# **AP - 102**

**2014 AGWMR** 

04 / 02 / 2015

6121 Indian School Road NE, Suite 200 Albuquerque, New Mexico 87110

Telephone: (505) 884-0672 Fax: (505) 884-4932

www.CRAworld.com

April 2, 2015 Reference No. 086242

Mr. Glenn von Gonten New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Re: Submittal of 2014 Annual Groundwater

Monitoring and Confirmation Drilling Report

Thoreau Compressor Station No. 5

AP-102

Transwestern Pipeline Company McKinley County, New Mexico

Dear Mr. von Gonten:

Attached please find one copy of the 2014 Annual Groundwater Monitoring and Drilling Confirmation Report for the above referenced site. If you have any questions or comments with regards to this report, please do not hesitate to contact our Albuquerque office at (505) 884-0672.

Yours truly,

**CONESTOGA-ROVERS & ASSOCIATES** 

Christine Mathews Project Scientist

CM/mc/2 Encl.

Attachments:

2014 Annual Groundwater Monitoring and Confirmation Drilling Report

Cc: Ms. Stacy Boultinghouse, Energy Transfer

Mr. Patric Antonio, Navajo Nation Environmental Protection Agency

Equal Employment Opportunity Employer













### **2014** Annual Groundwater Monitoring and Confirmation Drilling Report

THOREAU COMPRESSOR STATION No. 5 MCKINLEY COUNTY, NEW MEXICO

NMOCD: AP-102

Prepared for: TRANSWESTERN PIPELINE COMPANY, LLC

### **Conestoga-Rovers & Associates**

6121 Indian School Road, NE Suite 200 Albuquerque, New Mexico 87110



#### **Table of Contents**

			Page					
Section 1.0	Introdu	ıction	1					
	1.1	Background	1					
	1.2	Hydrogeology	2					
Section 2.0	Ground	dwater Monitoring Methodology and Analytical Results	3					
	2.1	Groundwater Monitoring Summary	3					
	2.2	Groundwater Monitoring Methodology	3					
	2.3	Groundwater Monitoring Analytical Results	3					
Section 3.0	Aquife	r Pumping	4					
Section 4.0	Confirmation Soil Drilling							
	4.1	Subsurface Lithology and Laboratory Results	6					
	4.2	Waste	7					
Section 5.0	Monito	oring Well Plugging and Abandonments	8					
Section 6.0	Conclus	Conclusions and Recommendations8						
Section 7.0	Propos	Proposed Modified Path Forward10						

### List of Figures (Following Text)

Figure 1	Site Location Map
Figure 2	Site Detail Map
Figure 3	April 2014 Potentiometric Surface Map
Figure 4	April 2014 Benzene and PCB Concentration Map
Figure 5	Cross Section Map
Figure 6	Cross Section A – A'
Figure 7	Cross Section B – B'



### List of Tables (Following Text)

Table 1	Summary of Groundwater Level Data
Table 2	Summary of Field Parameters
Table 3	Summary of Analytical results for BTEX Compounds
Table 4	Summary of Analytical results for PCB Compounds
Table 5	Summary of Soil Analytical Results
Table 6	Plugged and Abandoned Well Specifications

### **List of Appendices**

Appendix A	Groundwater Laboratory Analytical Report
Appendix B	Soil Laboratory Analytical Reports
Appendix C	Boring Logs
Appendix D	Soil Cutting Waste Disposal Documentation
Appendix E	Monitor Well Drilling and Plug and Abandonment Permits
Appendix F	Monitor Well Plug and Abandonment Photo Log



#### Section 1.0 Introduction

This report presents the results of the 2014 groundwater sampling event, aquifer pumping, soil boring, and monitoring well plug and abandonment performed by Conestoga-Rovers and Associates (CRA). These activities were performed at the Transwestern Pipeline Company, LLC. (Transwestern) Thoreau Compressor Station No. 5 (Site), located in McKinley County, New Mexico. The Site is situated approximately 1.5 miles north-northwest of Thoreau, New Mexico. Geographical coordinates for the Site are 35°25'34.55" north and 108°14'9.63" west. Properties adjacent to the Site are owned by the Navajo Nation and the Bureau of Land Management. A Site location map and detail map are included as **Figures 1** and **2**, respectively. Site consulting responsibilities were transferred from Cypress to Conestoga Rovers & Associates, Inc. (CRA) in January 2014.

#### 1.1 Background

In March 1989, Daniel B. Stephens & Associates (DBS&A) was retained by Transwestern to investigate the hydrogeology at four compressor stations. A Consent Decree had been issued by the EPA due to the potential release of polychlorinated biphenyl (PCB) compounds in soils at these sites. Transwestern utilized synthetic lubricating oil containing Aroclor-1242 in a gas turbine, which contaminated downstream elements of the Transwestern system via natural gas condensate. The potential PCB releases may have occurred from waste gas condensate liquids generated during pipeline cleaning operations.

The results of this initial investigation revealed the presence of hydrocarbons and PCBs within a shallow alluvial aquifer beneath the Station and Site. However, impacts to the regional aquifer were not found. The Consent Decree was terminated following a determination by the EPA in late 1992. The EPA concluded that Transwestern had met the terms and conditions of the Consent Decree. Following the termination of the Consent Decree, Transwestern began working solely with the New Mexico Oil Conservation Division (NMOCD) and the Navajo Nation for Site monitoring and remediation activities to address remaining impacts to the shallow alluvial aquifer.

From April to December of 1992, a nitrate injection pilot test was conducted at the Site in the immediate vicinity of monitoring well 5-35B. The pilot test was performed to assess the feasibility of nitrate-enhanced bioremediation of Site impacts. The pilot test resulted in reductions in concentrations of toluene, xylene, and ethylbenzene; however, no significant reduction in benzene was observed. Following the test, a decision was made to pursue bioremediation based on aerobic rather than anaerobic degradation.

