GW-209

Groundwater Mon. Report

DATE:
03.04.13

Lowe, Leonard, EMNRD

From: Parker, DeeDee <DParker@eprod.com>
Sent: Monday, March 04, 2013 12:58 PM
To: Sandoval, John; Morris, Ralph; Benson, Rick; Farley, Edward; Anderson, Don; McDowell, Jack; Waszut, Michael; Dailey, Aaron; Seale, Runell; 'kyle.summers@southwestgeoscience.com'; 'chris.mitchell@southwestgeoscience.com'; Lowe, Leonard, EMNRD; Griswold, Jim, EMNRD
Cc: Sartor, Rodney; Smith, David
Subject: Lindrith Compressor Station - GWMR (Dec 2012)
Attachments: Lindrith Compressor Station - GWMR (Dec 2012)-Ltr-Rpt March 2013.pdf

The attached documents were sent out today to Mr. Cordell TeCube at the Environmental Protection Office, Jicarilla Apache Nation. Please contact David Smith at (713) 381-2286, if you have any questions.

A copy has been saved on the Enterprise Y-drive under:
Y:\Remediation\~Projects\P09011 Lindrith Station\Corres_Reports\Final Reports\Lindrith GW Rpt 3_01_13.

Thank you!

DeeDee Parker

DeeDee Parker
Enterprise Products
EHS&T Technical Services
1100 Louisiana, #1338
Houston, Texas 77002
office: (713) 381-6640
Fax: (713) 381-6811

Enterprise Products

ENTERPRISE PRODUCTS PARTNERS L.P.
ENTERPRISE PRODUCTS HOLDINGS LLC
(General Partner)

ENTERPRISE PRODUCTS OPERATING LLC

March 4, 2013

Return Receipt Requested
7010 1870 0001 2945 4115

Mr. Cordell TeCube - Director
Environmental Protection Office
Jicarilla Apache Nation
P.O. Box 507
Dulce, NM 87528-0507

RE: Groundwater Monitoring Report (December 2012) -
Enterprise Field Services, LLC - Lindrith Compressor Station
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. TeCube:

Enterprise Field Services, LLC (Enterprise) is submitting the enclosed *Groundwater Monitoring Report (December 2012 Monitoring Event)*, dated January 11, 2013, for the facility referenced above. The enclosed report provides the results of the December 2012 groundwater monitoring event conducted at this facility.

Remedial actions at this facility are being performed to remediate soil and groundwater affected by historical facility operations. Routine groundwater monitoring events are currently conducted to ensure that migration of affected groundwater does not occur from areas that have been delineated, and to evaluate the effectiveness of remedial actions in reducing groundwater constituent concentrations. A total of twenty-five (25) monitor wells are currently utilized in the groundwater monitoring program. During this monitoring event, seven (7) monitor wells contained light non-aqueous phase liquids (LNAPL), and several well locations exceeded applicable New Mexico Water Quality Control Commission (WQCC) Groundwater Quality Standards (GQS). Due to the occurrence of LNAPL at monitor well location MW-6 during this monitoring event, Enterprise is evaluating this area to determine if additional actions are required.

Enterprise is currently completing a pilot study utilizing a mobile dual-phase extraction (MDPE) system to remediate affected soils and groundwater at the facility. This work is being performed in accordance with recommendations provided in the *Supplemental Environmental Site Investigation and Corrective Action Work Plan*, dated November 30, 2011. To complete the study, Enterprise will install six extraction wells in the vicinities of monitoring well MW-1R and MW-9 to determine the radius of influence of the MDPE process. These activities are currently in the planning/scheduling phase. Upon completion of the evaluation, the Jicarilla Environmental Protection Office will be provided with a report documenting the effectiveness of this technology, with recommendations for additional remedial actions necessary at the site.

P. O. BOX 4324
HOUSTON, TX 77210-4324
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Two (2) additional monitoring wells are expected to be installed during the installation of the extraction wells. These monitoring wells will be installed downgradient of the sub-grade tank in the west corner of the facility and downgradient of the former pond area to further enhance delineation control of the dissolve-phase plumes.

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

Sincerely,

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

Rodney M. Sartor, REM
Manager, Remediation

/dep
Enclosures - Quarterly Groundwater Monitoring Report (March 2013 Monitoring Event)

cc: Mr. Kurt Sandoval
Bureau of Indian Affairs, Realty Program
P.O. Box 167
Dulce, NM 87528-0167

Mr. Dixon Sandoval
Jicarilla Oil & Gas Administration
P.O. Box 146
Dulce, NM 87528-0146

Mr. Hobson Sandoval
Jicarilla Environmental Protection Office
P.O. Box 507
Dulce, NM 87528-0507

ec: Chris Mitchell, Southwest Geoscience
Kyle Summers, Southwest Geoscience

GROUNDWATER MONITORING REPORT
(December 2012 Monitoring Event)

Property:

LINDRITH COMPRESSOR STATION (GW-209)
Section 18, Township 24N, Range 5W
Rio Arriba County, New Mexico
January 11, 2013

Prepared for:
Enterprise Field Services, LLC
P.O. Box 4324
Houston, Texas 77210-4324
Attention: Mr. David R. Smith, P.G.

PREPARED BY:

Kyle Summers, C.P.G.
Senior Geologist/
Manager, Four Corners Office

B. Chris Mitchell, P.G.
Principal Geoscientist

Southwest GEOSCIENCE
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GROUNDWATER MONITORING REPORT
(December 2012 Monitoring Event)

LINDRITH COMPRESSOR STATION
Section 18, Township 24N, Range 5W
Rio Arriba County, New Mexico

SWG Project No. 0410006

1.0 EXECUTIVE SUMMARY

The Lindrith Compressor Station is located off Jicarilla Road J-36, approximately 7.2 miles west of State Highway 537, in Section 8, Township 24N, Range 5W Rio Arriba County, Jicarilla Apache Nation, New Mexico, referred to hereinafter as the "Site" or "subject Site". The Site is a natural gas compressor station utilized to dehydrate and compress natural gas collected from production wells in the area for transportation via pipeline. The Site was constructed in the 1950s and currently includes three (3) compressor engines, a dehydration unit, a flare, one (1) bullet storage tank, a condensate storage tank battery, which includes eight (8) condensate storage tanks, two (2) below-grade tanks, inlet scrubbers, a water tower, and office/shop buildings.

On December 27, 2007, a natural gas condensate release (initially reported as 50 bbls (25 bbls recovered)) occurred within the containment berm at the former condensate storage tanks. The release penetrated the berm and flowed outside the south fence of the facility. The release was immediately reported the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division's (OCD) Aztec field office, and The OCD *Release Notification and Corrective Action* form (Form C-141) was submitted to the OCD. Initial response activities included the removal of some impacted soil, as well as soil boring sampling to evaluate the extent of impact (*Spill Cleanup Report Lindrith Compressor Station, Rio Arriba County, New Mexico*, Envirotech, September 2008). Supplemental excavation, delineation, and remediation activities were performed between November 2009 and the present (*Subsurface Investigation Report*, LT Environmental, Inc. (LTE), February 2011) (*Supplemental Site Investigation & Corrective Action Work Plan*, Southwest Geoscience (SWG), November 30, 2011), resulting in the removal of approximately 4,182 cubic yards of affected soils, the advancement of a total of forty-two (42) soil borings, and the installation and sampling of twenty-five (25) groundwater monitoring wells. The former condensate tanks and associated below-grade tank have been permanently removed from the facility.

This report documents the observations and analytical results derived from the December 2012 groundwater monitoring event. During this sampling event, SWG collected groundwater samples from eighteen (18) of the monitoring wells at the site. These samples were analyzed for total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) utilizing EPA method SW-846#8015M, and benzene, toluene, ethylbenzene and xylenes (BTEX) utilizing EPA method SW-846 #8021B. Groundwater samples were not collected from monitoring wells MW-1R, MW-6,

MW-9, MW-30, MW-32, MW-37, or MW-39, due to the presence of light non-aqueous phase liquids (LNAPL).

Pertinent findings from the December 2012 sampling event include the following:

- LNAPL was observed in monitoring well MW-6 (0.61 feet in thickness), which historically exhibited only dissolved-phase constituent concentrations. Additional investigation activities are warranted to determine if this LNAPL is related to an existing area of impact, or if another source area is present at the Site.

- LNAPL plumes remain present in the vicinity of the former condensate tanks (0.29 feet to 1.63 feet of LNAPL), the former pond area (0.01 feet to 1.02 feet of LNAPL), and in the vicinity of the below-grade tank near the west boundary of the facility (1.33 feet of LNAPL).

- Measured LNAPL thickness at monitoring well MW-30 continues to increase in thickness (1.02 feet of LNAPL) and may be attributed to artificially fluctuating water levels created during the recent product recovery vacuum events at the site. It is also possible that the product recovery activities created new flow pathways, liberating additional NAPL for migration to the monitoring well. Previous increases in NAPL thickness were attributed to naturally occurring water level fluctuations.

- The groundwater samples collected from monitoring wells MW-2, MW-3, MW-4, MW-7, MW-12, MW-36, and MW-38 exhibited benzene concentrations ranging from 11 µg/L to 4,300 µg/L which exceed the New Mexico Water Quality Control Commission (WQCC) Groundwater Quality Standard (*GQS)* of 10 µg/L.

- The groundwater sample collected from monitoring well MW-4 exhibited a toluene concentration of 1,800 µg/L which exceeds the WQCC GQS of 750 µg/L.

- The groundwater samples collected from monitoring wells MW-4 and MW-38 exhibited xylene concentrations ranging of 1,700 µg/L and 1,400 µg/L, respectively, which exceed the WQCC *GQS* of 620 µg/L.

2.0 INTRODUCTION

The Site is under the jurisdiction of the Jicarilla Apache Nation Environmental Protection Office (JANEPO). In the absence of published JANEPO regulatory guidance, SWG referenced the New Mexico OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically NMAC 19.15.30 *Remediation*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

Based on the results of soil and groundwater sampling activities at the Site, Constituent of Concern (COC) concentrations were identified in soil above the New Mexico EMNRD OCD *Remediation Action Levels* (RALs) and in groundwater above the New Mexico WQCC *GQSs*.

The following historical source areas are suspected as contributors to the identified soil and/or groundwater impact at the facility:

1. Former condensate storage tanks and associated below-grade tank in south central facility and possibly the former hydrocarbon tank located southwest of the water tower. An LNAPL plume is present in this area.
2. Former pond locations (and possible burn pit location) in the southeastern portion of the facility in the vicinity of monitoring wells MW-30 and MW-32. An LNAPL plume is present in this area.
3. Below-grade tank at the west boundary of the facility. LNAPL is present in monitoring well MW-39.

The Site location is depicted on Figure 1 of Appendix A which was reproduced from a portion of the United States Geological Survey (USGS) 7.5-minute series topographic map. A Site Vicinity Map is included as Figure 2, and a Site Map, which indicates the approximate locations of the monitoring wells in relation to pertinent structures and general Site boundaries, is included as Figure 3 of Appendix A.

2.1 Chronology of Events

Significant events and related activities associated with the Site, including the results of Site investigation activities and corrective action completed to date, are provided in the following table:

December 27, 2007	An estimated 50 bbls (25 bbls recovered) release of condensate occurred at the former condensate storage tanks location due to suspected theft or vandalism. The OCD was notified immediately, and a C-141 Release Notification was submitted to the OCD on January 4, 2008. Condensate penetrated the secondary containment berm and flowed outside the south fence of the facility. Initial response activities included the removal of some soil, and the advancement of soil borings.

