0.50		mg/Kg	1	11/6/2010 4:22:10 PM
Carbon disulfide	ND	0.50		mg/Kg	1	11/6/2010 4:22:10 PM
Carbon tetrachloride	ND	0.10		mg/Kg	1	11/6/2010 4:22:10 PM
Chlorobenzene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
Chloroethane	ND	0.10		mg/Kg	1	11/6/2010 4:22:10 PM
Chloroform	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
Chloromethane	ND	0.15		mg/Kg	1	11/6/2010 4:22:10 PM
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	11/6/2010 4:22:10 PM
Dibromochloromethane	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
Dibromomethane	ND	0.10		mg/Kg	1	11/6/2010 4:22:10 PM
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 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: 19-Jan-11

CLIENT: LTE
 Lab Order: 1011146
 Project: Lindrith C.S.
 Lab ID: 1011146-08

Client Sample ID: B-27-12
 Collection Date: 11/2/2010 2:12:00 PM
 Date Received: 11/3/2010
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DAM
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
1,1-Dichloroethane	ND	0.10		mg/Kg	1	11/6/2010 4:22:10 PM
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
2,2-Dichloropropane	ND	0.10		mg/Kg	1	11/6/2010 4:22:10 PM
1,1-Dichloropropene	ND	0.10		mg/Kg	1	11/6/2010 4:22:10 PM
Hexachlorobutadiene	ND	0.10		mg/Kg	1	11/6/2010 4:22:10 PM
2-Hexanone	ND	0.50		mg/Kg	1	11/6/2010 4:22:10 PM
Isopropylbenzene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
4-Isopropyltoluene	0.12	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/6/2010 4:22:10 PM
Methylene chloride	ND	0.15		mg/Kg	1	11/6/2010 4:22:10 PM
n-Butylbenzene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
n-Propylbenzene	0.056	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
sec-Butylbenzene	0.088	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
Styrene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	11/6/2010 4:22:10 PM
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	11/6/2010 4:22:10 PM
Vinyl chloride	ND	0.050		mg/Kg	1	11/6/2010 4:22:10 PM
Xylenes, Total	0.11	0.10		mg/Kg	1	11/6/2010 4:22:10 PM
Surr: 1,2-Dichloroethane-d4	95.9	77.8-97.5		%REC	1	11/6/2010 4:22:10 PM
Surr: 4-Bromofluorobenzene	96.0	82.2-105		%REC	1	11/6/2010 4:22:10 PM
Surr: Dibromofluoromethane	98.4	63.7-133		%REC	1	11/6/2010 4:22:10 PM
Surr: Toluene-d8	83.9	87.2-105	S	%REC	1	11/6/2010 4:22:10 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: 19-Jan-11

CLIENT: LTE
 Lab Order: 1011146
 Project: Lindrith C.S.
 Lab ID: 1011146-09

Client Sample ID: B-27-33
 Collection Date: 11/2/2010 3:11:00 PM
 Date Received: 11/3/2010
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	33	10		mg/Kg	1	11/7/2010 1:30:05 AM
Motor Oil Range Organics (MRO)	98	50		mg/Kg	1	11/7/2010 1:30:05 AM
Surr: DNOP	106	61.7-135		%REC	1	11/7/2010 1:30:05 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	30	5.0		mg/Kg	1	11/9/2010 10:00:25 PM
Surr: BFB	217	93.1-120	S	%REC	1	11/9/2010 10:00:25 PM
EPA METHOD 8260B: VOLATILES						Analyst: DAM
Benzene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
Toluene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
Ethylbenzene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
1,2,4-Trimethylbenzene	0.19	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
1,3,5-Trimethylbenzene	0.13	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
Naphthalene	ND	0.10		mg/Kg	1	11/6/2010 4:50:24 PM
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/6/2010 4:50:24 PM
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/6/2010 4:50:24 PM
Acetone	ND	0.75		mg/Kg	1	11/6/2010 4:50:24 PM
Bromobenzene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
Bromodichloromethane	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
Bromoform	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
Bromomethane	ND	0.15		mg/Kg	1	11/6/2010 4:50:24 PM
2-Butanone	ND	0.50		mg/Kg	1	11/6/2010 4:50:24 PM
Carbon disulfide	ND	0.50		mg/Kg	1	11/6/2010 4:50:24 PM
Carbon tetrachloride	ND	0.10		mg/Kg	1	11/6/2010 4:50:24 PM
Chlorobenzene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
Chloroethane	ND	0.10		mg/Kg	1	11/6/2010 4:50:24 PM
Chloroform	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
Chloromethane	ND	0.15		mg/Kg	1	11/6/2010 4:50:24 PM
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	11/6/2010 4:50:24 PM
Dibromochloromethane	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
Dibromomethane	ND	0.10		mg/Kg	1	11/6/2010 4:50:24 PM
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 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: 19-Jan-11

CLIENT: LTE
 Lab Order: 1011146
 Project: Lindrith C.S.
 Lab ID: 1011146-09

Client Sample ID: B-27-33
 Collection Date: 11/2/2010 3:11:00 PM
 Date Received: 11/3/2010
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DAM
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
1,1-Dichloroethane	ND	0.10		mg/Kg	1	11/6/2010 4:50:24 PM
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
2,2-Dichloropropane	ND	0.10		mg/Kg	1	11/6/2010 4:50:24 PM
1,1-Dichloropropene	ND	0.10		mg/Kg	1	11/6/2010 4:50:24 PM
Hexachlorobutadiene	ND	0.10		mg/Kg	1	11/6/2010 4:50:24 PM
2-Hexanone	ND	0.50		mg/Kg	1	11/6/2010 4:50:24 PM
Isopropylbenzene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/6/2010 4:50:24 PM
Methylene chloride	ND	0.15		mg/Kg	1	11/6/2010 4:50:24 PM
n-Butylbenzene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
n-Propylbenzene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
Styrene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
Tetrachloroethane (PCE)	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	11/6/2010 4:50:24 PM
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	11/6/2010 4:50:24 PM
Vinyl chloride	ND	0.050		mg/Kg	1	11/6/2010 4:50:24 PM
Xylenes, Total	0.26	0.10		mg/Kg	1	11/6/2010 4:50:24 PM
Surr: 1,2-Dichloroethane-d4	96.8	77.8-97.5		%REC	1	11/6/2010 4:50:24 PM
Surr: 4-Bromofluorobenzene	80.7	82.2-105	S	%REC	1	11/6/2010 4:50:24 PM
Surr: Dibromofluoromethane	101	63.7-133		%REC	1	11/6/2010 4:50:24 PM
Surr: Toluene-d8	93.0	87.2-105		%REC	1	11/6/2010 4:50:24 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

QA/QC SUMMARY REPORT

Client: LTE
Project: Lindrith C.S.