The Phase I remediation system was placed into service on December 9, 1994. This system consisted of a single ½ HP electric regenerative blower which extracted soil vapor from monitoring well 5-35B.

The Phase II system was implemented in 1996 with the installation of 11 air sparge points (AS-1 thru AS-11), two dedicated soil vapor extraction (SVE) wells (SVE-1 and SVE-2), and the installation of associated surface equipment. During drilling activities at AS-2, soil impacts originating from a former surface impoundment for gas condensate liquids were discovered (**Figure 2**). It was determined that this former surface impoundment was likely the primary source of Site benzene impacts. The Phase III system was implemented in late 1997 with the addition of five air sparge wells (AS-12 through AS-16) and two additional SVE wells (SVE-3 and SVE-4). The SVE system was shut down in November 2010 because of declining volatile organic compounds (VOCs) detected in the system influent.

In 2006, during construction to replace the pig receiver, a petroleum hydrocarbon odor was noted as soil was excavated from around the concrete pedestal supporting the receiver. Laboratory analysis of a soil sample from the area revealed elevated total petroleum hydrocarbons (TPH). Subsequently, 130 cubic yards of soil was excavated from the area around the pig receiver. Waste characterization samples were taken from soil stockpiles prior to disposal. The samples revealed elevated TPH in the diesel and motor oil range, as well as trace amounts of PCBs.

PCBs have been detected in groundwater samples collected from two Site wells in the extreme southeast corner of the facility (monitoring wells 5-59 and 5-06C). The source of PCBs detected in perched groundwater is not fully understood.

#### 1.2 Hydrogeology

The Chinle Formation is the principal bedrock underlying the station. The Chinle Formation is comprised primarily of red claystones and mudstones and is roughly 1000 to 1300 feet thick. In addition, there is a middle Chinle Formation member, the Sonsela sandstone, which is approximately 90 to 130 feet thick at a depth of approximately 650 feet below the station. The Sonsela sandstone is the shallowest aquifer that is used as a water supply in the Thoreau area.

The Chinle Formation is overlain by 30 to more than 75 feet of alluvium over most of the Site and surrounding area. The alluvium consists of reddish brown, silty sand that is fine- to very fine-grained, moderately to well sorted, with thin, silty, interbeds. Approximately 1 to 5 feet of weathered, sandy clay marks the transition between the surficial alluvium and underlying Chinle Formation.

Perched groundwater is present in the alluvium on top of the Chinle Formation. The perched zone is approximately 10 to 15 feet thick over most of the Site, with the thickness increasing locally due to the presence of paleochannels that occur from the erosion of the Chinle Formation. The water table elevation at the Site has declined significantly since 1993 due primarily to decreased water use at the facility.

#### Section 2.0 Groundwater Monitoring Methodology and Analytical Results

#### 2.1 Groundwater Monitoring Summary

A groundwater sampling event was conducted at the Site from April 21 through April 22, 2014. Prior to collection of groundwater samples, depth to groundwater in each well was measured using an oil/water interface probe. Groundwater elevations are detailed in **Table 1**. A groundwater potentiometric surface map is presented as **Figure 3**. The groundwater gradient was approximately 0.039 feet per foot. Depth to groundwater ranged from 51.63 to 61.84 feet bgs. Apparent groundwater flow at the Site is to the south and is consistent with historical data.

#### 2.2 Groundwater Monitoring Methodology

During the April 2014 monitoring event, water was purged from monitoring wells 5-06C, 5-16B, 5-18B, 5-20B, and 5-59 with a low flow bladder pump until field parameters stabilized. Due to insufficient well volume, monitoring wells SVE-3 and 5-35B were purged of three well volumes or until dry using dedicated, polyethylene, 1.5-inch disposable bailers. While purging each well, groundwater parameter data, including temperature, pH, conductivity, dissolved oxygen, and oxidation-reduction potential were collected using a multi-parameter sonde. Field parameters are summarized on **Table 2**. Groundwater samples were placed in laboratory prepared bottles, packed on ice, and shipped under chain-of-custody documentation to Hall Environmental Analysis Laboratory (Hall) in Albuquerque, NM.

Groundwater samples from monitoring wells SVE-3, 5-06C, 5-16B, 5-18B, 5-20B, 5-35B, and 5-59 were analyzed for benzene, ethylbenzene, toluene, and total xylenes (BTEX) by EPA Method 8260. Groundwater samples from monitoring wells 5-06C and 5-59 were also analyzed for PCBs by EPA Method 8082. A summary of analytical results for BTEX constituents is presented on **Table 3**. A summary of analytical results for PCBs is presented on **Table 4**.

#### 2.3 Groundwater Monitoring Analytical Results

The New Mexico Water Quality Control Commission (NMWQCC) mandates that groundwater quality in New Mexico be protected. Groundwater quality standards can be found in Title 20, Chapter 6, Part 2, Section 3103 of the New Mexico Administrative Code (20.6.2.3103 NMAC).



Results of the April 2014 groundwater sampling event are discussed below:

- Groundwater from monitoring well 5-02C was found to contain phase-separated hydrocarbons (PSH) during pumping activities and was not sampled.
- Benzene: The NMWQCC groundwater quality standard for benzene is 10 micrograms per liter (ug/L). Groundwater samples collected from monitoring wells 5-16B, 5-35B, and SVE-3 were found to contain benzene at concentrations of 5,000 ug/L, 2,500 ug/L, and 6,800 ug/L, respectively (Figure 4).
- **Total Xylenes:** The NMWQCC groundwater quality standard for total xylenes is 620 ug/L. Groundwater samples collected from monitoring wells 5-16B, 5-35B, and SVE-3 were found to contain xylenes at concentrations of 2,500 ug/L, 830 ug/L, and 1,900 ug/L, respectively.
- PCBs: The NMWQCC groundwater quality standard for PCBs is 1.0 ug/L. The groundwater sample collected from monitoring well 5-06C was found to contain PCBs at a concentration of 1.4 ug/L (Figure 4).