September 2008	*Spill Cleanup Report Lindrith Compressor Station, Rio Arriba County, New Mexico,* September 2008.
November 2009	LTE oversaw the removal of an additional 3,200 cubic yards of hydrocarbon affected soil from the affected area. Apparent historically impacted soil was identified underlying the floor of the excavation, which extended to approximately 9 feet below ground surface (bgs).
December 2009	Six (6) soil borings were advanced in the immediate vicinity of the former condensate storage tanks. Three (3) of the soil borings were converted into groundwater monitoring wells. Groundwater impact was confirmed through laboratory analysis.
March 2010	Proposed *Delineation Work Plan,* (LTE) presented to the JANEPO detailing the proposed subsurface investigation activities.
April 2010	*Supplemental Work Plan,* (LTE) presented to JANEPO describing proposed below-grade tank removal and remediation activities.
May 2010	Removal of the below-grade tank, as well as an additional 982 cubic yards of hydrocarbon affected soils.
June 2010	*Combined ORC Injection and Delineation Work Plan and Remediation Work Plan (LTE)* submitted to JANEPO. This work plan proposed in-situ treatment at the source and additional soil and groundwater delineation activities.
July-November 2010	Bureau of Indian Affairs (BIA) approves the combined work plans. ORC is introduced into the excavation floor, a drain/injection system is installed, and the excavation is backfilled. The ORC is hydrated immediately after the drain/injection system installation, and again in September, October and November 2010.
October 2010	LTE begins supplemental site delineation activities which included twenty (20) additional soil borings across the southern portion of the Site and adjacent property. Ten (10) of the soil borings are converted to groundwater monitoring wells, including the replacement of MW-1 with MW-1R.
February 2011	*Subsurface Investigation Report* (LTE) describes the results of the subsurface investigation activities. The investigation identifies NAPL in association with the initial groundwater bearing unit, as well as identifying historical apparent impact from undetermined sources. Additional investigation will be required to further evaluate the extent of the NAPL and dissolve-phase groundwater COCs, as well as the historic soil impacts.
August 2011	*Supplemental Site Investigation Work Plan* submitted to JANEPO on August 1, 2011. Supplemental Site Investigation Work Plan approved by JANEPO on August 12, 2011.
August/September 2011	Southwest Geoscience (SWG) performed supplemental site investigation activities which included the advancement and sampling of thirteen (13) additional soil borings across the southern portion of the Site and adjacent property. Each of the soil borings were converted into groundwater monitoring wells which were sampled during the September 2011 groundwater sampling event. Two previously undocumented LNAPL plumes were identified and delineated during the course of the investigation and sampling activities.

December 12, 2011	*Supplemental Environmental Site Investigation & Corrective Action Work Plan* submitted to JANEPO for review/approval.
February 12, 2012	JANEPO approves the activities proposed in the *Supplemental Site Investigation & Corrective Action Work Plan*.
May 2012	SWG, in conjunction with Animas Environmental Services (AES), initiates High Vacuum Recovery activities at the former condensate release site. Enterprise is currently preparing to install additional vapor extraction wells in the condensate tank release area to determine the effective "radius of influence" for vacuum recovery efforts at the site. These activities are anticipated to be completed and reported on during the Spring of 2013.

2.2 Scope of Work

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

2.3 Standard of Care & Limitations

The findings and recommendations contained in this report represent SWG's professional opinions based upon information derived from on-Site activities and other services performed under this scope of work and were arrived at in accordance with currently acceptable professional standards. The findings were based upon analytical results provided by an independent laboratory. Evaluations of the geologic/hydrogeologic conditions at the Site for the purpose of this investigation are made from a limited number of available data points (i.e. soil borings and ground water samples) and site wide subsurface conditions may vary from these data points. SWG makes no warranties, express or implied, as to the services performed hereunder. Additionally, SWG does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties).

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

3.0 SAMPLING PROGRAM

A groundwater sampling event was conducted on December 18th and 19th of 2012 by SWG environmental professionals Jordon Dubuisson and Aaron Bentley.

Prior to sample collection, SWG gauged the depth to fluids in each monitoring well using an interface probe capable of detecting LNAPL. Groundwater samples were not collected from monitoring wells MW-1R, MW-6, MW-9, MW-30, MW-32, MW-37 or MW-39,

due to the presence of LNAPL.

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

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

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

Groundwater samples were collected in laboratory prepared containers, sealed with custody tape and placed on ice in a cooler secured with a custody seal. The sample coolers and completed chain-of-custody forms were relinquished to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico.

4.0 LABORATORY ANALYTICAL PROGRAM

The groundwater samples collected from the monitoring wells during the groundwater sampling event were analyzed for TPH GRO and DRO utilizing EPA method SW-846#8015M, and BTEX utilizing EPA method SW-846 #8021B.

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

Analysis	Sample Type	No. of Samples	Method
TPH GRO/DRO	Groundwater	18	SW-846# 8015M
BTEX	Groundwater	18	SW-846# 8021B

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

5.0 GROUNDWATER FLOW DIRECTION

Monitoring well top-of-casing (TOC) elevations were previously surveyed and referenced to Section corner benchmarks. Groundwater measurements were collected utilizing an interface probe capable of detecting the presence of LNAPL. LNAPL ranging in thickness from 0.01 feet to 1.63 feet was observed in monitoring wells MW-1R, MW-6, MW-9, MW-30, MW-32, MW-37, and MW-39 during this gauging event.

Based on the groundwater elevations measured during the December 2012 monitoring event, the groundwater at the Site flows generally to the west-southwest at an average gradient of 0.010 ft/ft. The observed gradient on the west-central portion of the site is considerably steeper than that observed at the eastern portion. This may be due to increased recharge from a surface drainage feature that drains from the fence just south of the condensate storage tanks. This feature runs relatively parallel to the southern fence towards the west in the same general direction as demonstrated by the subsurface (groundwater) flow.

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

6.0 CORRECTIVE ACTIONS - PILOT STUDY

The "Pilot Study" High Vacuum Recovery (Mobile Dual Phase Extraction (MDPE)) activities were performed during May, June, and July of 2012, and once "radius of influence" measurements are completed at the site, these activities will be comprehensibly reported under separate cover.

7.0 DATA EVALUATION

The Site is under the jurisdiction of the JANEPO. In the absence of published JANEPO regulatory guidance, SWG referenced the New Mexico OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically NMAC 19.15.30 *Remediation*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

The New Mexico WQCC *Groundwater Quality Standards* utilized during data validation are: 10 µg/L for benzene, 750 µg/L for toluene, 750 µg/L for ethylbenzene, and 620 µg/L for total xylenes.

7.1 Quality Assurance / Quality Control

All non-disposable sampling equipment was cleaned using an Alconox® wash and potable water rinse prior to the beginning of the project and before the collection of each sample.

Soil and groundwater samples were collected and placed in laboratory prepared glassware, sealed with custody tape and placed on ice in a cooler, which was secured with a custody seal. The sample coolers and completed chain-of-custody forms were relinquished to Hall Environmental Analytical Laboratory (HEAL) in Albuquerque, New Mexico for standard turnaround.

HEAL performed the analyses of samples under an adequate and documented quality assurance program to meet the project and data quality objectives. The laboratory's quality assurance program is generally consistent the quality standards outlined in the National Environmental Laboratory Accreditation Program, as amended. In addition, the data generated by HEAL meet the intralaboratory performance standards for the selected analytical method and the performance standards are sufficient to meet the bias, precision, sensitivity, representativeness, comparability, and completeness, as specified in the project data quality objectives. Sample results that resulted in Data Qualifier flags are listed below.

Sample ID	Data Qualifier Flag	Comments/Reactions
MW-12	TPH Gasoline Range Spike Recovery was outside the accepted recovery limits.	The TPH GRO data is suitable for the intended use as a non-regulated screening result. Benzene is present above WQCC standards at this location, but no flags are associated with the SW-846 8021B analysis.

7.2 Groundwater Samples

SWG compared BTEX concentrations or laboratory Reporting Limits (RLs) associated with the groundwater samples collected from monitoring wells during the December 2012 sampling event to the New Mexico WQCC *GQSs*.

Benzene, Toluene, Ethylbenzene, and Xylenes

The groundwater samples collected from monitoring wells MW-5, MW-8, MW-10, MW-11, MW-31, MW-33, MW-34, MW-35, MW-40, MW-41, and MW-42 did not exhibit benzene, toluene, ethylbenzene or xylenes concentrations above the respective WQCC *GQSs*.

The groundwater samples collected from monitoring wells MW-2, MW-3, MW-4, MW-7, MW-12, MW-36, and MW-38 exhibited benzene concentrations ranging from 11 µg/L to 4,300 µg/L which exceed the New Mexico WQCC *GQS* of 10 µg/L.

The groundwater sample collected from monitoring well MW-4 exhibited a toluene concentration of 1,800 µg/L which exceeds the WQCC GQS of 750 µg/L.

The groundwater samples collected from monitoring wells MW-4 and MW-38 exhibited xylene concentrations ranging of 1,700 µg/L and 1,400 µg/L, respectively, which

exceed the WQCC *GQS* of 620 µg/L.

Groundwater samples were not collected from monitoring wells MW-1R, MW-6, MW-9, MW-30, MW-32, MW-37 or MW-39, due to the presence of LNAPL.

The results of groundwater sample analyses are summarized in Table 1 of Appendix B. Figure 5 (Appendix A) details the NMWQCC *Groundwater Quality Standard* Exceedance Zone in groundwater.

TPH GRO/DRO

The groundwater samples collected from monitoring wells MW-8, MW-10, MW-11, MW-31, MW-33, MW-34, MW-35, and MW-41 did not exhibit TPH GRO concentrations above the laboratory RLs during the December 2012 sampling event. TPH DRO concentrations were not identified above the laboratory RLs in any of the sampled wells.

The groundwater samples collected from monitoring wells MW-2, MW-3, MW-4, MW-5, MW-7, MW-12, MW-36, MW-38, MW-40, and MW-42 exhibited TPH GRO concentrations ranging from 0.091 mg/L to 25 mg/L. The highest GRO concentration during the December 2012 sampling event was observed in the groundwater sample from monitoring well MW-4 (25 mg/L).

8.0 FINDINGS

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

- LNAPL was observed in monitoring well MW-6 (0.61 feet in thickness), which historically exhibited only dissolved-phase constituent concentrations.
- LNAPL plumes remain present in the vicinity of the former condensate tanks (0.29 feet to 1.63 feet of LNAPL), the former pond area (0.01 feet to 1.02 feet of LNAPL), and in the vicinity of the below-grade tank near the west boundary of the facility (1.33 feet of LNAPL).
- Measured LNAPL thickness at monitoring well MW-30 continues to increase in thickness (1.02 feet of LNAPL) and may be attributed to artificially fluctuating water levels created during the recent product recovery vacuum events at the site. It is also possible that the product recovery activities created new flow pathways, liberating additional NAPL for migration to the monitoring well. Previous increases in NAPL thickness were attributed to naturally occurring water level fluctuations.
- The groundwater samples collected from monitoring wells MW-2, MW-3, MW-4, MW-7, MW-12, MW-36, and MW-38 exhibited BTEX constituent concentrations which exceed the WQCC *GQS*.