Work Order: 1011146

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range Organics											
Sample ID: 1011146-01AMSD		MSD				Batch ID: 24391		Analysis Date: 11/6/2010 8:24:33 PM			
Diesel Range Organics (DRO)	44.26	mg/Kg	10	50	0	88.5	67.4	117	3.75	17.4	
Sample ID: MB-24391		MBLK				Batch ID: 24391		Analysis Date: 11/6/2010 5:34:11 PM			
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Motor Oil Range Organics (MRO)	ND	mg/Kg	50								
Sample ID: LCS-24391		LCS				Batch ID: 24391		Analysis Date: 11/6/2010 6:08:19 PM			
Diesel Range Organics (DRO)	42.72	mg/Kg	10	50	0	85.4	64.6	116			
Sample ID: LCSD-24391		LCSD				Batch ID: 24391		Analysis Date: 11/6/2010 6:42:26 PM			
Diesel Range Organics (DRO)	44.08	mg/Kg	10	50	0	88.2	64.6	116	3.14	17.4	
Sample ID: 1011146-01AMS		MS				Batch ID: 24391		Analysis Date: 11/6/2010 7:50:40 PM			
Diesel Range Organics (DRO)	42.63	mg/Kg	10	50	0	85.3	67.4	117			

Method: EPA Method 8015B: Gasoline Range									
Sample ID: MB-24370		MBLK				Batch ID: 24370		Analysis Date: 11/8/2010 10:18:48 PM	
Gasoline Range Organics (GRO)		ND	mg/Kg	5.0					
Sample ID: LCS-24370		LCS				Batch ID: 24370		Analysis Date: 11/8/2010 9:49:57 PM	
Gasoline Range Organics (GRO)		26.28	mg/Kg	5.0	25	0	105	95.7	120

Qualifiers:

E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded
NC Non-Chlorinated
R RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: LTE
Project: Lindrith C.S.

Work Order: 1011146

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 8260B: VOLATILES

Sample ID: 1011146-09a msd

MSD

Batch ID: 24370 Analysis Date: 11/6/2010 5:46:51 PM

Benzene	1.002	mg/Kg	0.050	1	0.0178	98.4	62.3	118	0.824	20	
Toluene	0.9518	mg/Kg	0.050	1	0	95.2	76.4	120	10.8	12.5	
Chlorobenzene	0.9639	mg/Kg	0.050	1	0.0230	94.1	78.1	125	7.62	14	
1,1-Dichloroethene	1.159	mg/Kg	0.050	1	0	116	60.9	128	1.10	30.9	
Trichloroethene (TCE)	0.9378	mg/Kg	0.050	1	0	93.8	56.2	102	1.97	21.1	

Sample ID: mb-24370

MBLK

Batch ID: 24370 Analysis Date: 11/6/2010 6:43:19 PM

Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.050								
1,2,4-Trimethylbenzene	ND	mg/Kg	0.050								
1,3,5-Trimethylbenzene	ND	mg/Kg	0.050								
1,2-Dichloroethane (EDC)	ND	mg/Kg	0.050								
1,2-Dibromoethane (EDB)	ND	mg/Kg	0.050								
Naphthalene	ND	mg/Kg	0.10								
1-Methylnaphthalene	ND	mg/Kg	0.20								
2-Methylnaphthalene	ND	mg/Kg	0.20								
Acetone	ND	mg/Kg	0.75								
Bromobenzene	ND	mg/Kg	0.050								
Bromodichloromethane	ND	mg/Kg	0.050								
Bromoform	ND	mg/Kg	0.050								
Bromomethane	ND	mg/Kg	0.15								
2-Butanone	ND	mg/Kg	0.50								
Carbon disulfide	ND	mg/Kg	0.50								
Carbon tetrachloride	ND	mg/Kg	0.10								
Chlorobenzene	ND	mg/Kg	0.050								
Chloroethane	ND	mg/Kg	0.10								
Chloroform	ND	mg/Kg	0.050								
Chloromethane	ND	mg/Kg	0.15								
2-Chlorotoluene	ND	mg/Kg	0.050								
4-Chlorotoluene	ND	mg/Kg	0.050								
cis-1,2-DCE	ND	mg/Kg	0.050								
cis-1,3-Dichloropropene	ND	mg/Kg	0.050								
1,2-Dibromo-3-chloropropane	ND	mg/Kg	0.10								
Dibromochloromethane	ND	mg/Kg	0.050								
Dibromomethane	ND	mg/Kg	0.10								
1,2-Dichlorobenzene	ND	mg/Kg	0.050								
1,3-Dichlorobenzene	ND	mg/Kg	0.050								
1,4-Dichlorobenzene	ND	mg/Kg	0.050								
Dichlorodifluoromethane	ND	mg/Kg	0.050								
1,1-Dichloroethane	ND	mg/Kg	0.10								
1,1-Dichloroethene	ND	mg/Kg	0.050								
1,2-Dichloropropane	ND	mg/Kg	0.050								
1,3-Dichloropropane	ND	mg/Kg	0.050								

Qualifiers:

E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded
NC Non-Chlorinated
R RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: LTE
Project: Lindrith C.S.

Work Order: 1011146

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 8260B: VOLATILES

Sample ID: mb-24370

MBLK

Batch ID: 24370 Analysis Date: 11/6/2010 6:43:19 PM

2,2-Dichloropropane	ND	mg/Kg	0.10
1,1-Dichloropropene	ND	mg/Kg	0.10
Hexachlorobutadiene	ND	mg/Kg	0.10
2-Hexanone	ND	mg/Kg	0.50
Isopropylbenzene	ND	mg/Kg	0.050
4-Isopropyltoluene	ND	mg/Kg	0.050
4-Methyl-2-pentanone	ND	mg/Kg	0.50
Methylene chloride	ND	mg/Kg	0.15
n-Butylbenzene	ND	mg/Kg	0.050
n-Propylbenzene	ND	mg/Kg	0.050
sec-Butylbenzene	ND	mg/Kg	0.050
Styrene	ND	mg/Kg	0.050
tert-Butylbenzene	ND	mg/Kg	0.050
1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.050
1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.050
Tetrachloroethene (PCE)	ND	mg/Kg	0.050
trans-1,2-DCE	ND	mg/Kg	0.050
trans-1,3-Dichloropropene	ND	mg/Kg	0.050
1,2,3-Trichlorobenzene	ND	mg/Kg	0.10
1,2,4-Trichlorobenzene	ND	mg/Kg	0.050
1,1,1-Trichloroethane	ND	mg/Kg	0.050
1,1,2-Trichloroethane	ND	mg/Kg	0.050
Trichloroethene (TCE)	ND	mg/Kg	0.050
Trichlorofluoromethane	ND	mg/Kg	0.050
1,2,3-Trichloropropane	ND	mg/Kg	0.10
Vinyl chloride	ND	mg/Kg	0.050
Xylenes, Total	ND	mg/Kg	0.10

Sample ID: lcs-24370

LCS

Batch ID: 24370 Analysis Date: 11/6/2010 6:15:00 PM

Benzene	1.005	mg/Kg	0.050	1	0	100	73.3	116
Toluene	1.004	mg/Kg	0.050	1	0	100	90.5	117
Chlorobenzene	1.031	mg/Kg	0.050	1	0.0077	102	93.6	113
1,1-Dichloroethene	1.208	mg/Kg	0.050	1	0	121	68.4	131
Trichloroethene (TCE)	0.9184	mg/Kg	0.050	1	0	91.8	64.6	100

Sample ID: 1011146-09a ms

MS

Batch ID: 24370 Analysis Date: 11/6/2010 5:18:40 PM

Benzene	1.010	mg/Kg	0.050	1	0.0178	99.2	62.3	118
Toluene	1.060	mg/Kg	0.050	1	0	106	76.4	120
Chlorobenzene	1.040	mg/Kg	0.050	1	0.0230	102	78.1	125
1,1-Dichloroethene	1.147	mg/Kg	0.050	1	0	115	60.9	128
Trichloroethene (TCE)	0.9195	mg/Kg	0.050	1	0	92.0	56.2	102

Qualifiers:

E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded
NC Non-Chlorinated
R RPD outside accepted recovery limits

Turn-Around Time:

☒ Standard ☐ Rush
 Project Name: Lindrith C.S.
 Project #: GMS 1001
 Project Manager: Julie Linn
Asstky Aggr
 Sampler: J. Linn
 Office:
 Sample: Pemphigidae
5-16

Container Type and #	Preservative Type	Temperature
1403 JAR	NONE	-1
		-2
		-3
		-4
		-5
		-6
		-7
		-8
		-9

Received by:				Date	Time
Heidi C. Davidson				11/3/200	10:30

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Lindith C.S.