Elevated benzene concentrations in groundwater appear to be localized to an area extending from 5-35B to 5-02C and from 5-35B to 5-16B (see **Tables 2 and 3**). Since Phase III of the remediation system was installed in late 1997, detected benzene concentrations in monitoring well 5-16B have increased from 41 ug/L in February 1998, to a high of 5100 ug/L in July 2013. As of April 2014, the concentration of benzene in 5-16B is 5,000 ug/L. Concentrations of PCBs continue to indicate a decreasing trend. While PCB concentrations in monitoring well 5-06C remained nearly stable (1.4 ug/L), the concentrations in monitor well 5-59 were less than 0.25 ug/l.

A copy of the Laboratory Analytical Report for the annual groundwater sampling event is included in **Appendix A**.

### Section 3.0 Aquifer Pumping

CRA performed short pumping tests to assess whether the minimal amount of water present in the wells will allow for effective removal of PSH during a mobile dual phase extraction (MDPE) event. The pumping tests were performed on monitoring wells 5-02C and SVE-3 to assess drawdown and potential PSH removal. CRA had initially proposed to perform pumping on monitoring well 5-34B, but there was not enough water in the well to allow pumping at this location.

Each of the wells was gauged using an oil/water interface probe and the data recorded. A temporary down-hole pump was installed in each of the monitoring wells. During pumping, the amount of water and the amount of PSH produced was estimated, and the amount of drawdown was also measured. Discharge from these wells was placed in the 200 gallon purge water containment tank located in the SVE shed for future disposal.

During gauging activities, PSH was not detected in monitoring well 5-02C. Approximately 1/8-inch of PSH was observed in the purge bucket after approximately 2 gallons of groundwater had been pumped out of the well. Monitoring well 5-02C dewatered after approximately 5 minutes of pumping and was allowed to recharge for approximately one hour. After recharge, the well was gauged again, at which time a 0.72 foot thick layer of PSH was detected within the well.

A visible sheen was noted in the purge bucket after pumping approximately 2.5 gallons of water from SVE-3. The thickness of this PSH was not measureable. The monitoring well went dry after pumping an additional 0.25 gallons from the well and no additional PSH was observed.

Due to the presence of PSH appearing after groundwater has already been purged from the monitoring wells, it seems that hydrocarbon contamination is trapped below the top of groundwater.

#### Section 4.0 Confirmation Soil Drilling

Five hollow stem auger borings were advanced at the site to assess the residual hydrocarbon concentrations in the soil. Enviro-Drill, Inc. (Enviro-Drill) of Albuquerque, New Mexico performed the drilling during the weeks of November 17 and November 24, 2014.

Prior to drilling activities, New Mexico One Call was contacted and CRA coordinated drilling activities with on-site Transwestern Staff to have them review the drilling locations for the presence of subsurface utilities. Additionally, each soil boring was pre-cleared using a hand auger to a depth of five feet below ground surface (bgs). The first borehole, B-1, was advanced in the vicinity of the historical soil concentrations. Four additional borings, borings B-2 through B-5, were advanced to the north, south, east, and west of the area exhibiting historical elevated soil concentrations to assess the current level of hydrocarbon concentrations (**Figure 5**).

Soil borings were advanced to total depths of approximately 60 feet bgs or refusal. Samples were collected beginning at 5 ft bgs and every 5 ft thereafter using a 2-inch (in.) diameter by 24-in. long split spoon sampler. Cuttings and samples were logged by a CRA Geologist according to the Unified Soil Classification System. Field screening for petroleum hydrocarbons was performed using the heated headspace method.

A calibrated, Ion Phocheck Tiger photoionization detector (PID) was used to collect headspace measurements and results were recorded on CRA boring logs.

Between one and three samples from each boring were collected for laboratory analysis of gasoline, diesel, and oil range total petroleum hydrocarbons (TPH-GRO, DRO, ORO) by EPA method 8015B modified and BTEX by EPA method 8260B. Soil samples were placed into laboratory prepared jars, stored in a cooler with ice, and hand delivered to Hall Environmental Analytical Laboratory for analysis under chain of custody documentation.

#### 4.1 Subsurface Lithology and Laboratory Results

The soil type observed in split spoon samples and drill cuttings collected from ground surface to approximately 40 feet bgs consisted primarily of reddish brown sand with silt and sandy clay. CRA observed hard drilling at approximately 40 feet bgs in borings B-1, B-2, and B-3, with samples indicating a possible caliche layer (**Figures 6** and **7**). Field headspace readings were elevated for the hard drilling zone in borings B-1 and B-2. A laboratory sample submitted between 44 and 45.5 ft bgs in boring B-1 contained elevated concentrations of total TPH. It appears that the permeability in the hard drilling zone may be too low for previous SVE attempts to have been effective. Due to the apparent low permeability and its location well above groundwater, this zone does not seem to be a source for groundwater contamination.

Between 55 and 60 feet, each boring graded from primarily sand to sandy clay, with trace to some gravel. This interval was observed to be moist to damp but never saturated. Below 60 feet bgs, each boring encountered hard, dry, red clay with blue mottling, that may be the Chinle Formation. This hard clay layer acts as a lower confining unit.