9.0 RECOMMENDATIONS

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

- Report the results of the monitoring event to the JANEPO;
- Complete the proposed "Pilot Study" High Vacuum Recovery (Mobile Dual Phase Extraction (MDPE)) by determining the effective radius-of-influence created by the MDPE vacuum. This additional information will allow a more accurate determination of the feasibility of LNAPL recovery at the Site.
- Additional investigation activities are warranted to determine if the LNAPL identified at monitoring well MW-6 is related to an existing area of impact, or if another source area is present at the Site. Perform additional subsurface investigation activities to assess the impact affecting monitoring wells MW-6, MW-39, and MW-30.
- Continue development of a preferred remedial action strategy for the site and submit to the JANEPO for review/approval.

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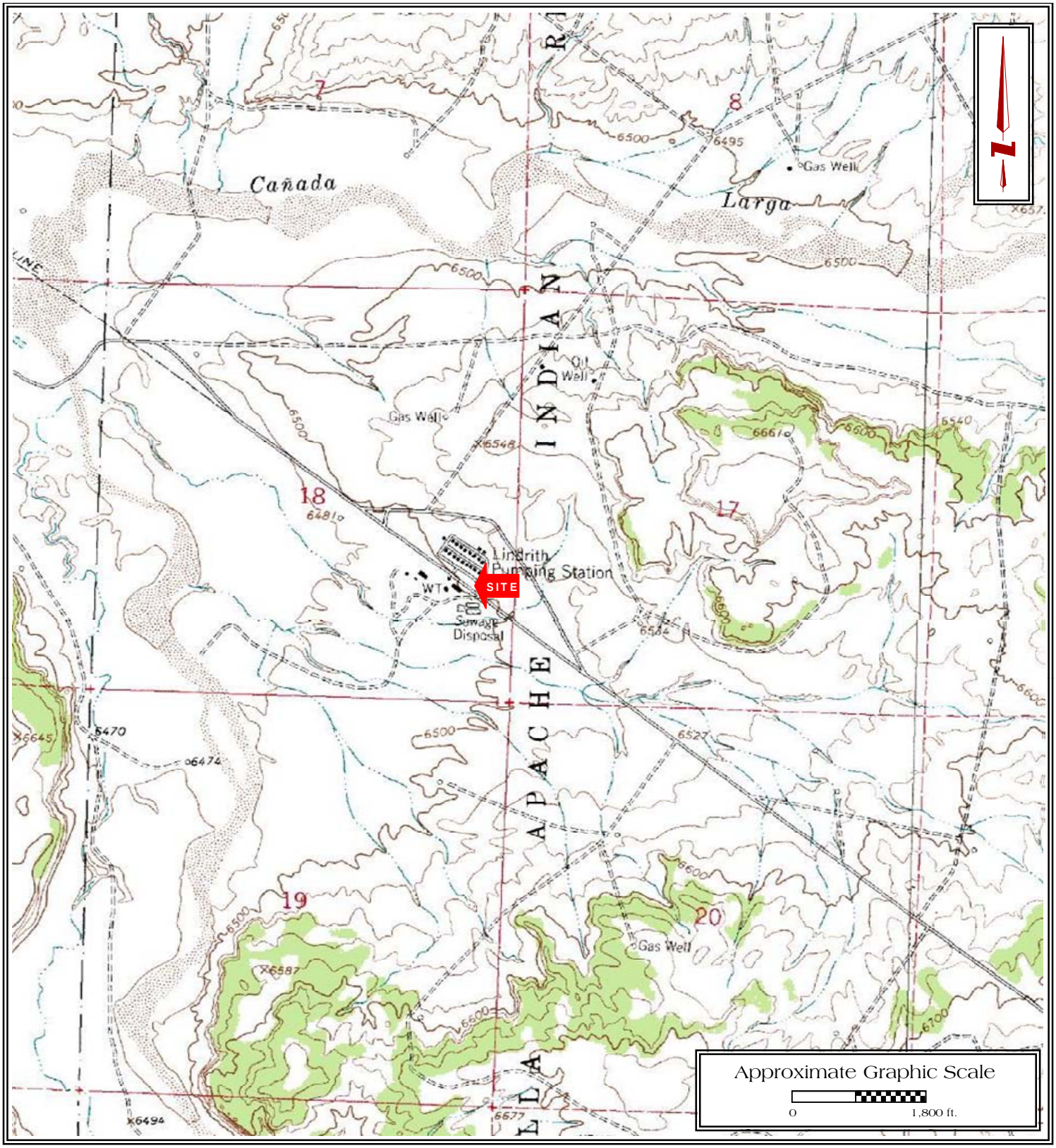
APPENDIX A

Figures



Lindrith Compressor Station

SE 1/4, S18 T24N R5W

N36° 18' 32.41"; W107° 23' 48.09"

Rio Arriba County, New Mexico

SWG Project No. 0410006

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FIGURE 1

Topographic Map

East Fork Kutz Canyon, NM Quad

Contour Interval - 10 Feet

Lindrith Compressor Station

SE 1/4, S18 T24N R5W

N36° 18' 32.41"; W107° 23' 48.09"

Rio Arriba County, New Mexico

SWG Project No. 0410006

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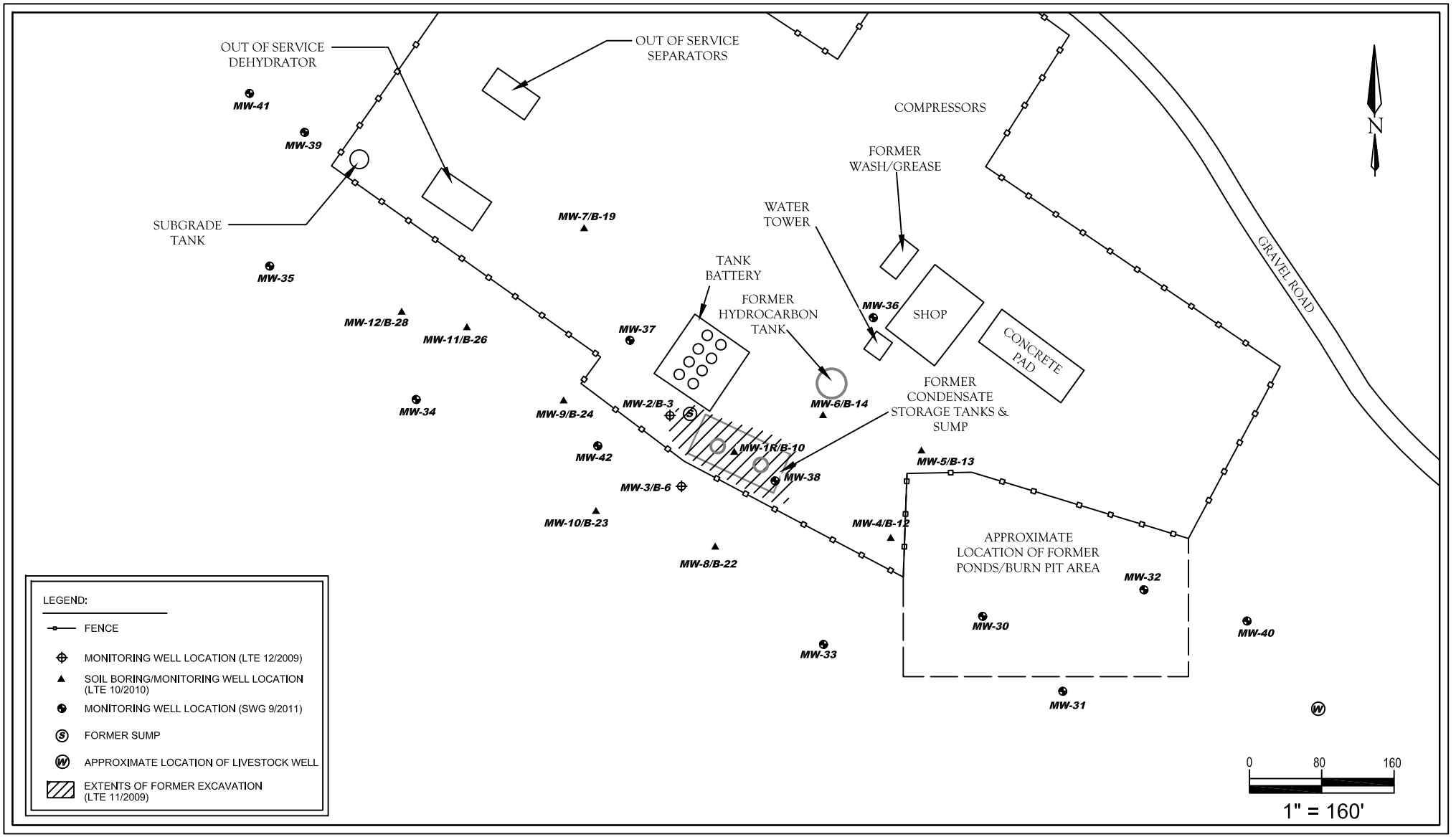
FIGURE 2

Site Vicinity Map

2009 Aerial Photograph
Source: Digital Globe



Lindrith Compressor Station
SE 1/4 S18 T24N R5W
N36° 18' 32.41"; W107° 23' 48.09"
Rio Arriba County, New Mexico

SWG Project No. 0410006

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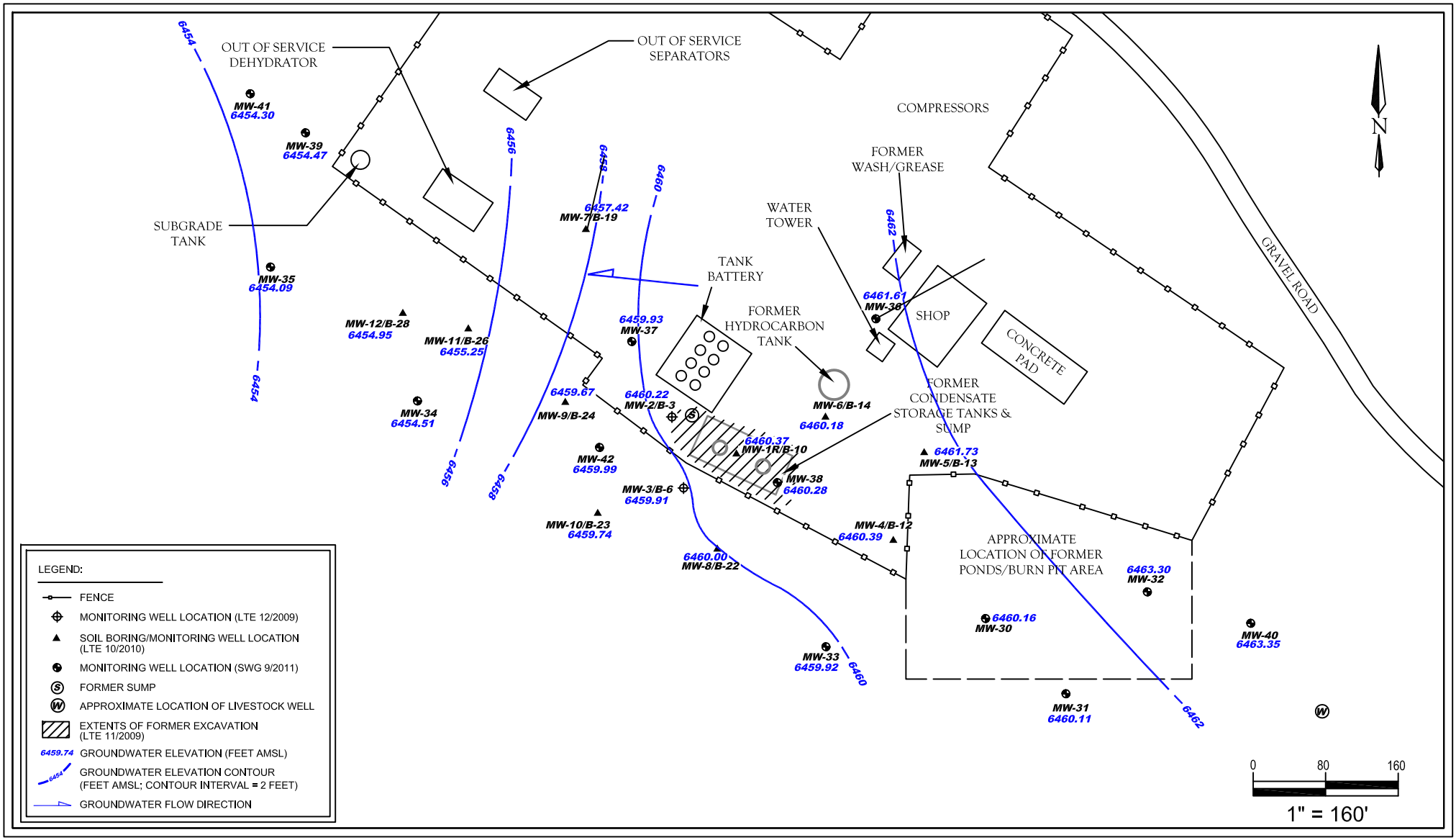
FIGURE 3