Project #: GMS 1001

Project Manager: Julie Linn
Ashley Agos
Sampler: J. Linn
Office: 606-636-1111
Sample: Hemlock
5-16

Container Type and #	Preservative Type	Temperature
1403 JAR	NONE	-1
		-2
		-3
		-4
		-5
		-6
		-7
		-8
		-9

Received by:				Date	Time
Heidi C. Davidson				11/3/200	10:30

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

BTEX + MTBE + TMBs (8021)

Project Manager:	Julie Linn Ashley Agos	
Sampler:	J. Linn	
Office:	256-631-1110	
Sample Temperature:	5-21°C	
Container Type and #	Preservative Type	HEAVY OILY

X	X	X	X	X	X	X	X	X
---	---	---	---	---	---	---	---	---

143, JAR NONE

143, JAR	NONE
0	-1
1	-2
2	-3
3	-4
4	-5
5	-6
6	-7
7	-8
8	-9

				Remarks

Received by:				Date	Time
Heidi C. Davidson				11/3/200	10:30

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.



COVER LETTER

Wednesday, January 19, 2011

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

RE: Lindrith CS

Order No.: 1011353

Dear Ashley Ager:

Hall Environmental Analysis Laboratory, Inc. received 5 sample(s) on 11/9/2010 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued December 1, 2010.

No determination of compounds below these (denoted by the ND or < sign) has been made.

Reporting limits are determined by EPA methodology.

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

Sincerely,

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

Andy Freeman, Laboratory Manager

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



Hall Environmental Analysis Laboratory, Inc.

Date: 19-Jan-11

CLIENT: LTE
Project: Lindrith CS
Lab Order: 1011353

CASE NARRATIVE

EPA Method 8015B was added to the COC after the samples were past the 14 day holding time.

Hall Environmental Analysis Laboratory, Inc.

Date: 19-Jan-11

CLIENT: LTE
Lab Order: 1011353
Project: Lindrith CS
Lab ID: 1011353-01

Client Sample ID: BH-27-45'
Collection Date: 11/3/2010 11:19:00 AM
Date Received: 11/9/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	ND	10	H	mg/Kg	1	11/26/2010 4:36:49 PM
Motor Oil Range Organics (MRO)	ND	50	H	mg/Kg	1	11/26/2010 4:36:49 PM
Surr: DNOP	109	61.7-135	H	%REC	1	11/26/2010 4:36:49 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	H	mg/Kg	1	11/26/2010 10:41:04 AM
Surr: BFB	101	89.7-125	H	%REC	1	11/26/2010 10:41:04 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: MMS
Benzene	ND	0.050		mg/Kg	1	11/12/2010 3:10:12 AM
Toluene	ND	0.050		mg/Kg	1	11/12/2010 3:10:12 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/12/2010 3:10:12 AM
Xylenes, Total	ND	0.10		mg/Kg	1	11/12/2010 3:10:12 AM
Surr: 4-Bromofluorobenzene	89.5	82.2-105		%REC	1	11/12/2010 3:10:12 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011353
Project: Lindrith CS
Lab ID: 1011353-02

Client Sample ID: BH-28-30'
Collection Date: 11/3/2010 2:39:00 PM
Date Received: 11/9/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	360	10	H	mg/Kg	1	11/26/2010 6:18:10 PM
Motor Oil Range Organics (MRO)	680	50	H	mg/Kg	1	11/26/2010 6:18:10 PM
Surr: DNOP	127	61.7-135	H	%REC	1	11/26/2010 6:18:10 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	110	5.0	H	mg/Kg	1	11/25/2010 11:14:37 AM
Surr: BFB	777	89.7-125	SH	%REC	1	11/25/2010 11:14:37 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: MMS
Benzene	ND	0.050		mg/Kg	1	11/12/2010 4:06:40 AM
Toluene	ND	0.050		mg/Kg	1	11/12/2010 4:06:40 AM
Ethylbenzene	0.22	0.050		mg/Kg	1	11/12/2010 4:06:40 AM
Xylenes, Total	2.4	0.10		mg/Kg	1	11/12/2010 4:06:40 AM
Surr: 4-Bromofluorobenzene	101	82.2-105		%REC	1	11/12/2010 4:06:40 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011353
Project: Lindrith CS
Lab ID: 1011353-03

Client Sample ID: BH-28-45'
Collection Date: 11/3/2010 2:39:00 PM
Date Received: 11/9/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	ND	10	H	mg/Kg	1	11/26/2010 6:51:45 PM
Motor Oil Range Organics (MRO)	ND	50	H	mg/Kg	1	11/26/2010 6:51:45 PM
Surr: DNOP	105	61.7-135	H	%REC	1	11/26/2010 6:51:45 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	H	mg/Kg	1	11/26/2010 11:38:47 AM
Surr: BFB	98.0	89.7-125	H	%REC	1	11/26/2010 11:38:47 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: MMS
Benzene	ND	0.050		mg/Kg	1	11/12/2010 12:49:00 AM
Toluene	ND	0.050		mg/Kg	1	11/12/2010 12:49:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/12/2010 12:49:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	11/12/2010 12:49:00 AM
Surr: 4-Bromofluorobenzene	89.1	82.2-105		%REC	1	11/12/2010 12:49:00 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011353
Project: Lindrith CS
Lab ID: 1011353-04

Client Sample ID: BH-29-27'
Collection Date: 11/4/2010 10:56:00 AM
Date Received: 11/9/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	100	10	H	mg/Kg	1	11/26/2010 7:25:21 PM
Motor Oil Range Organics (MRO)	130	50	H	mg/Kg	1	11/26/2010 7:25:21 PM
Surr: DNOP	116	61.7-135	H	%REC	1	11/26/2010 7:25:21 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	H	mg/Kg	1	11/26/2010 12:07:38 PM
Surr: BFB	126	89.7-125	SH	%REC	1	11/26/2010 12:07:38 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: MMS
Benzene	ND	0.050		mg/Kg	1	11/12/2010 2:13:41 AM
Toluene	ND	0.050		mg/Kg	1	11/12/2010 2:13:41 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/12/2010 2:13:41 AM
Xylenes, Total	ND	0.10		mg/Kg	1	11/12/2010 2:13:41 AM
Surr: 4-Bromofluorobenzene	86.8	82.2-105		%REC	1	11/12/2010 2:13:41 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011353
Project: Lindrith CS
Lab ID: 1011353-05

Client Sample ID: BH-29-40'
Collection Date: 11/4/2010 11:51:00 AM
Date Received: 11/9/2010
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	ND	10	H	mg/Kg	1	11/26/2010 8:32:05 PM
Motor Oil Range Organics (MRO)	ND	50	H	mg/Kg	1	11/26/2010 8:32:05 PM
Surr: DNOP	112	61.7-135	H	%REC	1	11/26/2010 8:32:05 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	6.6	5.0	H	mg/Kg	1	11/25/2010 12:44:23 PM
Surr: BFB	110	89.7-125	H	%REC	1	11/25/2010 12:44:23 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: MMS
Benzene	ND	0.050		mg/Kg	1	11/12/2010 2:41:55 AM
Toluene	ND	0.050		mg/Kg	1	11/12/2010 2:41:55 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/12/2010 2:41:55 AM
Xylenes, Total	ND	0.10		mg/Kg	1	11/12/2010 2:41:55 AM
Surr: 4-Bromofluorobenzene	89.1	82.2-105		%REC	1	11/12/2010 2:41:55 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