The laboratory results indicated TPH-ORO concentrations were below laboratory detection limits in the soil samples. Soil samples collected from borings B-3 and B-4 were below analytical laboratory reporting limits (LRL). A summary of soil sample laboratory results are:

- **Benzene** The sample collected from 60 to 62 feet bgs in boring B-1 contained 18 milligrams per kilogram (mg/kg) benzene.
- Total BTEX –The samples collected from boring B-1 at 56 to 58 feet bgs and 60 to 61.5 feet bgs contained total BTEX concentrations at 51 and 73.3 mg/kg, respectively. The sample collected from 57 to 58.5 feet bgs in boring B-2 contained total BTEX concentrations at 162.2 mg/kg. The sample collected from 60 to 62 feet bgs in boring B-5 contained total BTEX concentrations at 627 mg/kg.
- TPH The samples collected from boring B-1 at 56 to 58 feet bgs and 60 to 61.5 feet bgs contained TPH at 2,400 and 1,910 mg/kg, respectively. The sample collected from 57 to 58.5 feet bgs in boring B-2 contained TPH at 3,540 mg/kg. The sample collected from 60 to 62 feet bgs in boring B-5 contained TPH at 14,600 mg/kg.

Elevated concentrations of BTEX and TPH appear to be present primarily in the hard drilling zone observed at 40 ft bgs and in the sandy clay zone between 55 and 60 ft bgs. These are only present in borings B-1, B-2, and B-5. Based on confirmation soil drilling, the source of benzene impacts appears to be located between borings B-3 and B-1. Petroleum hydrocarbon concentrations that were observed in the soil appear to correlate well to elevated benzene and xylene concentrations present in the groundwater. Boring B-5 did not contain BTEX or TPH above laboratory analytical detection limits until the depth of 58 to 60 ft bgs.

Based on the laboratory analytical data, elevated soil concentrations were observed in two areas:

- The hard drilling caliche layer at 40 ft bgs; and
- At, within, and above the clay layer in the water bearing zone.

Soil laboratory analytical results are summarized in **Table 5** and in **Figures 6** and **7**. The soil sample laboratory analytical report is included as **Appendix B**. Boring logs are included as **Appendix C**.

Based on the results of the soil data, it appears that the former SVE system was mostly successful in remediating the subsurface with the exception of:

- The hard drilling zone observed in borings B-1, B-2, and B-3 at a depth of approximately 40 ft bgs. It appears that the permeability in this zone may be too low for SVE to have been effective; and
- The water bearing soils above the hard clay layer observed from approximately 58 to 60 ft bgs. The presence of water in the soils most likely prevented SVE from being effective.

Upon completion of drilling activities, the annulus of the boreholes were plugged and abandoned using a 95% cement/5% bentonite grout mix.

#### 4.2 Waste

Soil cuttings generated during drilling activities were placed in 55 gallon drums pending laboratory analysis. A waste characterization sample was collected from drill cuttings that exceeded 100 ppm during field screening with a PID. Cuttings that were less than 100 ppm were thin spread at the Site.

The characterization sample was submitted to Hall Environmental Laboratory for analysis of Toxicity Leaching Characteristic Procedure (TCLP) benzene, TPH-GRO, DRO, and ORO, reactivity, corrosivity, ignitability, TCLP Resource Conservation and Recovery Act (RCRA) metals, and PCBs.

Three drums of soil cuttings, along with one drum of water from decontamination, were subsequently hauled by Industrial Ecosystems, Inc. (IEI), of Aztec, New Mexico, to their land farm for disposal. Waste disposal documentation is presented as **Appendix D**.

#### Section 5.0 Monitoring Well Plugging and Abandonments

A number of monitoring wells and soil vapor extraction wells are no longer viable for data collection. Monitoring wells 5-02B, 5-04B, 5-12B, 5-13B, 5-14B, 5-15B, 5-19B, 5-22B, 5-23B, 5-24B, 5-41B, and wells SVE-1 and SVE-2 were plugged and abandoned during the weeks of November 17 and November 24, 2014. Plugging and abandonment was performed in general accordance with New Mexico Office of State Engineer (NMOSE) requirements. A well plugging plan was submitted to the Navajo Nation Environmental Protection Agency (NNEPA) and the Navajo Nation Water Code Administration. This plugging plan was approved on October 7, 2014.

Prior to beginning plugging activities, specifications for the wells including well identification number, casing diameter, total depth, and depth to groundwater were field checked. The theoretical grout volumes were calculated and actual grout volumes used in each monitoring well were recorded. This information is included in **Table 6**.

All Site wells were plugged by Enviro-Drill using a tremie pipe to pump Type I/II Portland cement into each of the wells from total depth to the top of each casing. All surface completions were removed, and a minimum of a six inch thick cement plug was placed on the ground surface. The plug was labeled with the well name and date of plug and abandonment. Monitoring wells 5-12B, 5-13B, 5-14B, 5-15B, 5-19B, 5-23B, and 5-24B contained a steel inner casing that could not be removed. In these instances, the inner casing was filled to surface with concrete and labeled in the same manner as all other plugged and abandoned Site wells. Demolition debris was disposed of by Enviro-Drill at a nearby landfill.

Well Plugging Plan of Operations forms and subsequent regulatory approvals are included as **Appendix E**. A Photo log documenting plugging and abandonment field activities is included as **Appendix F**.

#### Section 6.0 Conclusions and Recommendations

Based on the data that was collected during this assessment, CRA makes the following conclusions:



- Elevated benzene concentrations in groundwater appear to be localized to an area extending from 5-35B to 5-02C and from 5-35B to 5-16B (see Figure 4). Since Phase III of the remediation system was installed in late 1997, benzene concentrations in monitoring well 5-16B have increased from 41 ug/L in February 1998, to a high of 5,100 ug/L in July 2013. As of April 2014, the concentration of benzene in 5-16B is 5,000 ug/L.
- Concentrations of PCBs continue to follow a decreasing trend. While PCB concentrations in monitoring well 5-06C remained nearly stable at 1.4 ug/L, the concentrations in monitoring well 5-59 were less than 0.25 ug/L (below the regulatory limit).
- Soil lithology graded from primarily sand to sandy clay with some gravels between 55 and 60 feet, just above the Chinle Formation. This interval was observed to be moist to damp but never saturated.
- Elevated concentrations of BTEX and TPH in soil appear to be present primarily above the
  hard clay zone between 55 and 60 feet bgs. These concentrations were observed in borings
  B-1, B-2, and B-5. Petroleum hydrocarbon concentrations that were observed in the soil
  appear to correlate well to elevated benzene and xylene concentrations present in the
  groundwater.
- The groundwater observed in the monitor wells appears to be representative of the minimal quantity of groundwater in the subsurface.
- Based on the results of the soil data, it appears that the former SVE system was mostly successful in remediating the subsurface with the exception of:
  - The hard drilling zone observed in borings B-1, B-2, and B-3 at an approximate depth of 40 ft bgs. It appears that the permeability in this zone may be too low for SVE to have been effective; and
  - The water bearing soils above the hard clay layer observed from approximately 58 to 60 ft bgs. The presence of water in the soils most likely prevented SVE from being effective.

#### Recommendations:

- Groundwater monitoring should be continued for the respective constituents of concern.
- The collection of additional data to assess the oxidative/reductive state of wells containing PCB concentrations should be included in 2015 annual groundwater monitoring. The assessment should be performed to confirm that favorable conditions for continued biodegradation are present.
- Previously, CRA proposed the use of mobile dual phase extraction (MDPE) pending confirmation of drilling results. However the new data suggests that this may not be as effective as originally thought to do:
  - The hydrocarbon concentrations affecting the groundwater occur in a relatively thin zone above the hard clay layer that acts as a lower confining unit. Because this layer is thin (three to four feet thick), MDPE may not be able to produce a sufficiently large radius of influence within this zone to be effective.
  - The residual concentrations observed in the top of the hard clay layer will continue to act as a source of hydrocarbons in the groundwater.



Because of these potential issues, the data was reviewed by CRA's Innovative Technology Group (ITG). Based on the data, the ITG felt that chemical oxidation would be a more effective option for soil and groundwater remediation than MDPE. This is because:

- The chemical oxidant could be injected into existing air sparge and monitoring wells. This
  would minimize the number of wells needed and reduce subsurface disturbance, while
  providing for good distribution of oxidant at the proper depth;
- The relatively impermeable Chinle Formation will act as a lower confining unit for the chemical oxidant and help to spread the material throughout the impacted zone; and
- The chemical oxidant would reduce the concentrations present at the surface of the hard clay layer. This should reduce the chance of residual hydrocarbon concentrations appearing in the groundwater.

#### Section 7.0 Proposed Modified Path Forward

Based on this information, CRA proposes to evaluate the effectiveness of chemical oxidation in a phased approach. The phases would consist of:

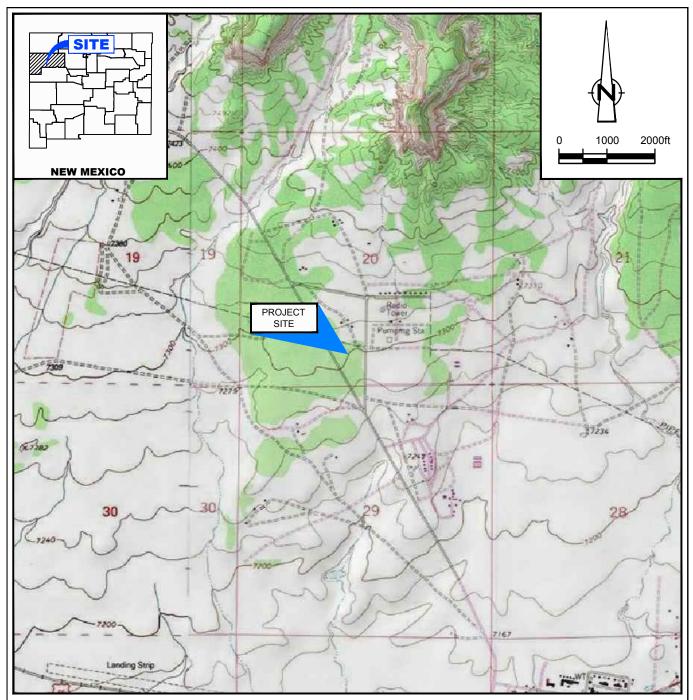
- Phase 1: Collect subsurface samples and perform bench scale testing;
- Phase 2: Pilot testing in localized area to assess effectiveness; and
- Phase 3: Full scale implementation and monitoring.

CRA is proposing a phased approach to the use of chemical oxidation. The use of a phased approach would provide data to assess the effectiveness of chemical oxidation. The first Phase would consist of drilling a soil boring to collect a bulk soil and groundwater sample in the saturated zone. Bench scale testing would be performed to provide baseline data and maximize the effective of the chemical oxidation formulation.

The second phase would be performed in a localized area to assess the in-situ effectiveness of the method. Pending the successful results of Phase 2, full scale implementation would be performed at the site. A work plan providing information on the above in further detail will be provided under separate cover for review.