SITE MAP



Lindrith Compressor Station
SE 1/4 S18 T24N R5W
N36° 18' 32.41"; W107° 23' 48.09"
Rio Arriba County, New Mexico

SWG Project No. 0410006

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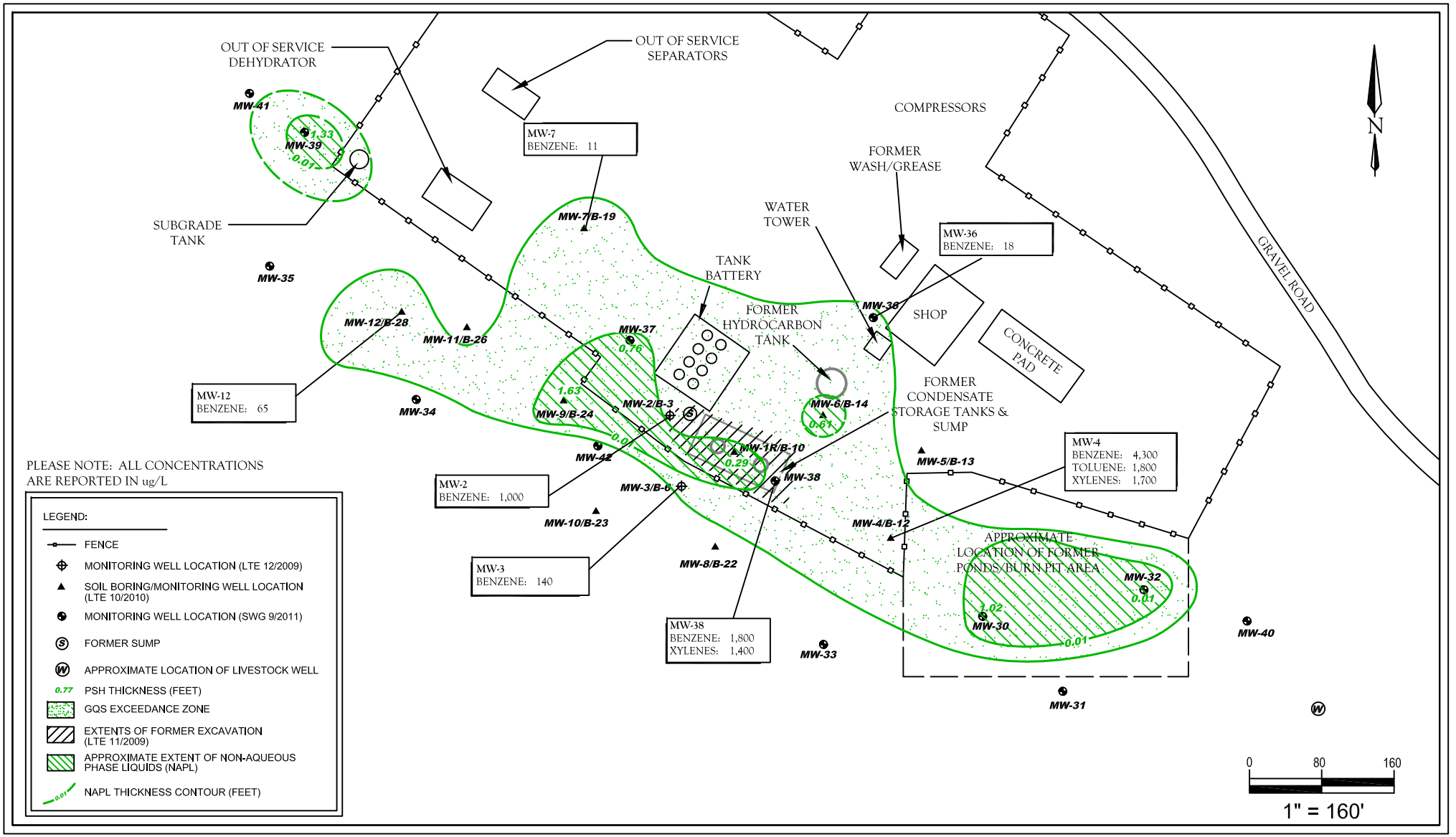
FIGURE 4

GROUNDWATER GRADIENT MAP

DECEMBER 2012



Lindrith Compressor Station
SE 1/4 S18 T24N R5W
N36° 18' 32.41"; W107° 23' 48.09"
Rio Arriba County, New Mexico

SWG Project No. 0410006

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FIGURE 5

GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE IN GROUNDWATER

DECEMBER 2012

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APPENDIX B

Tables

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TABLE 1
Lindrith Compressor Station
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)	TPH MRO (mg/L)	pH (Standard Units)	Nitrate (mg/L)	Iron (mg/L)
New Mexico Water Quality Control Commmission Groundwater Quality Standards		10	750	750	620	NE	NE	NE	6-9	10	1.0*
MW-1*	12.30.09	1,900	2,600	120	870	NA	NA	NA	NA	NA	NA
MW-1R	11.16.10	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-1R	6.24.11	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-1R	9.21.11	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-1R	12.14.11	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-1R	3.28.12	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-1R	6.21.12[M]	NAPL[M]	NAPL[M]	NAPL[M]	NAPL[M]	NAPL[M]	NAPL[M]	NAPL[M]	NA	NA	NA
MW-1R	12.18.12	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-2	12.30.09	3,000	3,200	270	1,900	NA	NA	NA	NA	NA	NA
MW-2	11.16.10	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-2	6.24.11	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-2	9.21.11	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-2	12.14.11	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-2	3.28.12	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-2	6.20.12[M]	1,300[M]	720[M]	75[M]	1,200[M]	11[M]	<1.0[M]	NA	NA	NA	NA
MW-2	12.19.12	1,000	<20	23	440	8.7	<1.0	NA	NA	NA	NA
MW-3	12.30.09	130	370	76	530	NA	NA	NA	NA	NA	NA
MW-3	11.16.10	5,500	62	350	1,000	16	<1.0	<5.0	7.16	<1.0	210
MW-3	6.24.11	5,700	3,300	340	2,300	31	1.7	NA	NA	NA	NA
MW-3	9.21.11	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-3	12.15.11	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-3	3.29.12	1,400	90	220	240	7.2	<1.0	NA	NA	NA	NA
MW-3	6.20.12[M]	130[M]	<5.0[M]	37[M]	100[M]	1.5[M]	<1.0[M]	NA	NA	NA	NA
MW-3	12.18.12	140	<5.0	81	34	0.92	<1.0	NA	NA	NA	NA
MW-4	11.16.10	2,600	1,600	280	1,700	0.35	3.1	<5.0	6.93	<1.0	470
MW-4	6.24.11	3,900	1,600	220	1,400	26	<1.0	NA	NA	NA	NA
MW-4	9.21.11	4,000	1,700	280	1,700	32	1.1	NA	NA	NA	NA
MW-4	12.14.11	3,900	1,600	260	1,700	38	<1.0	NA	NA	NA	NA
MW-4	3.28.12	3,900	1,700	250	1,500	33	<1.0	NA	NA	NA	NA
MW-4	6.20.12	4,400	1,900	280	1,700	36	<1.0	NA	NA	NA	NA
MW-4	12.19.12	4,300	1,800	270	1,700	25	<1.0	NA	NA	NA	NA
MW-5	11.15.10	4.4	<1.0	6.3	22	2.2	1.4	<5.0	6.82	<1.0	47
MW-5	6.24.11	1.2	<1.0	31	19	0.52	<1.0	NA	NA	NA	NA
MW-5	9.21.11	1.9	<1.0	3.8	9.7	0.62	1.1	NA	NA	NA	NA
MW-5	12.14.11	1.8	<1.0	2.1	7.0	0.50	1.2	NA	NA	NA	NA
MW-5	3.28.12	<10	<10	<10	<20	0.52	<1.0	NA	NA	NA	NA
MW-5	6.20.12	<5.0	<5.0	<5.0	<10	0.61	<1.0	NA	NA	NA	NA
MW-5	12.19.12	<5.0	<5.0	<5.0	<10	0.36	<1.0	NA	NA	NA	NA
MW-6	11.16.10	2,400	65	230	1,200	0.42	1.4	<5.0	6.57	<1.0	140
MW-6	6.24.11	4,500	68	230	1,200	25	<1.0	NA	NA	NA	NA
MW-6	9.21.11	4,900	67	330	1,800	32	1.4	NA	NA	NA	NA
MW-6	12.14.11	4,600	82	290	1,700	36	1.3	NA	NA	NA	NA
MW-6	3.28.12	4,500	71	290	1,600	33	1.2	NA	NA	NA	NA
MW-6	6.20.12	4,500	64	280	1,600	33	<1.0	NA	NA	NA	NA
MW-6	12.18.12	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-7	11.16.10	8.9	2.6	5.9	50	1.5	<1.0	<5.0	7.29	<1.0	53
MW-7	6.24.11	2.3	<1.0	<1.0	<2.0	0.35	<1.0	NA	NA	NA	NA
MW-7	9.21.11	3.3	<1.0	<1.0	4.9	0.57	<1.0	NA	NA	NA	NA
MW-7	12.14.11	14	<1.0	2.5	14	0.70	<1.0	NA	NA	NA	NA
MW-7	3.29.12	3.9	<1.0	1.4	5.7	0.54	<1.0	NA	NA	NA	NA
MW-7	6.20.12	3.0	<1.0	<1.0	3.2	0.49	<1.0	NA	NA	NA	NA
MW-7	12.19.12	11	<1.0	5.2	15	0.57	<1.0	NA	NA	NA	NA