QA/QC SUMMARY REPORT

Client: LTE
Project: Lindrith CS

Work Order: 1011353

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range Organics											
Sample ID: 1011353-01AMSD		MSD				Batch ID: 24642	Analysis Date: 11/26/2010 5:44:32 PM				
Diesel Range Organics (DRO)	54.89	mg/Kg	10	50	4.6	101	67.4	117	3.09	17.4	
Sample ID: MB-24642		MBLK				Batch ID: 24642	Analysis Date: 11/26/2010 2:55:15 PM				
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Motor Oil Range Organics (MRO)	ND	mg/Kg	50								
Sample ID: LCS-24642		LCS				Batch ID: 24642	Analysis Date: 11/26/2010 3:29:06 PM				
Diesel Range Organics (DRO)	53.81	mg/Kg	10	50	0	108	64.6	116			
Sample ID: LCSD-24642		LCSD				Batch ID: 24642	Analysis Date: 11/26/2010 4:02:57 PM				
Diesel Range Organics (DRO)	52.04	mg/Kg	10	50	0	104	64.6	116	3.35	17.4	
Sample ID: 1011353-01AMS		MS				Batch ID: 24642	Analysis Date: 11/26/2010 5:10:57 PM				
Diesel Range Organics (DRO)	53.22	mg/Kg	10	50	4.6	97.2	67.4	117			
Method: EPA Method 8015B: Gasoline Range											
Sample ID: MB-24432		MBLK				Batch ID: 24432	Analysis Date: 11/13/2010 3:34:27 AM				
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-24432		LCS				Batch ID: 24432	Analysis Date: 11/13/2010 3:05:33 AM				
Gasoline Range Organics (GRO)	24.89	mg/Kg	5.0	25	0	99.6	95.7	120			
Method: EPA Method 8260B: Volatiles Short List											
Sample ID: 1011353-03a msd		MSD				Batch ID: 24432	Analysis Date: 11/12/2010 1:45:28 AM				
Benzene	0.9027	mg/Kg	0.050	1	0	90.3	62.3	118	2.02	20	
Toluene	0.9345	mg/Kg	0.050	1	0	93.5	76.4	120	3.86	12.5	
Sample ID: mb-24432		MBLK				Batch ID: 24432	Analysis Date: 11/12/2010 12:20:46 AM				
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-24432		LCS				Batch ID: 24432	Analysis Date: 11/11/2010 11:52:39 PM				
Benzene	0.9228	mg/Kg	0.050	1	0	92.3	73.3	116			
Toluene	0.9233	mg/Kg	0.050	1	0	92.3	90.5	117			
Sample ID: 1011353-03a ms		MS				Batch ID: 24432	Analysis Date: 11/12/2010 1:17:12 AM				
Benzene	0.9211	mg/Kg	0.050	1	0	92.1	62.3	118			
Toluene	0.8991	mg/Kg	0.050	1	0	89.9	76.4	120			

Qualifiers:

E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded
NC Non-Chlorinated
R RPD outside accepted recovery limits

Chain-of-Custody Record

Client: LTE

attn: Julie Lian, pg

Mailing Address: 2243 N. Main #3

Phone #: (970) 385-1096

email or Fax#: jliao@lteenv.com

QA/QC Package: Standard

Accreditation: ☒ NELAP ☐ Other

EDD (Type): pdf-ALS

☐ Level 4 (Full Validation)

Turn-Around Time: ☒ Standard ☐ Rush

Project Name: Lindrieth CS

Project #: GMS 1001

Project Manager: Julie Lian/Ashley Ager

Sampler: D. Hencemann

Sample Temperature: 5

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type
11/3/10	1119	Soil	BH-27-45'	4 oz. Jar NONE	-1
11/3/10	1439		BH-28-30'		-2
11/3/10	1439		BH-28-45'		-3
11/4/10	1050		BH-29-27'		-4
11/4/10	1151		BH-29-40'		-5

Date: 11/5/10 Time: 10:30

Relinquished by: Julie L

Date: 11/8/10 Time: 1000

Relinquished by: Christen Waelen

Remarks:

Analysis Request	TPH Method 8015B (Gas/Diesel)	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)
BTEX + MTBE + TPH (8021)	X											
BTEX + MTBE + TPH (8021)	X											
BTEX + MTBE + TPH (8021)	X											
BTEX + MTBE + TPH (8021)	X											
BTEX + MTBE + TPH (8021)	X											

APPENDIX D
GEOTECHNICAL LABORATORY REPORTS



MECHANICAL ANALYSIS - SIEVE TEST DATA
#200 SIEVE ONLY
ASTM D 1140

CLIENT LT Environmental

JOB NO. 2247-54

BORING NO.

DEPTH

SAMPLE NO.

SOIL DESCR.

LOCATION

Durango

SAMPLED

DATE TESTED

11/10/10 PW

WASH SIEVE

Yes

DRY SIEVE

No

WASH SIEVE ANALYSIS

Wt. Wet Soil & Pan	
Before Washing (g)	1130.3
Wt. Dry Soil & Pan	
Before Washing (g)	1104.7
Weight of Pan (g)	843.3
Wt. of Dry Soil	
Before Washing	261.5
Wt. Dry Soil & Pan	
After Washing (g)	1027.6
Wt. of Dry Soil	
After Washing (g)	184.4
#200 Wash. Out %	29.5

Data entry by: MLM
Data checked by: BKL
Filename: LTS00000

Date: 11/11/2010
Date: 11/11/10



PERMEABILITY TEST - BACK PRESSURE CONSTANT HEAD
ASTM D 5084

CLIENT LT Environmental

JOB NO. 2247-54

BORING NO. BH-29
DEPTH 30-30.5'
SAMPLE NO.
SOIL DESCR.
LOCATION Durango
CONF. PRES. PSF 720

SAMPLED
TEST STARTED 11/12/10 LB
TEST FINISHED 11/19/10 CL
CELL NUMBER 2P
SATURATED TEST Yes
TEST TYPE TX/Pbp/Tap Water

MOISTURE/DENSITY DATA	BEFORE TEST	AFTER TEST
Wt. Soil + Moisture (g)	364.8	413.5
Wt. Wet Soil & Pan (g)	396.0	444.7
Wt. Dry Soil & Pan (g)	361.8	361.8
Wt. Lost Moisture (g)	34.2	82.9
Wt. of Pan Only (g)	31.2	31.2
Wt. of Dry Soil (g)	330.6	330.6
Moisture Content %	10.3	25.1
Wet Density PCF	102.5	120.3
Dry Density PCF	92.9	96.1

Init. Diameter (in)	2.407	(cm)	6.114
Init. Area (sq in)	4.550	(sq cm)	29.359
Init. Height (in)	2.978	(cm)	7.564
Vol. Bef. Consol. (cu ft)	0.00784		
Vol. After Consol. (cu ft)	0.00758		
Porosity %	38.62		
Constant Head (PSI)	1.00	(cm)	70.39

Time Min	Time Sec	Init. Burette CC	Final Burette CC	Head Corr. CM	Permeability k cm/sec
0.5	30	45.1	27.1	26.1	3.5E-03
0.5	30	49.0	32.8	20.8	2.8E-03
0.5	30	48.5	34.1	20.4	2.5E-03
0.5	30	48.1	36.2	19.5	2.0E-03
0.5	30	48.9	38.6	17.7	1.7E-03
0.5	30	48.9	39.3	17.3	1.6E-03
0.5	30	48.5	39.0	17.7	1.6E-03
0.5	30	48.7	39.5	17.3	1.5E-03

AVERAGE LAST 4 VALUE 1.6E-03

Average Temperature 23.3

Data entry by: CAL/MLM Date: 11/22/2010
Checked by: *MLM* Date: 12/06/10
FileName: LTP02930



TRIAXIAL COMPRESSION TEST DATA

CLIENT LT Environmental

JOB NO. 2247-54

BORING NO. BH-29
DEPTH 30-30.5'

SAMPLED
TEST STARTED 11/12/10 LB

SAMPLE NO.