### **Figures**





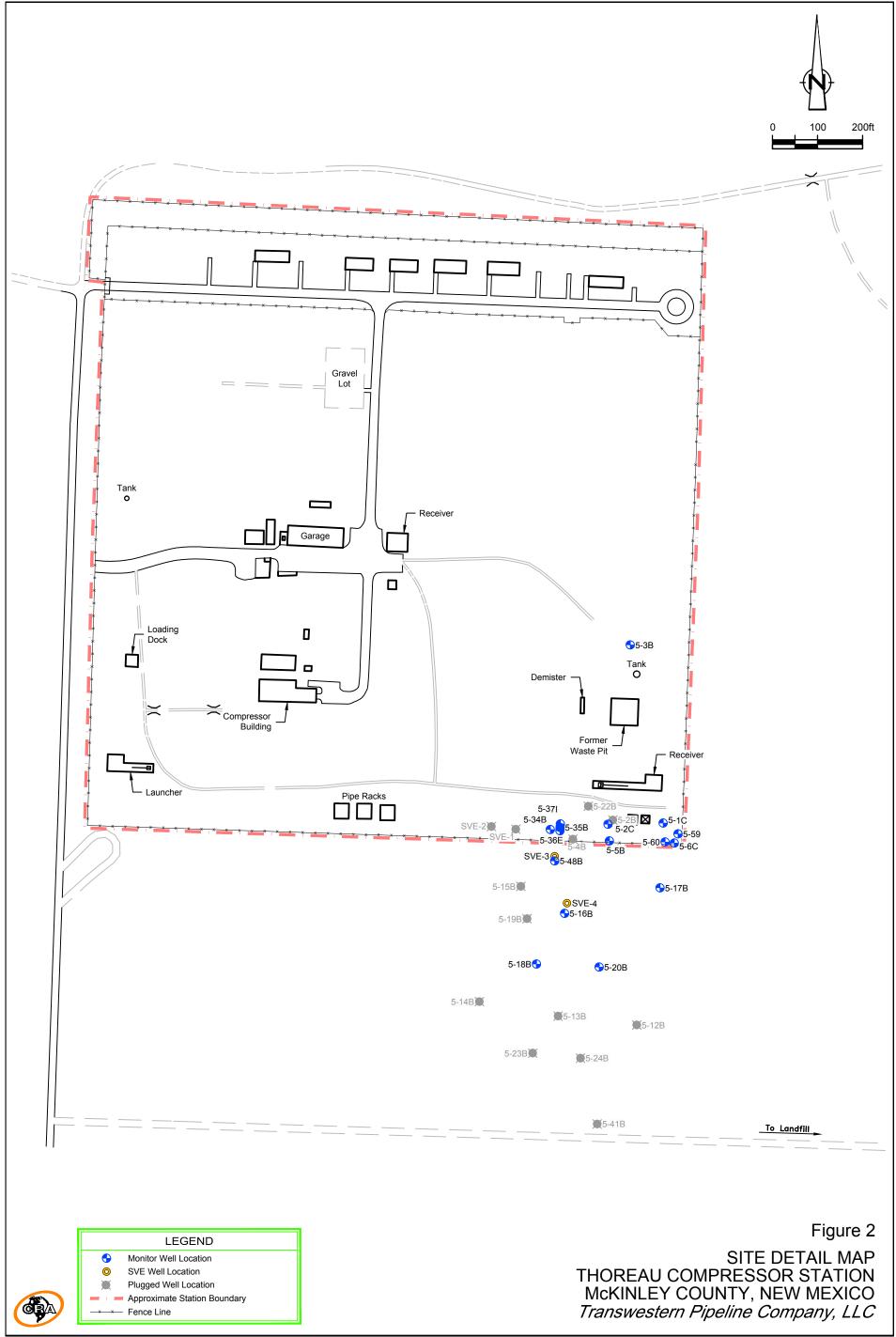
SOURCE: USGS 7.5 MINUTE QUAD
"BELL LAKE AND TIP TOP WELLS, NEW MEXICO"

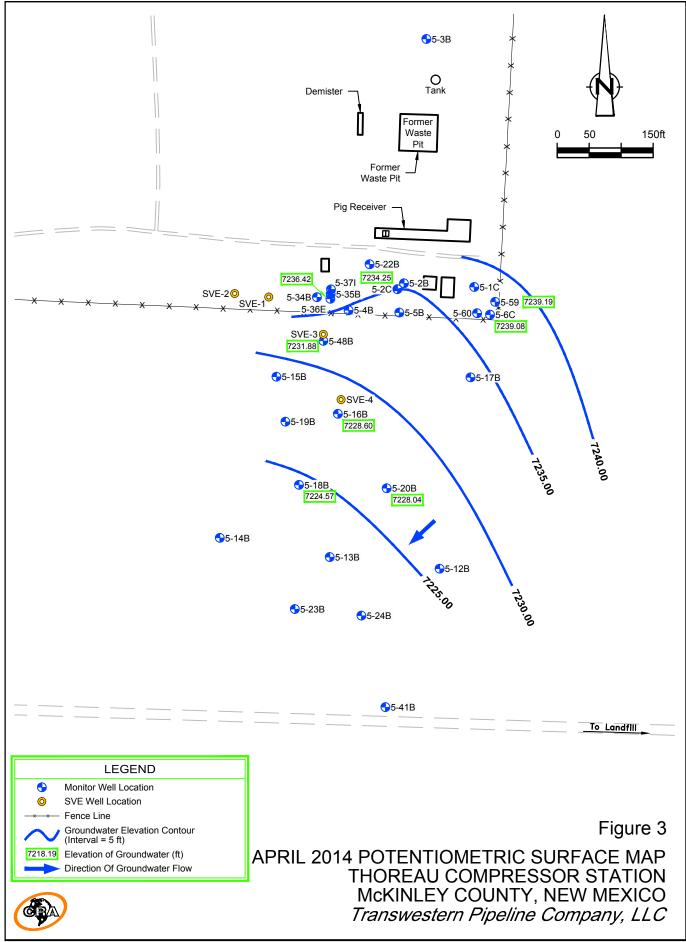
LAT/LONG: 35.4262° NORTH, 108.2360° WEST COORDINATE: NAD83 DATUM, U.S. FOOT STATE PLANE ZONE - NEW MEXICO WEST