Southwest GEOSCIENCE

TABLE 1
Lindrith Compressor Station
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)	TPH MRO (mg/L)	pH (Standard Units)	Nitrate (mg/L)	Iron (mg/L)
New Mexico Water Quality Control Commmission Groundwater Quality Standards		10	750	750	620	NE	NE	NE	6-9	10	1.0*
MW-8	11.15.10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	7.36	<1.0	7.8
MW-8	6.24.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-8	9.20.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-8	12.15.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-8	3.29.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-8	6.20.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-8	12.18.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-9	11.16.10	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-9	6.24.11	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-9	9.21.11	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-9	12.15.11	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-9	3.28.12	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-9	6.21.12[M]	NAPL[M]	NAPL[M]	NAPL[M]	NAPL[M]	NAPL[M]	NAPL[M]	NAPL[M]	NA	NA	NA
MW-9	12.18.12	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-10	11.15.10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	7.57	<1.0	52
MW-10	6.24.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-10	9.20.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-10	12.15.11	<1.0	<1.0	<1.0	<2.0	<0.050	3.3	NA	NA	NA	NA
MW-10	3.29.12	<1.0	<1.0	<1.0	<2.0	<0.050	3.3	NA	NA	NA	NA
MW-10	6.20.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-10	12.18.12	<1.0	<1.0	<1.0	2.6	<0.050	<1.0	NA	NA	NA	NA
MW-11	11.16.10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	7.09	<1.0	13
MW-11	6.24.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-11	9.20.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-11	12.15.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-11	3.29.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-11	6.21.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-11	12.18.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-12	11.15.10	23	16	13	84	1.3	<1.0	<5.0	7.28	<1.0	39
MW-12	6.24.11	27	<1.0	5.6	9.4	0.51	1.0	NA	NA	NA	NA
MW-12	9.21.11	63	<1.0	17	26	0.81	<1.0	NA	NA	NA	NA
MW-12	12.15.11	20	<1.0	3.1	9.7	0.73	<1.0	NA	NA	NA	NA
MW-12	3.28.12	57	<1.0	7.6	17	0.95	<1.0	NA	NA	NA	NA
MW-12	6.21.12	62	<1.0	6.8	17	0.58	<1.0	NA	NA	NA	NA
MW-12	12.18.12	65	<1.0	5.9	9.5	0.51	<1.0	NA	NA	NA	NA
MW-30	9.21.11	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-30	12.14.11	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-30	3.28.12	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-30	6.21.12	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-30	12.18.12	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-31	9.20.11	<1.0	1.2	1.1	7.4	0.23	<1.0	NA	NA	NA	NA
MW-31	12.14.11	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0	NA	NA	NA	NA
MW-31	3.29.12	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0	NA	NA	NA	NA
MW-31	6.20.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-31	12.18.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-32	9.21.11	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-32	12.14.11	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-32	3.28.12	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-32	6.21.12	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-32	12.18.12	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NAPL	NA	NA	NA
MW-33	9.20.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-33	12.14.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-33	3.29.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-33	6.20.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-33	12.18.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA

Southwest GEOSCIENCE

TABLE 1
Lindrith Compressor Station
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)	TPH MRO (mg/L)	pH (Standard Units)	Nitrate (mg/L)	Iron (mg/L)
New Mexico Water Quality Control Commmission Groundwater Quality Standards		10	750	750	620	NE	NE	NE	6-9	10	1.0*
MW-34	9.20.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-34	12.15.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-34	3.29.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-34	6.21.12	1.6	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-34	12.18.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-35	9.21.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-35	12.15.11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-35	3.28.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-35	6.21.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-35	12.18.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-36	9.21.11	<1.0	<1.0	<1.0	<2.0	0.15	<1.0	NA	NA	NA	NA
MW-36	12.14.11	<1.0	<1.0	<1.0	<2.0	0.11	<1.0	NA	NA	NA	NA
MW-36	3.29.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-36	6.20.12	1.3	<1.0	<1.0	<2.0	0.096	<1.0	NA	NA	NA	NA
MW-36	12.19.12	**18**	11	5.0	31	0.32	<1.0	NA	NA	NA	NA
MW-37	9.21.11	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	NA	NA	NA
MW-37	12.14.11	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	NA	NA	NA
MW-37	3.29.12	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	NA	NA	NA
MW-37	6.21.12	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	NA	NA	NA
MW-37	12.18.12	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	NA	NA	NA
MW-38	9.21.11	**2,100**	440	270	**1,800**	26	1.3	NA	NA	NA	NA
MW-38	12.14.11	**1,900**	180	210	**1,500**	24	<1.0	NA	NA	NA	NA
MW-38	3.28.12	**1,800**	100	230	**1,400**	21	<1.0	NA	NA	NA	NA
MW-38	6.20.12	**1,900**	320	240	**1,500**	24	<1.0	NA	NA	NA	NA
MW-38	12.19.12	**1,800**	280	220	**1,400**	17	<1.0	NA	NA	NA	NA
MW-39	9.21.11	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	NA	NA	NA
MW-39	12.15.11	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	NA	NA	NA
MW-39	3.28.12	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	NA	NA	NA
MW-39	6.21.12	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	NA	NA	NA
MW-39	12.18.12	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	**NAPL**	NA	NA	NA
MW-40	9.20.11	<1.0	<1.0	<1.0	<2.0	0.21	<1.0	NA	NA	NA	NA
MW-40	12.14.11	1.4	<1.0	<1.0	4.7	0.53	<1.0	NA	NA	NA	NA
MW-40	3.29.12	<1.0	<1.0	<1.0	<2.0	0.48	<1.0	NA	NA	NA	NA
MW-40	6.20.12	<1.0	<1.0	<1.0	<2.0	0.20	<1.0	NA	NA	NA	NA
MW-40	12.18.12	<1.0	<1.0	<1.0	<2.0	0.33	<1.0	NA	NA	NA	NA
MW-41	9.20.11	**<10.0**	<10.0	<10.0	30	<0.50	2.4	NA	NA	NA	NA
MW-41	12.15.11	<1.0	<1.0	<1.0	<2.0	0.11	4.3	NA	NA	NA	NA
MW-41	3.28.12	<1.0	<1.0	<1.0	<2.0	0.26	<1.0	NA	NA	NA	NA
MW-41	6.21.12	<1.0	<1.0	<1.0	<2.0	0.11	<1.0	NA	NA	NA	NA
MW-41	12.18.12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	NA	NA	NA	NA
MW-42	9.20.11	**70**	42	4.1	33	0.62	<1.0	NA	NA	NA	NA
MW-42	12.15.11	**69**	1.6	3.1	<2.0	0.61	<1.0	NA	NA	NA	NA
MW-42	3.29.12	2.1	<1.0	<1.0	<2.0	0.15	<1.0	NA	NA	NA	NA
MW-42	6.21.12	1.2	<1.0	<1.0	<2.0	0.12	<1.0	NA	NA	NA	NA
MW-42	12.18.12	<1.0	<1.0	<1.0	<2.0	0.091	<1.0	NA	NA	NA	NA

Note: Concentrations in **bold** and yellow exceed the applicable OCD Remediation Action Level
NA = Not Analyzed
NE = Not Established
M = Well Subjected to MDPE event
NAPL = Non-aqueous phase liquid
* = Relpaced by MW-1R
<1.0 = the numeral (in this case "1.0") identifies the laboratory PQL

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TABLE 2
Lindrith Compressor Station
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-1R	11.11.10	31.73	33.29	1.56	6494.62	6462.31
MW-1R	11.15.10	31.93	32.86	0.93	6494.62	6462.35
MW-1R	6.22.11	32.57	35.50	2.93	6494.62	6460.97
MW-1R[1]	9.21.11	32.55	38.20	5.65	6494.64	6460.00
MW-1R	12.14.11	32.41	37.85	5.44	6494.64	6460.22
MW-1R	3.28.12	32.61	38.50	5.89	6494.64	6459.85
MW-1R[M]	6.21.12[M]	NG[M]	NG[M]	NG[M]	6494.64	NG[M]
MW-1R	12.18.12	34.16	34.45	0.29	6494.64	6460.37
MW-2	11.11.10	30.12	30.15	0.03	6491.08	6460.95
MW-2	11.15.10	29.86	29.90	0.04	6491.08	6461.21
MW-2	6.22.11	30.64	30.73	0.09	6491.08	6460.41
MW-2	9.21.11	30.70	30.72	0.02	6491.08	6460.37
MW-2	12.14.11	30.78	30.79	0.01	6491.08	6460.30
MW-2	3.28.12	30.86	30.91	0.05	6491.08	6460.20
MW-2	6.21.112	ND	31.14	ND	6491.08	6459.94
MW-2	12.19.12	ND	30.86	ND	6491.08	6460.22
MW-3	11.11.10	ND	32.08	ND	6492.78	6460.70
MW-3	11.15.10	ND	32.96	ND	6492.78	6459.82
MW-3	6.22.11	ND	32.61	ND	6492.78	6460.17
MW-3	9.21.11	32.71	32.72	0.01	6492.78	6460.07
MW-3	12.15.11	32.79	32.79	0.00	6492.78	6459.99
MW-3	3.28.12	ND	32.72	ND	6492.78	6460.06
MW-3	6.21.12	ND	33.11	ND	6492.78	6459.67
MW-3	12.18.12	ND	32.87	ND	6492.78	6459.91
MW-4	11.11.10	ND	33.31	ND	6493.99	6460.68
MW-4	11.15.10	ND	33.10	ND	6493.99	6460.89
MW-4	6.22.11	ND	33.45	ND	6493.99	6460.54
MW-4	9.21.11	ND	34.46	ND	6493.99	6459.53
MW-4	12.14.11	ND	33.51	ND	6493.99	6460.48
MW-4	3.28.12	ND	33.54	ND	6493.99	6460.45
MW-4	6.21.12	ND	33.72	ND	6493.99	6460.27
MW-4	12.19.12	ND	33.60	ND	6493.99	6460.39
MW-5	11.11.10	ND	34.37	ND	6496.06	6461.69
MW-5	11.15.10	ND	35.64	ND	6496.06	6460.42
MW-5	6.22.11	ND	34.52	ND	6496.06	6461.54
MW-5	9.21.11	ND	34.57	ND	6496.06	6461.49
MW-5	12.14.11	ND	34.14	ND	6496.06	6461.92
MW-5	3.28.12	ND	34.70	ND	6496.06	6461.36
MW-5	6.21.12	ND	34.78	ND	6496.06	6461.28
MW-5	12.19.12	ND	34.33	ND	6496.06	6461.73
MW-6	11.11.10	ND	33.79	ND	6494.72	6460.93
MW-6	11.15.10	ND	33.63	ND	6494.72	6461.09
MW-6	6.22.11	ND	34.09	ND	6494.72	6460.63
MW-6	9.21.11	ND	33.86	ND	6494.72	6460.86
MW-6	12.14.11	ND	34.30	ND	6494.72	6460.42
MW-6	3.28.12	ND	34.25	ND	6494.72	6460.47
MW-6	6.21.12	ND	34.55	ND	6494.72	6460.17
MW-6	12.18.12	34.31	34.92	0.61	6494.72	6460.18