TEST FINISHED 11/19/10 CL

SOIL DESCR.

CELL NUMBER 2P

LOCATION

Durango

SATURATED TEST Yes

CONF. PRES. PSF 720

TEST TYPE TX/Pbp/Tap Water

SATURATION DATA

Cell Pres. (PSI)	Back Pres. (PSI)	Burette Reading (CC)	Pore Pressure (PSI)	Change	B
		Close	Open	Close	Open
40.0	38.0	1.9	11.5		
50.0	48.0	14.5	15.7	38.6	46.1
60.0		17.1	17.2	48.3	57.8
				7.5	9.5
					0.75
					0.95

CONSOLIDATION DATA

Elapsed Time (Min)	SQRT Time (Min)	Burette Reading (CC)	Volume Defl. (CC)
0.00	0.00	17.20	0.00
0.25	0.50	18.00	-0.80
0.5	0.71	18.00	-0.80
1	1.00	18.00	-0.80
2	1.41	18.05	-0.85
4	2.00	18.05	-0.85
9	3.00	18.10	-0.90
16	4.00	18.10	-0.90
30	5.48	18.10	-0.90
60	7.75	18.10	-0.90
120	10.95	18.10	-0.90
240	15.49	18.10	-0.90
360	18.97	18.10	-0.90

Initial Height (in) 2.978
Height Change (in) 0.039
Ht. After Cons. (in) 2.939
Initial Area (sq in) 4.550
Area After Cons. (sq in) 4.457

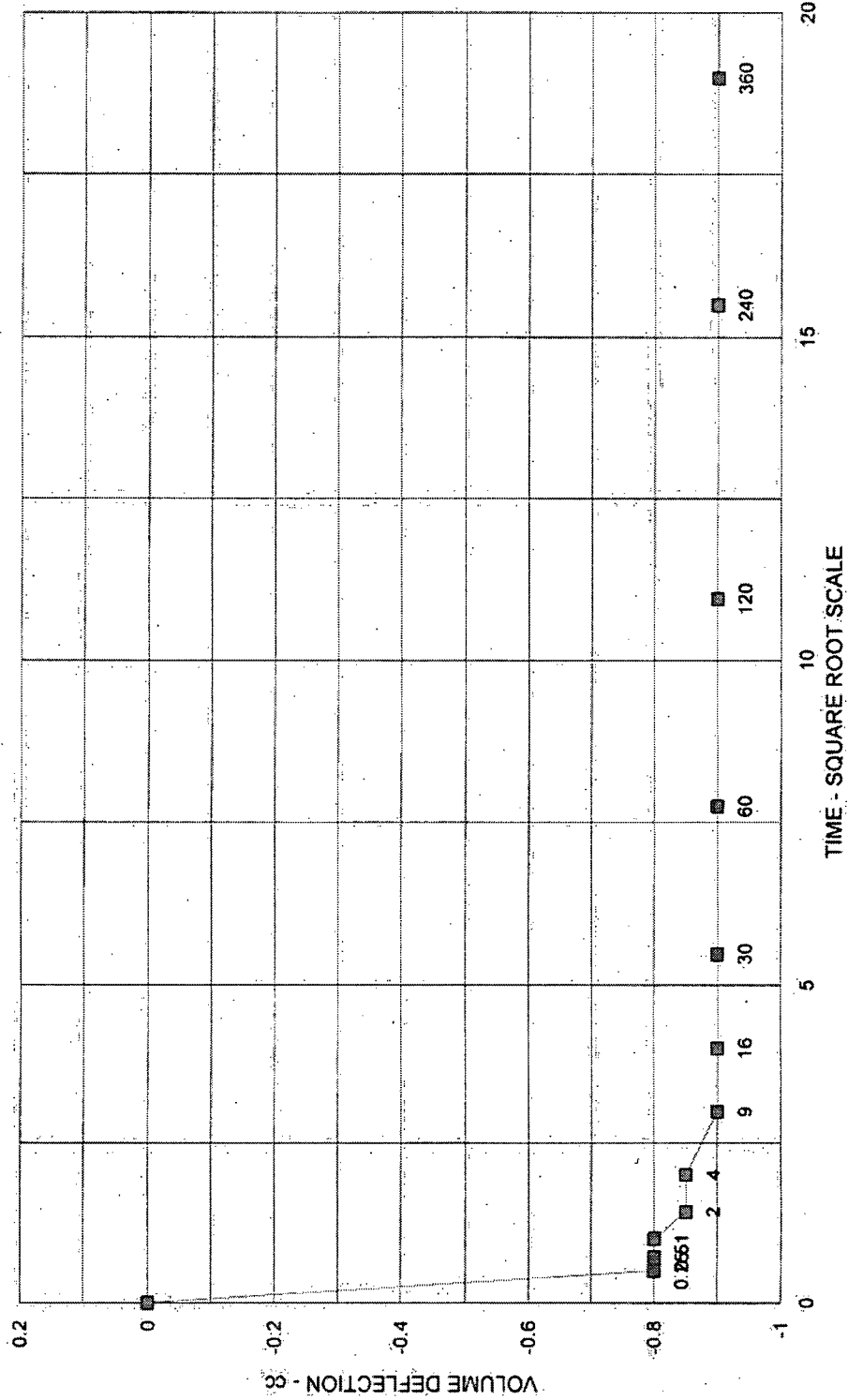
Init. Vol. (CC) 222.10
Vol. Change (CC) 17.30
Cell Exp. (CC) 9.90
Net Change (CC) 7.40
Cons. Vol. (CC) 214.70