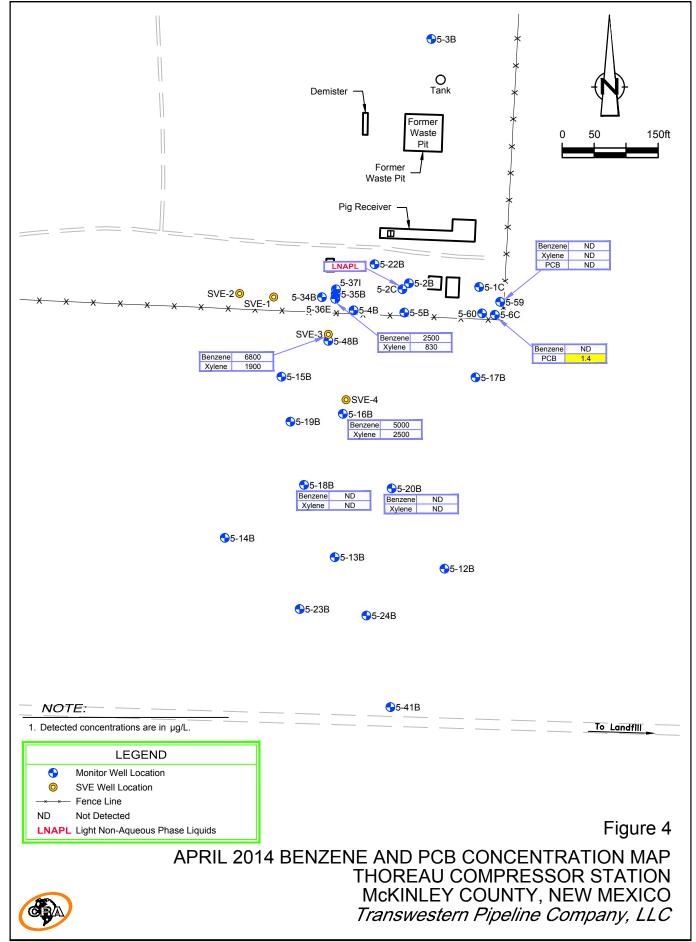
Figure 1 SITE LOCATION MAP

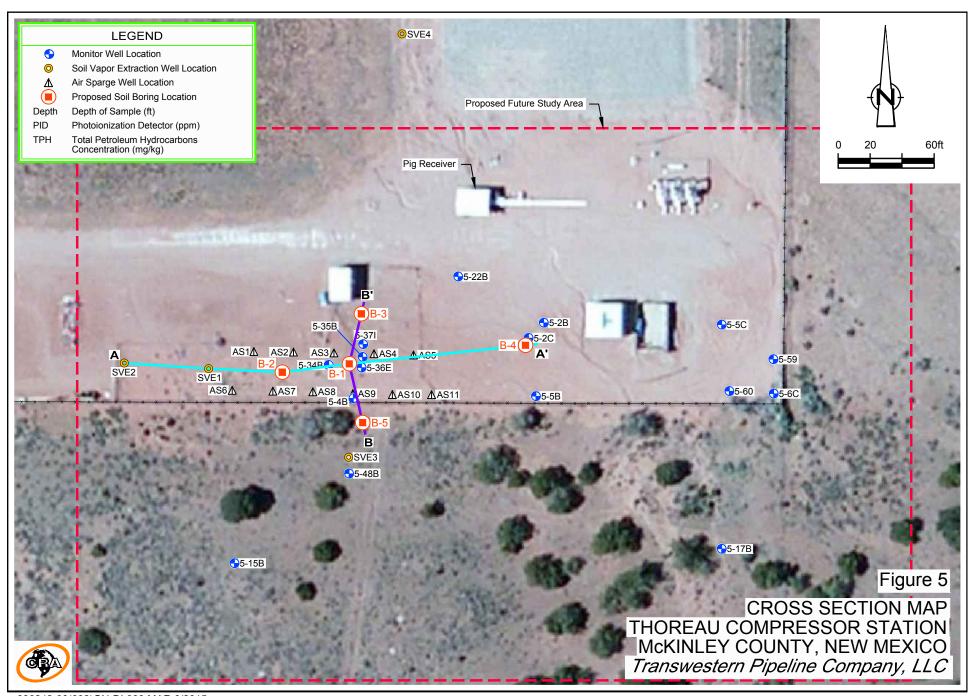
THOREAU COMPRESSOR STATION McKINLEY COUNTY, NEW MEXICO Transwestern Pipeline Company, LLC