Southwest GEOSCIENCE

TABLE 2
Lindrith Compressor Station
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-7	11.11.10	ND	36.65	ND	6492.49	6455.84
MW-7	11.15.10	ND	34.70	ND	6492.49	6457.79
MW-7	6.22.11	ND	34.87	ND	6492.49	6457.62
MW-7	9.21.11	ND	34.95	ND	6492.49	6457.54
MW-7	12.14.11	ND	35.00	ND	6492.49	6457.49
MW-7	3.28.12	ND	35.01	ND	6492.49	6457.48
MW-7	6.21.12	ND	35.08	ND	6492.49	6457.41
MW-7	12.19.12	ND	35.07	ND	6492.49	6457.42
MW-8	11.11.10	ND	34.39	ND	6493.10	6458.71
MW-8	11.15.10	ND	32.16	ND	6493.10	6460.94
MW-8	6.22.11	ND	32.70	ND	6493.10	6460.40
MW-8	9.21.11	ND	32.66	ND	6493.10	6460.44
MW-8	12.15.11	ND	32.92	ND	6493.10	6460.18
MW-8	3.28.12	ND	32.92	ND	6493.10	6460.18
MW-8	6.21.12	ND	33.10	ND	6493.10	6460.00
MW-8	12.18.12	ND	33.10	ND	6493.10	6460.00
MW-9	11.11.10	29.46	30.34	0.88	6491.17	6461.38
MW-9	11.15.10	30.47	31.24	0.77	6491.17	6460.42
MW-9	6.22.11	30.76	32.14	1.38	6491.17	6459.90
MW-9	9.21.11	30.76	32.46	1.70	6491.17	6459.78
MW-9	12.15.11	31.94	33.30	1.36	6491.17	6458.73
MW-9	3.28.12	30.86	32.20	1.34	6491.17	6459.81
MW-9[M]	6.21.12[M]	NG[M]	NG[M]	NG[M]	6491.17	NG[M]
MW-9	12.18.12	30.90	32.53	1.63	6491.17	6459.67
MW-10	11.11.10	ND	29.85	ND	6492.39	6462.54
MW-10	11.15.10	ND	31.83	ND	6492.39	6460.56
MW-10	6.22.11	ND	32.40	ND	6492.39	6459.99
MW-10	9.21.11	ND	32.62	ND	6492.39	6459.77
MW-10	12.15.11	ND	34.49	ND	6492.39	6457.90
MW-10	3.28.12	ND	32.41	ND	6492.39	6459.98
MW-10	6.21.12	ND	30.99	ND	6492.39	6461.40
MW-10	12.18.12	ND	32.65	ND	6492.39	6459.74
MW-11	11.11.10	ND	34.05	ND	6489.84	6455.79
MW-11	11.15.10	ND	35.05	ND	6489.84	6454.79
MW-11	6.22.11	ND	34.23	ND	6489.84	6455.61
MW-11	9.21.11	ND	34.03	ND	6489.84	6455.81
MW-11	12.15.11	ND	34.50	ND	6489.84	6455.34
MW-11	3.28.12	ND	34.39	ND	6489.84	6455.45
MW-11	6.21.12	ND	34.75	ND	6489.84	6455.09
MW-11	12.18.12	ND	34.59	ND	6489.84	6455.25
MW-12	11.11.10	ND	32.04	ND	6487.95	6455.91
MW-12	11.15.10	ND	32.74	ND	6487.95	6455.21
MW-12	6.22.11	ND	32.73	ND	6487.95	6455.22
MW-12	9.21.11	ND	32.93	ND	6487.95	6455.02
MW-12	12.15.11	ND	32.91	ND	6487.95	6455.04
MW-12	3.28.12	ND	32.35	ND	6487.95	6455.60
MW-12	6.21.12	ND	33.03	ND	6487.95	6454.92
MW-12	12.18.12	ND	33.00	ND	6487.95	6454.95

Southwest GEOSCIENCE

TABLE 2
Lindrith Compressor Station
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-30	9.21.11	36.06	36.14	0.08	6498.21	6462.12
MW-30	12.14.11	36.16	36.19	0.03	6498.21	6462.04
MW-30	3.28.12	37.58	38.22	0.64	6498.21	6460.39
MW-30	6.21.12	35.25	35.87	0.62	6498.21	6462.73
MW-30	12.18.12	37.67	38.69	1.02	6498.21	6460.16
MW-31	9.21.11	ND	37.99	ND	6498.24	6460.25
MW-31	12.14.11	ND	37.99	ND	6498.24	6460.25
MW-31	3.28.12	ND	38.13	ND	6498.24	6460.11
MW-31	6.21.12	ND	38.19	ND	6498.24	6460.05
MW-31	12.18.12	ND	38.13	ND	6498.24	6460.11
MW-32	9.21.11	37.42	38.31	0.89	6499.30	6461.55
MW-32	12.14.11	36.11	36.16	0.05	6499.30	6463.17
MW-32	3.28.12	36.13	36.25	0.12	6499.30	6463.13
MW-32	6.21.12	36.19	36.28	0.09	6499.30	6463.08
MW-32	12.18.12	36.00	36.01	0.01	6499.30	6463.30
MW-33	9.21.11	ND	32.90	ND	6493.04	6460.14
MW-33	12.14.11	ND	32.85	ND	6493.04	6460.19
MW-33	3.28.12	ND	32.95	ND	6493.04	6460.09
MW-33	6.21.12	ND	33.16	ND	6493.04	6459.88
MW-33	12.18.12	ND	33.12	ND	6493.04	6459.92
MW-34	9.21.11	ND	34.50	ND	6488.60	6454.10
MW-34	12.15.11	ND	34.05	ND	6488.60	6454.55
MW-34	3.28.12	ND	33.93	ND	6488.60	6454.67
MW-34	6.21.12	ND	34.17	ND	6488.60	6454.43
MW-34	12.18.12	ND	34.09	ND	6488.60	6454.51
MW-35	9.21.11	ND	34.36	ND	6485.71	6451.35
MW-35	12.15.11	ND	31.56	ND	6485.71	6454.15
MW-35	3.28.12	ND	31.45	ND	6485.71	6454.26
MW-35	6.21.12	ND	31.70	ND	6485.71	6454.01
MW-35	12.18.12	ND	31.62	ND	6485.71	6454.09
MW-36	9.21.11	ND	35.16	ND	6496.77	6461.61
MW-36	12.14.11	ND	35.21	ND	6496.77	6461.56
MW-36	3.28.12	ND	35.25	ND	6496.77	6461.52
MW-36	6.21.12	ND	35.29	ND	6496.77	6461.48
MW-36	12.19.12	ND	35.16	ND	6496.77	6461.61
MW-37	9.21.11	32.58	33.10	0.52	6492.96	6460.19
MW-37	12.14.11	32.61	33.37	0.76	6492.96	6460.07
MW-37	3.28.12	32.67	33.46	0.79	6492.96	6460.00
MW-37	6.21.12	32.86	33.68	0.82	6492.96	6459.80
MW-37	12.18.12	32.75	33.51	0.76	6492.96	6459.93
MW-38	9.21.11	ND	34.68	ND	6495.10	6460.42
MW-38	12.14.11	ND	34.75	ND	6495.10	6460.35
MW-38	3.28.12	ND	34.72	ND	6495.10	6460.38
MW-38	6.21.12	ND	35.06	ND	6495.10	6460.04
MW-38	12.19.12	ND	34.82	ND	6495.10	6460.28

Southwest GEOSCIENCE

TABLE 2
Lindrith Compressor Station
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-39	9.21.11	31.83	33.12	1.29	6486.85	6454.54
MW-39	12.15.11	31.90	33.08	1.18	6486.85	6454.51
MW-39	3.28.12	31.84	32.94	1.10	6486.85	6454.60
MW-39	6.21.12	31.97	33.25	1.28	6486.85	6454.41
MW-39	12.18.12	31.89	33.22	1.33	6486.85	6454.47
MW-40	9.21.11	ND	35.47	ND	6498.65	6463.18
MW-40	12.14.11	ND	35.38	ND	6498.65	6463.27
MW-40	3.28.12	ND	35.38	ND	6498.65	6463.27
MW-40	6.21.12	ND	35.43	ND	6498.65	6463.22
MW-40	12.18.12	ND	35.30	ND	6498.65	6463.35
MW-41	9.21.11	ND	32.67	ND	6487.00	6454.33
MW-41	12.15.11	ND	32.63	ND	6487.00	6454.37
MW-41	3.28.12	ND	32.53	ND	6487.00	6454.47
MW-41	6.21.12	ND	32.75	ND	6487.00	6454.25
MW-41	12.18.12	ND	32.70	ND	6487.00	6454.30
MW-42	9.21.11	ND	29.97	ND	6490.10	6460.13
MW-42	12.15.11	ND	30.80	ND	6490.10	6459.30
MW-42	3.28.12	ND	30.00	ND	6490.10	6460.10
MW-42	6.21.12	ND	30.58	ND	6490.10	6459.52
MW-42	12.18.12	ND	30.11	ND	6490.10	6459.99

BTOC - below top of casing
AMSL - aboce mean sea level
TOC - top of casing
M - Well connected to MDPE Unit.
NG - Well not gauged, or Errant Gauge.
* - corrected for presence of phase-sepated hydrocarbon using a site-specific density correction factor of 0.63
NA - not applicable
1 - MW-1R re-surveyed 09/01/11