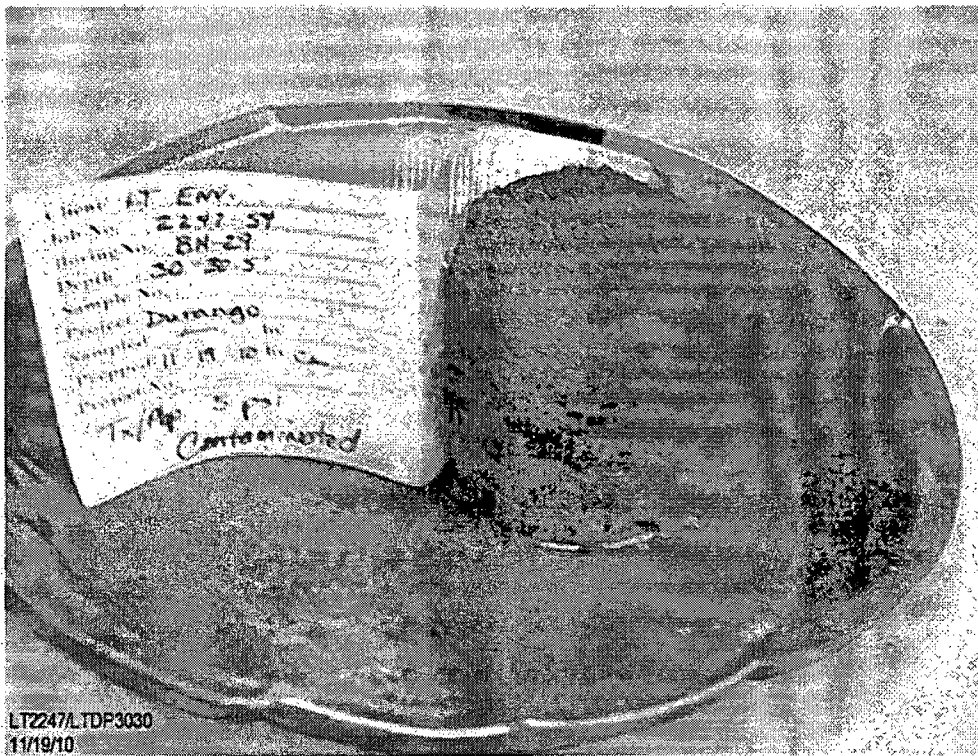
Data entry by: CAL/MLM Date: 12/01/2010
Checked by: DPM Date: 12/08/10
FileName: LTP02930



CONSOLIDATION DATA

BH-29, 30-30.5'





Client: LT. Emy.
Job No: 2292-57
Boring No: 8H-29
Depth: 30-35
Sample No: 1
Project: Durango
Sampled: 10/10/09
Prepared: 11/19/10
Project No: 2292-57
To/By: 5/1/11
Contaminated

LT2247/LDP3030
11/19/10

APPENDIX E
GROUNDWATER LABORATORY REPORT



COVER LETTER

Wednesday, January 19, 2011

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

RE: Lindrith Compressor Station

Order No.: 1011763

Dear Ashley Ager:

Hall Environmental Analysis Laboratory, Inc. received 10 sample(s) on 11/18/2010 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued December 13, 2010.

No determination of compounds below these (denoted by the ND or < sign) has been made.

Reporting limits are determined by EPA methodology.

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

Sincerely,


Andy Freeman, Laboratory Manager

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



Hall Environmental Analysis Laboratory, Inc.

Date: 19-Jan-11

CLIENT: LTE
Lab Order: 1011763
Project: Lindrith Compressor Station
Lab ID: 1011763-01

Client Sample ID: MW-8
Collection Date: 11/15/2010 11:43:00 AM
Date Received: 11/18/2010
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/20/2010 3:34:40 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/20/2010 3:34:40 PM
Surr: DNOP	118	86.9-151		%REC	1	11/20/2010 3:34:40 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/24/2010 3:05:38 PM
Surr: BFB	95.7	84.5-118		%REC	1	11/24/2010 3:05:38 PM
EPA METHOD 300.0: ANIONS						Analyst: LJB
Nitrate (As N)+Nitrite (As N)	ND	1.0		mg/L	5	12/6/2010 8:01:32 PM
EPA METHOD 200.7: METALS						Analyst: RAGS
Iron	7.8	0.20		mg/L	10	12/2/2010 3:09:40 PM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/20/2010 5:31:57 PM
Toluene	ND	1.0		µg/L	1	11/20/2010 5:31:57 PM
Ethylbenzene	ND	1.0		µg/L	1	11/20/2010 5:31:57 PM
Xylenes, Total	ND	2.0		µg/L	1	11/20/2010 5:31:57 PM
Surr: 4-Bromofluorobenzene	104	76.4-106		%REC	1	11/20/2010 5:31:57 PM
SM4500-H+B: PH						Analyst: IC
pH	7.36	0.100		pH units	1	11/23/2010 4:56:00 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: 19-Jan-11

CLIENT:	LTE	Client Sample ID:	MW-10
Lab Order:	1011763	Collection Date:	11/15/2010 1:05:00 PM
Project:	Lindrith Compressor Station	Date Received:	11/18/2010
Lab ID:	1011763-02	Matrix:	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/20/2010 4:08:47 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/20/2010 4:08:47 PM
Surr: DNOP	120	86.9-151		%REC	1	11/20/2010 4:08:47 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/24/2010 4:03:28 PM
Surr: BFB	101	84.5-118		%REC	1	11/24/2010 4:03:28 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Nitrate (As N)+Nitrite (As N)	ND	1.0		mg/L	5	12/1/2010 8:15:41 PM
EPA METHOD 200.7: METALS						Analyst: RAGS
Iron	52	2.0		mg/L	100	12/2/2010 3:52:18 PM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/20/2010 5:59:31 PM
Toluene	ND	1.0		µg/L	1	11/20/2010 5:59:31 PM
Ethylbenzene	ND	1.0		µg/L	1	11/20/2010 5:59:31 PM
Xylenes, Total	ND	2.0		µg/L	1	11/20/2010 5:59:31 PM
Surr: 4-Bromofluorobenzene	102	76.4-106		%REC	1	11/20/2010 5:59:31 PM
SM4500-H+B: PH						Analyst: IC
pH	7.57	0.100		pH units	1	11/23/2010 5:00:00 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

Page 2 of 10

Hall Environmental Analysis Laboratory, Inc.

Date: 19-Jan-11

CLIENT: LTE
Lab Order: 1011763
Project: Lindrith Compressor Station
Lab ID: 1011763-03

Client Sample ID: MW-12
Collection Date: 11/15/2010 3:35:00 PM
Date Received: 11/18/2010
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/20/2010 4:42:38 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/20/2010 4:42:38 PM
Surr: DNOP	122	86.9-151		%REC	1	11/20/2010 4:42:38 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	1.3	0.050		mg/L	1	11/24/2010 4:32:24 PM
Surr: BFB	153	84.5-118	S	%REC	1	11/24/2010 4:32:24 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Nitrate (As N)+Nitrite (As N)	ND	1.0		mg/L	5	12/1/2010 8:28:54 PM
EPA METHOD 200.7: METALS						Analyst: RAGS
Iron	39	1.0		mg/L	50	12/2/2010 4:04:16 PM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	23	1.0		µg/L	1	11/20/2010 6:27:04 PM
Toluene	16	1.0		µg/L	1	11/20/2010 6:27:04 PM
Ethylbenzene	13	1.0		µg/L	1	11/20/2010 6:27:04 PM
Xylenes, Total	84	2.0		µg/L	1	11/20/2010 6:27:04 PM
Surr: 4-Bromofluorobenzene	123	76.4-106	S	%REC	1	11/20/2010 6:27:04 PM
SM4500-H+B: PH						Analyst: IC
pH	7.28	0.100		pH units	1	11/23/2010 5:04:00 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011763
Project: Lindrith Compressor Station
Lab ID: 1011763-04

Client Sample ID: MW-5
Collection Date: 11/15/2010 4:27:00 PM
Date Received: 11/18/2010
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JB
Diesel Range Organics (DRO)	1.4	1.0		mg/L	1	11/20/2010 5:16:28 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/20/2010 5:16:28 PM
Surr: DNOP	117	86.9-151		%REC	1	11/20/2010 5:16:28 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	2.2	0.050		mg/L	1	11/24/2010 5:01:14 PM
Surr: BFB	199	84.5-118	S	%REC	1	11/24/2010 5:01:14 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Nitrate (As N)+Nitrite (As N)	ND	1.0		mg/L	5	12/1/2010 9:11:51 PM
EPA METHOD 200.7: METALS						Analyst: RAGS
Iron	47	1.0		mg/L	50	12/2/2010 3:18:38 PM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	4.4	1.0		µg/L	1	11/20/2010 6:54:35 PM
Toluene	ND	1.0		µg/L	1	11/20/2010 6:54:35 PM
Ethylbenzene	6.3	1.0		µg/L	1	11/20/2010 6:54:35 PM
Xylenes, Total	22	2.0		µg/L	1	11/20/2010 6:54:35 PM
Surr: 4-Bromofluorobenzene	125	76.4-106	S	%REC	1	11/20/2010 6:54:35 PM
SM4500-H+B: PH						Analyst: IC
pH	6.82	0.100		pH units	1	11/23/2010 5:08:00 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011763
Project: Lindrith Compressor Station
Lab ID: 1011763-05

Client Sample ID: MW-3
Collection Date: 11/16/2010 11:31:00 AM
Date Received: 11/18/2010
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/20/2010 6:24:26 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/20/2010 6:24:26 PM
Surr: DNOP	116	86.9-151		%REC	1	11/20/2010 6:24:26 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	16	0.050	E	mg/L	1	11/24/2010 5:30:16 PM
Surr: BFB	244	84.5-118	S	%REC	1	11/24/2010 5:30:16 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Nitrate (As N)+Nitrite (As N)	ND	1.0		mg/L	5	12/1/2010 9:23:04 PM
EPA METHOD 200.7: METALS						Analyst: RAGS
Iron	210	10		mg/L	500	12/2/2010 4:00:12 PM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	5500	100		µg/L	100	11/22/2010 11:45:41 AM
Toluene	62	10		µg/L	10	11/22/2010 12:13:18 PM
Ethylbenzene	350	10		µg/L	10	11/22/2010 12:13:18 PM
Xylenes, Total	1000	20		µg/L	10	11/22/2010 12:13:18 PM
Surr: 4-Bromofluorobenzene	101	76.4-106		%REC	1	11/20/2010 7:22:12 PM
SM4500-H+B: PH						Analyst: IC
pH	7.16	0.100		pH units	1	11/23/2010 5:11:00 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011763
Project: Lindrith Compressor Station
Lab ID: 1011763-06

Client Sample ID: MW-7
Collection Date: 11/16/2010 12:35:00 PM
Date Received: 11/18/2010
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/20/2010 6:58:34 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/20/2010 6:58:34 PM
Surr: DNOP	117	86.9-151		%REC	1	11/20/2010 6:58:34 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	1.5	0.050		mg/L	1	11/24/2010 5:59:11 PM
Surr: BFB	158	84.5-118	S	%REC	1	11/24/2010 5:59:11 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Nitrate (As N)+Nitrite (As N)	ND	1.0		mg/L	5	12/1/2010 9:34:18 PM
EPA METHOD 200.7: METALS						Analyst: RAGS
Iron	53	2.0		mg/L	100	12/2/2010 3:27:04 PM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	8.9	1.0		µg/L	1	11/22/2010 1:08:21 PM
Toluene	2.6	1.0		µg/L	1	11/22/2010 1:08:21 PM
Ethylbenzene	5.9	1.0		µg/L	1	11/22/2010 1:08:21 PM
Xylenes, Total	50	2.0		µg/L	1	11/22/2010 1:08:21 PM
Surr: 4-Bromofluorobenzene	107	76.4-106	S	%REC	1	11/22/2010 1:08:21 PM
SM4500-H+B: PH						Analyst: IC
pH	7.29	0.100		pH units	1	11/23/2010 5:15:00 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: 19-Jan-11

CLIENT:	LTE	Client Sample ID:	MW-4
Lab Order:	1011763	Collection Date:	11/16/2010 1:42:00 PM
Project:	Lindrith Compressor Station	Date Received:	11/18/2010
Lab ID:	1011763-07	Matrix:	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JB
Diesel Range Organics (DRO)	3.1	1.0		mg/L	1	11/20/2010 7:32:41 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/20/2010 7:32:41 PM
Surr: DNOP	115	86.9-151		%REC	1	11/20/2010 7:32:41 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	0.35	0.050		mg/L	1	11/24/2010 6:28:06 PM
Surr: BFB	109	84.5-118		%REC	1	11/24/2010 6:28:06 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Nitrate (As N)+Nitrite (As N)	ND	1.0		mg/L	5	12/1/2010 9:45:31 PM
EPA METHOD 200.7: METALS						Analyst: RAGS
Iron	470	10		mg/L	500	12/2/2010 3:29:54 PM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	2600	100		µg/L	100	11/22/2010 1:38:01 PM
Toluene	1600	100		µg/L	100	11/22/2010 1:38:01 PM
Ethylbenzene	280	10		µg/L	10	11/22/2010 2:03:43 PM
Xylenes, Total	1700	20		µg/L	10	11/22/2010 2:03:43 PM
Surr: 4-Bromofluorobenzene	100	76.4-106		%REC	10	11/22/2010 2:03:43 PM
SM4500-H+B: PH						Analyst: IC
pH	6.93	0.100		pH units	1	11/23/2010 5:19:00 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011763
Project: Lindrith Compressor Station
Lab ID: 1011763-08

Client Sample ID: MW-6
Collection Date: 11/16/2010 2:30:00 PM
Date Received: 11/18/2010
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JB
Diesel Range Organics (DRO)	1.4	1.0		mg/L	1	11/20/2010 8:06:48 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/20/2010 8:06:48 PM
Surr: DNOP	118	86.9-151		%REC	1	11/20/2010 8:06:48 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	0.42	0.050		mg/L	1	11/24/2010 6:57:04 PM
Surr: BFB	103	84.5-118		%REC	1	11/24/2010 6:57:04 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Nitrate (As N)+Nitrite (As N)	ND	1.0		mg/L	5	12/1/2010 9:56:45 PM
EPA METHOD 200.7: METALS						Analyst: RAGS
Iron	140	4.0		mg/L	200	12/2/2010 3:32:45 PM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	2400	50		µg/L	50	11/22/2010 2:58:57 PM
Toluene	65	10		µg/L	10	11/20/2010 8:45:01 PM
Ethylbenzene	230	10		µg/L	10	11/20/2010 8:45:01 PM
Xylenes, Total	1200	20		µg/L	10	11/20/2010 8:45:01 PM
Surr: 4-Bromofluorobenzene	101	76.4-106		%REC	10	11/20/2010 8:45:01 PM
SM4500-H+B: PH						Analyst: IC
pH	6.57	0.100		pH units	1	11/23/2010 5:23:00 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011763
Project: Lindrith Compressor Station
Lab ID: 1011763-09

Client Sample ID: MW-11
Collection Date: 11/16/2010 4:35:00 PM
Date Received: 11/18/2010
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/20/2010 8:40:54 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/20/2010 8:40:54 PM
Surr: DNOP	121	86.9-151		%REC	1	11/20/2010 8:40:54 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/24/2010 7:25:58 PM
Surr: BFB	100	84.5-118		%REC	1	11/24/2010 7:25:58 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Nitrate (As N)+Nitrile (As N)	ND	1.0		mg/L	5	12/1/2010 10:08:00 PM
EPA METHOD 200.7: METALS						Analyst: RAGS
Iron	13	0.40		mg/L	20	12/2/2010 3:48:06 PM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/20/2010 9:12:36 PM
Toluene	ND	1.0		µg/L	1	11/20/2010 9:12:36 PM
Ethylbenzene	ND	1.0		µg/L	1	11/20/2010 9:12:36 PM
Xylenes, Total	ND	2.0		µg/L	1	11/20/2010 9:12:36 PM
Surr: 4-Bromofluorobenzene	102	76.4-106		%REC	1	11/20/2010 9:12:36 PM
SM4500-H+B: PH						Analyst: IC
pH	7.09	0.100		pH units	1	11/23/2010 5:27:00 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: 19-Jan-11