Southwest GEOSCIENCE

APPENDIX C

Laboratory Data Reports & Chain of Custody Documentation

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

December 28, 2012

Kyle Summers

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

RE: Lindrith Compressor OrderNo.: 1212995

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 18 sample(s) on 12/21/2012 for the analyses presented in the following report.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-3
Project: Lindrith Compressor
Collection Date: 12/18/2012 12:00:00 PM
Lab ID: 1212995-001
Matrix: AQUEOUS
Received Date: 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/21/2012 11:52:56 PM
Surr: DNOP	113	79.5-166		%REC	1	12/21/2012 11:52:56 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.92	0.25		mg/L	5	12/21/2012 6:31:52 PM
Surr: BFB	105	51.9-148		%REC	5	12/21/2012 6:31:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	140	5.0		µg/L	5	12/21/2012 6:31:52 PM
Toluene	ND	5.0		µg/L	5	12/21/2012 6:31:52 PM
Ethylbenzene	81	5.0		µg/L	5	12/21/2012 6:31:52 PM
Xylenes, Total	34	10		µg/L	5	12/21/2012 6:31:52 PM
Surr: 4-Bromofluorobenzene	116	69.7-152		%REC	5	12/21/2012 6:31:52 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-4
Project: Lindrith Compressor
Collection Date: 12/19/2012 10:13:00 AM
Lab ID: 1212995-002
Matrix: AQUEOUS
Received Date: 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 12:19:21 AM
Surr: DNOP	118	79.5-166		%REC	1	12/22/2012 12:19:21 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	25	2.5		mg/L	50	12/21/2012 7:01:54 PM
Surr: BFB	95.0	51.9-148		%REC	50	12/21/2012 7:01:54 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	4300	50		µg/L	50	12/21/2012 7:01:54 PM
Toluene	1800	50		µg/L	50	12/21/2012 7:01:54 PM
Ethylbenzene	270	50		µg/L	50	12/21/2012 7:01:54 PM
Xylenes, Total	1700	100		µg/L	50	12/21/2012 7:01:54 PM
Surr: 4-Bromofluorobenzene	116	69.7-152		%REC	50	12/21/2012 7:01:54 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-5
Project: Lindrith Compressor
Collection Date: 12/19/2012 9:43:00 AM
Lab ID: 1212995-003
Matrix: AQUEOUS
Received Date: 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 12:45:47 AM
Surr: DNOP	116	79.5-166		%REC	1	12/22/2012 12:45:47 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.36	0.25		mg/L	5	12/21/2012 7:32:10 PM
Surr: BFB	104	51.9-148		%REC	5	12/21/2012 7:32:10 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	5.0		µg/L	5	12/21/2012 7:32:10 PM
Toluene	ND	5.0		µg/L	5	12/21/2012 7:32:10 PM
Ethylbenzene	ND	5.0		µg/L	5	12/21/2012 7:32:10 PM
Xylenes, Total	ND	10		µg/L	5	12/21/2012 7:32:10 PM
Surr: 4-Bromofluorobenzene	115	69.7-152		%REC	5	12/21/2012 7:32:10 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-8
Project: Lindrith Compressor
Collection Date: 12/18/2012 11:31:00 AM
Lab ID: 1212995-004 **Matrix:** AQUEOUS **Received Date:** 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 1:12:33 AM
Surr: DNOP	120	79.5-166		%REC	1	12/22/2012 1:12:33 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/22/2012 12:02:23 AM
Surr: BFB	89.7	51.9-148		%REC	1	12/22/2012 12:02:23 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/22/2012 12:02:23 AM
Toluene	ND	1.0		µg/L	1	12/22/2012 12:02:23 AM
Ethylbenzene	ND	1.0		µg/L	1	12/22/2012 12:02:23 AM
Xylenes, Total	ND	2.0		µg/L	1	12/22/2012 12:02:23 AM
Surr: 4-Bromofluorobenzene	110	69.7-152		%REC	1	12/22/2012 12:02:23 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-10
Project: Lindrith Compressor
Collection Date: 12/18/2012 12:30:00 PM
Lab ID: 1212995-005
Matrix: AQUEOUS
Received Date: 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 1:39:00 AM
Surr: DNOP	110	79.5-166		%REC	1	12/22/2012 1:39:00 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/22/2012 12:32:28 AM
Surr: BFB	98.5	51.9-148		%REC	1	12/22/2012 12:32:28 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/22/2012 12:32:28 AM
Toluene	ND	1.0		µg/L	1	12/22/2012 12:32:28 AM
Ethylbenzene	ND	1.0		µg/L	1	12/22/2012 12:32:28 AM
Xylenes, Total	2.6	2.0		µg/L	1	12/22/2012 12:32:28 AM
Surr: 4-Bromofluorobenzene	106	69.7-152		%REC	1	12/22/2012 12:32:28 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-11
Project: Lindrith Compressor
Collection Date: 12/18/2012 1:27:00 PM
Lab ID: 1212995-006
Matrix: AQUEOUS
Received Date: 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 2:05:33 AM
Surr: DNOP	120	79.5-166		%REC	1	12/22/2012 2:05:33 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/22/2012 1:02:32 AM
Surr: BFB	89.5	51.9-148		%REC	1	12/22/2012 1:02:32 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/22/2012 1:02:32 AM
Toluene	ND	1.0		µg/L	1	12/22/2012 1:02:32 AM
Ethylbenzene	ND	1.0		µg/L	1	12/22/2012 1:02:32 AM
Xylenes, Total	ND	2.0		µg/L	1	12/22/2012 1:02:32 AM
Surr: 4-Bromofluorobenzene	109	69.7-152		%REC	1	12/22/2012 1:02:32 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-12
Project: Lindrith Compressor
Collection Date: 12/18/2012 1:55:00 PM
Lab ID: 1212995-007
Matrix: AQUEOUS
Received Date: 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 2:31:58 AM
Surr: DNOP	121	79.5-166		%REC	1	12/22/2012 2:31:58 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.51	0.050		mg/L	1	12/22/2012 1:32:32 AM
Surr: BFB	168	51.9-148	S	%REC	1	12/22/2012 1:32:32 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	65	1.0		µg/L	1	12/22/2012 1:32:32 AM
Toluene	ND	1.0		µg/L	1	12/22/2012 1:32:32 AM
Ethylbenzene	5.9	1.0		µg/L	1	12/22/2012 1:32:32 AM
Xylenes, Total	9.5	2.0		µg/L	1	12/22/2012 1:32:32 AM
Surr: 4-Bromofluorobenzene	132	69.7-152		%REC	1	12/22/2012 1:32:32 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-34
Project: Lindrith Compressor
Collection Date: 12/18/2012 2:24:00 PM
Lab ID: 1212995-008
Matrix: AQUEOUS
Received Date: 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 2:58:24 AM
Surr: DNOP	119	79.5-166		%REC	1	12/22/2012 2:58:24 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/22/2012 2:02:29 AM
Surr: BFB	92.5	51.9-148		%REC	1	12/22/2012 2:02:29 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/22/2012 2:02:29 AM
Toluene	ND	1.0		µg/L	1	12/22/2012 2:02:29 AM
Ethylbenzene	ND	1.0		µg/L	1	12/22/2012 2:02:29 AM
Xylenes, Total	ND	2.0		µg/L	1	12/22/2012 2:02:29 AM
Surr: 4-Bromofluorobenzene	112	69.7-152		%REC	1	12/22/2012 2:02:29 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-31
Project: Lindrith Compressor
Collection Date: 12/18/2012 10:32:00 AM
Lab ID: 1212995-009
Matrix: AQUEOUS
Received Date: 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 3:51:21 AM
Surr: DNOP	116	79.5-166		%REC	1	12/22/2012 3:51:21 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/22/2012 2:32:30 AM
Surr: BFB	91.4	51.9-148		%REC	1	12/22/2012 2:32:30 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/22/2012 2:32:30 AM
Toluene	ND	1.0		µg/L	1	12/22/2012 2:32:30 AM
Ethylbenzene	ND	1.0		µg/L	1	12/22/2012 2:32:30 AM
Xylenes, Total	ND	2.0		µg/L	1	12/22/2012 2:32:30 AM
Surr: 4-Bromofluorobenzene	112	69.7-152		%REC	1	12/22/2012 2:32:30 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-33
Project: Lindrith Compressor
Collection Date: 12/18/2012 11:02:00 AM
Lab ID: 1212995-010
Matrix: AQUEOUS
Received Date: 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 4:18:04 AM
Surr: DNOP	118	79.5-166		%REC	1	12/22/2012 4:18:04 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/22/2012 3:02:25 AM
Surr: BFB	90.2	51.9-148		%REC	1	12/22/2012 3:02:25 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/22/2012 3:02:25 AM
Toluene	ND	1.0		µg/L	1	12/22/2012 3:02:25 AM
Ethylbenzene	ND	1.0		µg/L	1	12/22/2012 3:02:25 AM
Xylenes, Total	ND	2.0		µg/L	1	12/22/2012 3:02:25 AM
Surr: 4-Bromofluorobenzene	111	69.7-152		%REC	1	12/22/2012 3:02:25 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-2
Project: Lindrith Compressor
Collection Date: 12/19/2012 11:44:00 AM
Lab ID: 1212995-011
Matrix: AQUEOUS
Received Date: 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 4:44:29 AM
Surr: DNOP	114	79.5-166		%REC	1	12/22/2012 4:44:29 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	8.7	1.0		mg/L	20	12/22/2012 3:32:29 AM
Surr: BFB	98.5	51.9-148		%REC	20	12/22/2012 3:32:29 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	1000	20		µg/L	20	12/22/2012 3:32:29 AM
Toluene	ND	20		µg/L	20	12/22/2012 3:32:29 AM
Ethylbenzene	23	20		µg/L	20	12/22/2012 3:32:29 AM
Xylenes, Total	440	40		µg/L	20	12/22/2012 3:32:29 AM
Surr: 4-Bromofluorobenzene	118	69.7-152		%REC	20	12/22/2012 3:32:29 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-7
Project: Lindrith Compressor
Collection Date: 12/19/2012 12:10:00 PM
Lab ID: 1212995-012
Matrix: AQUEOUS
Received Date: 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 5:10:59 AM
Surr: DNOP	123	79.5-166		%REC	1	12/22/2012 5:10:59 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.57	0.050		mg/L	1	12/22/2012 4:32:40 AM
Surr: BFB	139	51.9-148		%REC	1	12/22/2012 4:32:40 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	11	1.0		µg/L	1	12/22/2012 4:32:40 AM
Toluene	ND	1.0		µg/L	1	12/22/2012 4:32:40 AM
Ethylbenzene	5.2	1.0		µg/L	1	12/22/2012 4:32:40 AM
Xylenes, Total	15	2.0		µg/L	1	12/22/2012 4:32:40 AM
Surr: 4-Bromofluorobenzene	125	69.7-152		%REC	1	12/22/2012 4:32:40 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-35
Project: Lindrith Compressor
Collection Date: 12/18/2012 2:54:00 PM
Lab ID: 1212995-013
Matrix: AQUEOUS
Received Date: 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 5:37:24 AM
Surr: DNOP	125	79.5-166		%REC	1	12/22/2012 5:37:24 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/22/2012 5:02:46 AM
Surr: BFB	90.5	51.9-148		%REC	1	12/22/2012 5:02:46 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/22/2012 5:02:46 AM
Toluene	ND	1.0		µg/L	1	12/22/2012 5:02:46 AM
Ethylbenzene	ND	1.0		µg/L	1	12/22/2012 5:02:46 AM
Xylenes, Total	ND	2.0		µg/L	1	12/22/2012 5:02:46 AM
Surr: 4-Bromofluorobenzene	112	69.7-152		%REC	1	12/22/2012 5:02:46 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-36
Project: Lindrith Compressor
Collection Date: 12/19/2012 11:17:00 AM
Lab ID: 1212995-014 **Matrix:** AQUEOUS **Received Date:** 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 6:04:08 AM
Surr: DNOP	118	79.5-166		%REC	1	12/22/2012 6:04:08 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.32	0.050		mg/L	1	12/26/2012 7:37:47 PM
Surr: BFB	111	51.9-148		%REC	1	12/26/2012 7:37:47 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	18	1.0		µg/L	1	12/26/2012 7:37:47 PM
Toluene	11	1.0		µg/L	1	12/26/2012 7:37:47 PM
Ethylbenzene	5.0	1.0		µg/L	1	12/26/2012 7:37:47 PM
Xylenes, Total	31	2.0		µg/L	1	12/26/2012 7:37:47 PM
Surr: 4-Bromofluorobenzene	123	69.7-152		%REC	1	12/26/2012 7:37:47 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-38
Project: Lindrith Compressor
Collection Date: 12/19/2012 10:40:00 AM
Lab ID: 1212995-015
Matrix: AQUEOUS
Received Date: 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 6:30:34 AM
Surr: DNOP	123	79.5-166		%REC	1	12/22/2012 6:30:34 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	17	2.5		mg/L	50	12/26/2012 8:07:50 PM
Surr: BFB	105	51.9-148		%REC	50	12/26/2012 8:07:50 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	1800	50		µg/L	50	12/26/2012 8:07:50 PM
Toluene	280	50		µg/L	50	12/26/2012 8:07:50 PM
Ethylbenzene	220	50		µg/L	50	12/26/2012 8:07:50 PM
Xylenes, Total	1400	100		µg/L	50	12/26/2012 8:07:50 PM
Surr: 4-Bromofluorobenzene	126	69.7-152		%REC	50	12/26/2012 8:07:50 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-40
Project: Lindrith Compressor
Collection Date: 12/18/2012 10:02:00 AM
Lab ID: 1212995-016
Matrix: AQUEOUS
Received Date: 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 6:57:23 AM
Surr: DNOP	124	79.5-166		%REC	1	12/22/2012 6:57:23 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.33	0.050		mg/L	1	12/26/2012 11:38:09 PM
Surr: BFB	109	51.9-148		%REC	1	12/26/2012 11:38:09 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/26/2012 11:38:09 PM
Toluene	ND	1.0		µg/L	1	12/26/2012 11:38:09 PM
Ethylbenzene	ND	1.0		µg/L	1	12/26/2012 11:38:09 PM
Xylenes, Total	ND	2.0		µg/L	1	12/26/2012 11:38:09 PM
Surr: 4-Bromofluorobenzene	127	69.7-152		%REC	1	12/26/2012 11:38:09 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-41
Project: Lindrith Compressor
Collection Date: 12/18/2012 3:25:00 PM
Lab ID: 1212995-017
Matrix: AQUEOUS
Received Date: 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 7:23:49 AM
Surr: DNOP	137	79.5-166		%REC	1	12/22/2012 7:23:49 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/27/2012 12:08:13 AM
Surr: BFB	105	51.9-148		%REC	1	12/27/2012 12:08:13 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/27/2012 12:08:13 AM
Toluene	ND	1.0		µg/L	1	12/27/2012 12:08:13 AM
Ethylbenzene	ND	1.0		µg/L	1	12/27/2012 12:08:13 AM
Xylenes, Total	ND	2.0		µg/L	1	12/27/2012 12:08:13 AM
Surr: 4-Bromofluorobenzene	124	69.7-152		%REC	1	12/27/2012 12:08:13 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience
Client Sample ID: MW-42
Project: Lindrith Compressor
Collection Date: 12/18/2012 12:58:00 PM
Lab ID: 1212995-018
Matrix: AQUEOUS
Received Date: 12/21/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/22/2012 7:50:39 AM
Surr: DNOP	121	79.5-166		%REC	1	12/22/2012 7:50:39 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.091	0.050		mg/L	1	12/27/2012 12:38:21 AM
Surr: BFB	126	51.9-148		%REC	1	12/27/2012 12:38:21 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/27/2012 12:38:21 AM
Toluene	ND	1.0		µg/L	1	12/27/2012 12:38:21 AM
Ethylbenzene	ND	1.0		µg/L	1	12/27/2012 12:38:21 AM
Xylenes, Total	ND	2.0		µg/L	1	12/27/2012 12:38:21 AM
Surr: 4-Bromofluorobenzene	127	69.7-152		%REC	1	12/27/2012 12:38:21 AM

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1212995**

28-Dec-12

Client: Southwest Geoscience

Project: Lindrith Compressor

Sample ID	**MB-5408**	SampType:	**MBLK**		TestCode:	**EPA Method 8015B: Diesel Range**				
Client ID:	**PBW**	Batch ID:	**5408**		RunNo:	**7691**				
Prep Date:	**12/21/2012**	Analysis Date:	**12/21/2012**		SeqNo:	**223800**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Surr: DNOP	0.99		1.000		98.8	79.5	166			

Sample ID	**LCS-5408**	SampType:	**LCS**		TestCode:	**EPA Method 8015B: Diesel Range**				
Client ID:	**LCSW**	Batch ID:	**5408**		RunNo:	**7691**				
Prep Date:	**12/21/2012**	Analysis Date:	**12/21/2012**		SeqNo:	**223801**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	103	64.4	132			
Surr: DNOP	0.50		0.5000		99.3	79.5	166			

Sample ID	**LCSD-5408**	SampType:	**LCSD**		TestCode:	**EPA Method 8015B: Diesel Range**				
Client ID:	**LCSS02**	Batch ID:	**5408**		RunNo:	**7691**				
Prep Date:	**12/21/2012**	Analysis Date:	**12/21/2012**		SeqNo:	**223802**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	105	64.4	132	2.02	20	
Surr: DNOP	0.51		0.5000		102	79.5	166	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1212995**

28-Dec-12

Client: Southwest Geoscience

Project: Lindrith Compressor

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

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		90.3	51.9	148			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R7697**	RunNo: **7697**
Prep Date:	Analysis Date: **12/21/2012**	SeqNo: **223624** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.54	0.050	0.5000	0	108	75.9	119			
Surr: BFB	19		20.00		93.2	51.9	148			

Sample ID **1212995-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **MW-3**	Batch ID: **R7697**	RunNo: **7697**
Prep Date:	Analysis Date: **12/21/2012**	SeqNo: **223629** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	3.1	0.25	2.500	0.9170	86.7	63.5	131			
Surr: BFB	100		100.0		101	51.9	148			

Sample ID **1212995-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **MW-3**	Batch ID: **R7697**	RunNo: **7697**
Prep Date:	Analysis Date: **12/21/2012**	SeqNo: **223630** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	3.1	0.25	2.500	0.9170	85.4	63.5	131	1.04	16.7	
Surr: BFB	100		100.0		103	51.9	148	0	0	

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **PBW**	Batch ID: **R7720**	RunNo: **7720**
Prep Date:	Analysis Date: **12/26/2012**	SeqNo: **224410** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		98.8	51.9	148			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R7720**	RunNo: **7720**
Prep Date:	Analysis Date: **12/26/2012**	SeqNo: **224411** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.55	0.050	0.5000	0	110	75.9	119			
Surr: BFB	21		20.00		103	51.9	148			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1212995**

28-Dec-12

Client: Southwest Geoscience

Project: Lindrith Compressor

Sample ID	**1212995-014AMS**	SampType:	**MS**		TestCode:	**EPA Method 8015B: Gasoline Range**				
Client ID:	**MW-36**	Batch ID:	**R7720**		RunNo:	**7720**				
Prep Date:		Analysis Date:	**12/26/2012**		SeqNo:	**224413**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.71	0.050	0.5000	0.3214	77.4	63.5	131			
Surr: BFB	22		20.00		108	51.9	148			

Sample ID	**1212995-014AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8015B: Gasoline Range**				
Client ID:	**MW-36**	Batch ID:	**R7720**		RunNo:	**7720**				
Prep Date:		Analysis Date:	**12/26/2012**		SeqNo:	**224414**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.71	0.050	0.5000	0.3214	77.6	63.5	131	0.141	16.7	
Surr: BFB	22		20.00		110	51.9	148	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1212995**

28-Dec-12

Client: Southwest Geoscience

Project: Lindrith Compressor

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

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	23		20.00		113	69.7	152			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **R7697**	RunNo: **7697**
Prep Date:	Analysis Date: **12/21/2012**	SeqNo: **223648** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	80	120			
Toluene	21	1.0	20.00	0	104	80	120			
Ethylbenzene	21	1.0	20.00	0	105	80	120			
Xylenes, Total	65	2.0	60.00	0	108	80	120			
Surr: 4-Bromofluorobenzene	24		20.00		120	69.7	152			

Sample ID **1212995-002AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-4**	Batch ID: **R7697**	RunNo: **7697**
Prep Date:	Analysis Date: **12/21/2012**	SeqNo: **223658** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	2800	50	1000	1840	99.3	75.2	124			
Ethylbenzene	1300	50	1000	267.5	105	69	125			
Xylenes, Total	4900	100	3000	1739	105	73.1	126			
Surr: 4-Bromofluorobenzene	1200		1000		120	69.7	152			

Sample ID **1212995-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-4**	Batch ID: **R7697**	RunNo: **7697**
Prep Date:	Analysis Date: **12/21/2012**	SeqNo: **223659** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	2700	50	1000	1840	86.2	75.2	124	4.74	11.9	
Ethylbenzene	1300	50	1000	267.5	100	69	125	3.72	13.5	
Xylenes, Total	4700	100	3000	1739	98.1	73.1	126	4.33	13	
Surr: 4-Bromofluorobenzene	1200		1000		122	69.7	152	0	0	

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **R7720**	RunNo: **7720**
Prep Date:	Analysis Date: **12/26/2012**	SeqNo: **224422** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1212995**

28-Dec-12

Client: Southwest Geoscience

Project: Lindrith Compressor

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**R7720**	RunNo:	**7720**					
Prep Date:		Analysis Date:	**12/26/2012**	SeqNo:	**224422**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	25		20.00		123	69.7	152			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSW**	Batch ID:	**R7720**	RunNo:	**7720**					
Prep Date:		Analysis Date:	**12/26/2012**	SeqNo:	**224423**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	80	120			
Toluene	22	1.0	20.00	0	108	80	120			
Ethylbenzene	22	1.0	20.00	0	109	80	120			
Xylenes, Total	66	2.0	60.00	0	110	80	120			
Surr: 4-Bromofluorobenzene	26		20.00		131	69.7	152			

Sample ID	**1212986-002AMS**	SampType:	**MS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**BatchQC**	Batch ID:	**R7720**	RunNo:	**7720**					
Prep Date:		Analysis Date:	**12/26/2012**	SeqNo:	**224426**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	7200	200	4000	2850	110	74.1	124			
Toluene	12000	200	4000	7576	112	75.2	124			
Ethylbenzene	5100	200	4000	635.6	113	69	125			
Xylenes, Total	32000	400	12000	18430	113	73.1	126			
Surr: 4-Bromofluorobenzene	5400		4000		135	69.7	152			

Sample ID	**1212986-002AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**BatchQC**	Batch ID:	**R7720**	RunNo:	**7720**					
Prep Date:		Analysis Date:	**12/26/2012**	SeqNo:	**224427**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	6600	200	4000	2850	94.7	74.1	124	8.74	11.2	
Toluene	11000	200	4000	7576	89.1	75.2	124	7.79	11.9	
Ethylbenzene	4700	200	4000	635.6	102	69	125	8.51	13.5	
Xylenes, Total	29000	400	12000	18430	90.6	73.1	126	8.62	13	
Surr: 4-Bromofluorobenzene	5400		4000		136	69.7	152	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Southwest Geoscience Aztec** Work Order Number: **1212995**

Received by/date: 12/21/12

Logged By: **Ashley Gallegos** 12/21/2012 9:55:00 AM

Completed By: **Ashley Gallegos** 12/21/2012 12:50:23 PM

Reviewed By: 12/21/2012

Chain of Custody

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

Log In

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

Special Handling (if applicable)

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

Person Notified: Date:

By Whom: Via: eMail Phone Fax In Person

Regarding:

Client Instructions:

18. Additional remarks:

19. **Cooler Information**

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

CHAIN OF CUSTODY RECORD

Southwest GEOSCIENCE
Environmental & Hydrogeologic Consultants

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

Laboratory: HALL
Address: Albuquerque, NM
Contact: Andy Freeman
Phone:
PO/SO #: 0410006

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

Proj. No.: 0410006
Project Name: Lindrith Compressor
No/Type of Containers

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

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

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	P/O	BTEX 8021B	TPH GRO/DRO 8015	Lab Sample ID (Lab Use Only)
W	12/18/12	1200	✓		MW-3	—	—	5				X	X	12/2995-001
	12/19/12	1013	✓		MW-4									-002
	12/19/12	0943	✓		MW-5									-003
	12/18/12	1131	✓		MW-8									-004
	12/18/12	1230	✓		MW-10									-005
	12/18/12	1327	✓		MW-11									-006
	12/18/12	1355	✓		MW-12									-007
	12/18/12	1424	✓		MW-34									-008
	12/18/12	1032	✓		MW-31									-009
	12/18/12	1102	✓		MW-33									-010

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Aaron Bentley	12/20/12	1058	Christie Walls	12/20/12	1058
Christie Walls	12/20/12	1647		12/21/12	0955
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

NOTES:

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

CHAIN OF CUSTODY RECORD

Southwest GEOSCIENCE
Environmental & Hydrogeologic Consultants

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

Laboratory: HALL
Address: Albuquerque, NM
Contact: Andy Freeman
Phone:
PO/SO #: 0410006

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

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

Proj. No.: 0410006
Project Name: Lindrith Compressor
No/Type of Containers

ANALYSIS REQUESTED: BTEX 8021B; TPH 418.1/1340 8015

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	P/O	Lab Sample ID (Lab Use Only)
W	12/19/12	1144		X	MW-2	—	—	5				1212995-011
	12/19/12	1210			MW-7							-012
	12/18/12	1454			MW-35							-013
	12/19/12	1117			MW-36							-014
	12/19/12	1040			MW-38							-015
	12/19/12	1002			MW-110							-016
	12/18/12	1525			MW-41							-017
	12/18/12	1258		V	MW-42							-018

12/18/12 ▲ 12/19/12 12/15/12

No Further Entries

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Aaron Bentley	12/20/12	1058	Krista Wells	12/20/12	1058
Krista Wells	12/20/12	1647		12/21/12	0955
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

NOTES:
FOR -014, -015 - SPOKE WITH KYLE SUMMERS REGARDING COLLECTION DATES FOR 12/21/12 MW-36 & MW-38

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