CLIENT: LTE
Lab Order: 1011763
Project: Lindrith Compressor Station
Lab ID: 1011763-10

Client Sample ID: TRIP BLANK
Collection Date:
Date Received: 11/18/2010
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/20/2010 9:40:07 PM
Toluene	ND	1.0		µg/L	1	11/20/2010 9:40:07 PM
Ethylbenzene	ND	1.0		µg/L	1	11/20/2010 9:40:07 PM
Xylenes, Total	ND	2.0		µg/L	1	11/20/2010 9:40:07 PM
Surr: 4-Bromofluorobenzene	104	76.4-106		%REC	1	11/20/2010 9:40:07 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

QA/QC SUMMARY REPORT

Client: LTE
Project: Lindrith Compressor Station

Work Order: 1011763

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 200.7: Metals											
Sample ID: MB-24694		MBLK				Batch ID: 24694		Analysis Date: 12/1/2010 2:48:38 PM			
Iron	ND	mg/L	0.020								
Sample ID: LCS-24694		LCS				Batch ID: 24694		Analysis Date: 12/1/2010 2:54:52 PM			
Iron	0.5226	mg/L	0.020	0.5	0	105	85	115			
Method: EPA Method 300.0: Anions											
Sample ID: MB		MBLK				Batch ID: R42433		Analysis Date: 12/1/2010 2:27:36 PM			
Nitrate (As N)+Nitrite (As N)	ND	mg/L	0.20								
Sample ID: MB		MBLK				Batch ID: R42538		Analysis Date: 12/6/2010 7:26:44 PM			
Nitrate (As N)+Nitrite (As N)	ND	mg/L	0.20								
Sample ID: LCS		LCS				Batch ID: R42433		Analysis Date: 12/1/2010 2:38:50 PM			
Nitrate (As N)+Nitrite (As N)	3.496	mg/L	0.20	3.5	0	99.9	90	110			
Sample ID: LCS		LCS				Batch ID: R42538		Analysis Date: 12/6/2010 7:44:08 PM			
Nitrate (As N)+Nitrite (As N)	3.665	mg/L	0.20	3.5	0	105	90	110			
Method: EPA Method 8015B: Diesel Range											
Sample ID: MB-24586		MBLK				Batch ID: 24586		Analysis Date: 11/20/2010 1:18:54 PM			
Diesel Range Organics (DRO)	ND	mg/L	1.0								
Motor Oil Range Organics (MRO)	ND	mg/L	5.0								
Sample ID: LCS-24586		LCS				Batch ID: 24586		Analysis Date: 11/20/2010 1:52:46 PM			
Diesel Range Organics (DRO)	5.761	mg/L	1.0	5	0	115	74	157			
Sample ID: LCSD-24586		LCSD				Batch ID: 24586		Analysis Date: 11/20/2010 2:26:53 PM			
Diesel Range Organics (DRO)	5.768	mg/L	1.0	5	0	115	74	157	0.116	23	
Method: EPA Method 8015B: Gasoline Range											
Sample ID: 5ML RB		MBLK				Batch ID: R42340		Analysis Date: 11/24/2010 8:28:50 AM			
Gasoline Range Organics (GRO)	ND	mg/L	0.050								
Sample ID: b 14		MBLK				Batch ID: R42340		Analysis Date: 11/24/2010 2:36:43 PM			
Gasoline Range Organics (GRO)	ND	mg/L	0.050								
Sample ID: b 48		MBLK				Batch ID: R42340		Analysis Date: 11/25/2010 6:59:00 AM			
Gasoline Range Organics (GRO)	ND	mg/L	0.050								
Sample ID: 2.5UG GRO LCS-II		LCS				Batch ID: R42340		Analysis Date: 11/24/2010 8:52:32 PM			
Gasoline Range Organics (GRO)	0.5210	mg/L	0.050	0.5	0	104	83.7	124			
Sample ID: 2.5UG GRO LCS		LCS				Batch ID: R42340		Analysis Date: 11/24/2010 12:18:10 PM			
Gasoline Range Organics (GRO)	0.5500	mg/L	0.050	0.5	0	110	83.7	124			
Sample ID: 2.5UG GRO LCS-III		LCS				Batch ID: R42340		Analysis Date: 11/25/2010 7:56:42 AM			
Gasoline Range Organics (GRO)	0.5038	mg/L	0.050	0.5	0	101	83.7	124			
Sample ID: 2.5UG GRO LCSD		LCSD				Batch ID: R42340		Analysis Date: 11/24/2010 12:47:11 PM			
Gasoline Range Organics (GRO)	0.5196	mg/L	0.050	0.5	0	104	83.7	124	5.68	12	
Sample ID: 2.5UG GRO LCSD-III		LCSD				Batch ID: R42340		Analysis Date: 11/25/2010 8:25:31 AM			
Gasoline Range Organics (GRO)	0.5020	mg/L	0.050	0.5	0	100	83.7	124	0.358	12	

Qualifiers:

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

QA/QC SUMMARY REPORT

Client: LTE
Project: Lindrith Compressor Station

Work Order: 1011763

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 8260: Volatiles Short List

Sample ID: 5ml-rb MBLK Batch ID: R42279 Analysis Date: 11/20/2010 11:08:52 AM

Benzene	ND	µg/L	1.0
Toluene	ND	µg/L	1.0
Ethylbenzene	ND	µg/L	1.0
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0
1,2,4-Trimethylbenzene	ND	µg/L	1.0
1,3,5-Trimethylbenzene	ND	µg/L	1.0
Xylenes, Total	ND	µg/L	2.0

Sample ID: b3 MBLK Batch ID: R42279 Analysis Date: 11/20/2010 11:57:45 PM

Benzene	ND	µg/L	1.0
Toluene	ND	µg/L	1.0
Ethylbenzene	ND	µg/L	1.0
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0
1,2,4-Trimethylbenzene	ND	µg/L	1.0
1,3,5-Trimethylbenzene	ND	µg/L	1.0
Xylenes, Total	ND	µg/L	2.0

Sample ID: 5ml-rb MBLK Batch ID: R42314 Analysis Date: 11/22/2010 8:56:13 AM

Benzene	ND	µg/L	1.0
Toluene	ND	µg/L	1.0
Ethylbenzene	ND	µg/L	1.0
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0
1,2,4-Trimethylbenzene	ND	µg/L	1.0
1,3,5-Trimethylbenzene	ND	µg/L	1.0
Xylenes, Total	ND	µg/L	2.0

Sample ID: 100ng lcs2 LCS Batch ID: R42279 Analysis Date: 11/20/2010 2:07:57 PM

Benzene	18.75	µg/L	1.0	20	0	93.8	84.6	109
Toluene	20.92	µg/L	1.0	20	0	105	81	114

Sample ID: 100ng lcs3 LCS Batch ID: R42279 Analysis Date: 11/21/2010 12:52:57 AM

Benzene	18.40	µg/L	1.0	20	0	92.0	84.6	109
Toluene	20.68	µg/L	1.0	20	0	103	81	114

Sample ID: 100ng lcs LCS Batch ID: R42314 Analysis Date: 11/22/2010 9:51:33 AM

Benzene	18.39	µg/L	1.0	20	0	92.0	84.6	109
Toluene	20.70	µg/L	1.0	20	0	103	81	114

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