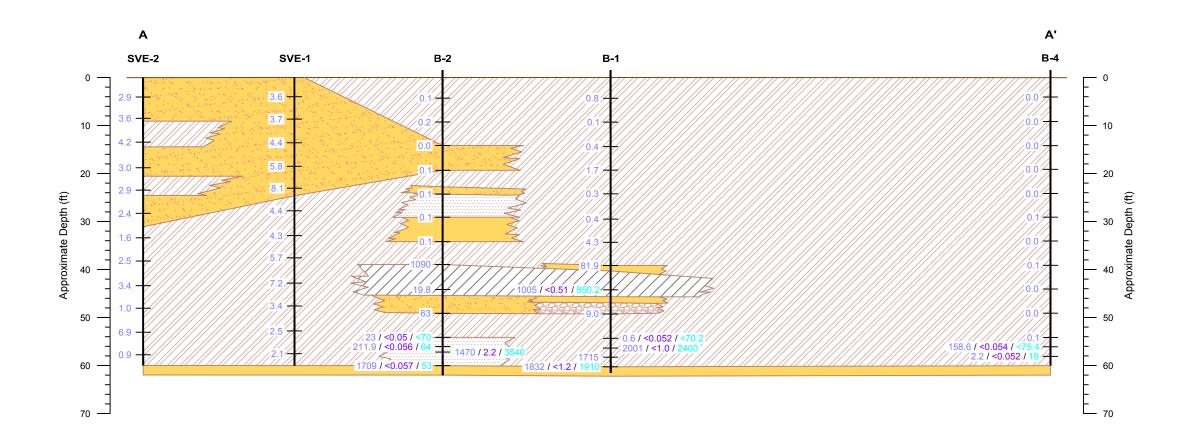












#### NOTE:

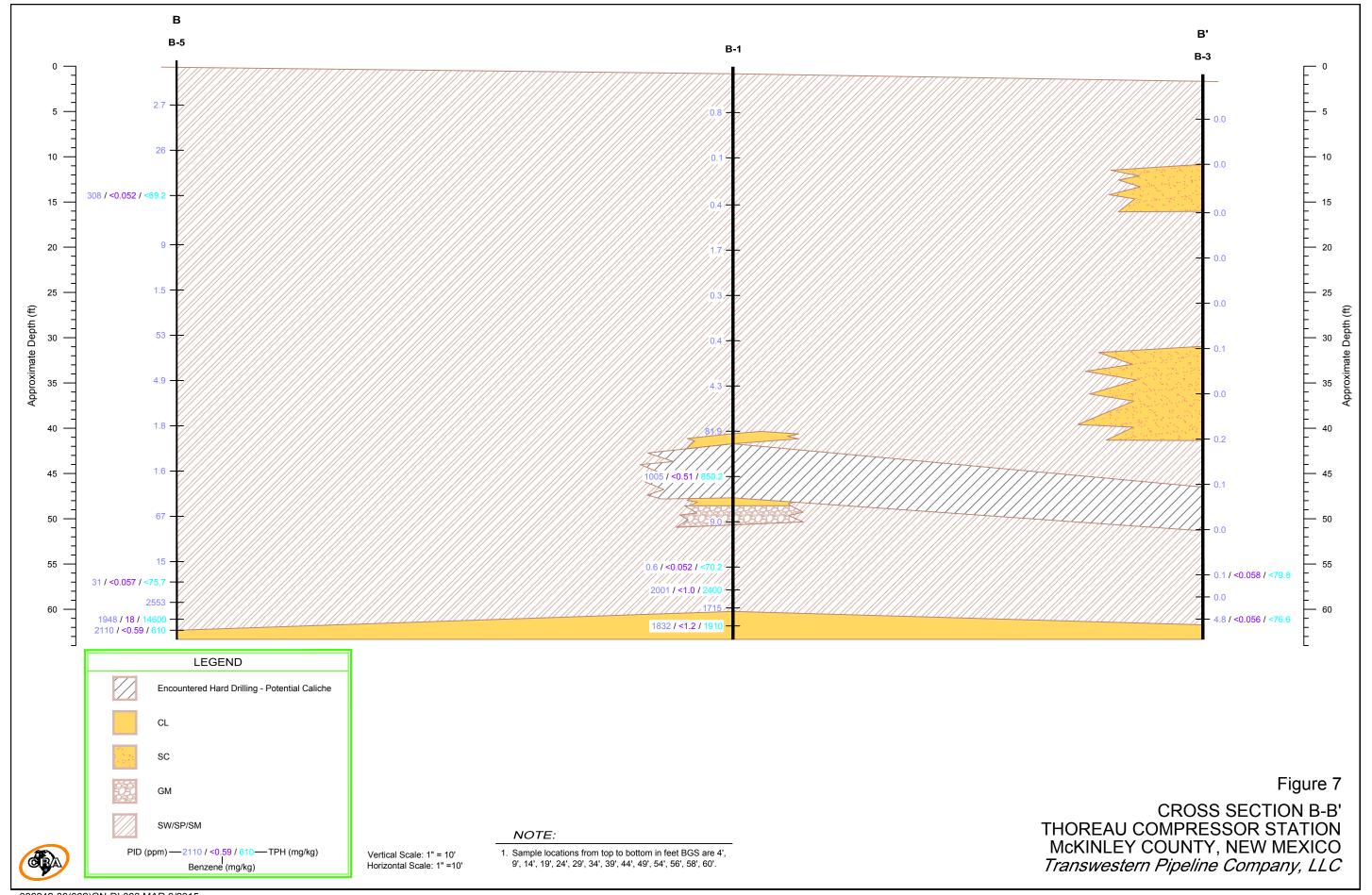
1. Sample locations from top to bottom in feet BGS are 4', 9', 14', 19', 24', 29', 34', 39', 44', 49', 54', 56', 58', 60'.



Vertical Scale: 1" = 20' Horizontal Scale: 1" = 40' Figure 6

CROSS SECTION A-A'
THOREAU COMPRESSOR STATION
McKINLEY COUNTY, NEW MEXICO
Transwestern Pipeline Company, LLC

**FA** 



### **Tables**



Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		08/29/90		44.69		7245.84
		11/08/90		44.70		7245.83
		01/08/91		44.82		7245.71
		02/05/91		44.86		7245.67
		03/05/91		44.91		7245.62
		04/10/91		44.94		7245.59
		05/21/91		45.08		7245.45
		06/18/91		45.15		7245.38
		07/23/91		45.28		7245.25
	7,290.53	09/04/91		45.38		7245.15
		10/02/91		45.52		7245.01
		11/06/91		45.63		7244.90
		12/10/91		45.64		7244.89
		01/09/92		45.61		7244.92
5-01B		01/27/92		45.53		7245.00
3-016	7,290.33	02/20/92		45.39		7245.14
		03/18/92		45.18		7245.35
		04/29/92		44.78		7245.75
		10/06/92		43.71		7246.82
		10/14/92		43.67		7246.86
		04/19/93		42.96		7247.57
		11/14/95		46.16		7244.37
		02/15/96		46.64		7243.89
		05/21/96		47.32		7243.21
		08/12/96		NM		
		11/18/96		47.91		7242.62
		02/24/97		48.31		7242.22
		05/19/97		48.57		7241.96
		08/18/97		48.77		7241.76
		11/16/97		49.03		7241.50

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		02/10/98		TP		
		06/08/98		TP		
		09/29/98		TP		
		04/27/99		TP		
5-01C	7,292.11	10/11/99		TP		
		05/10/00		51.45		7240.66
		11/14/00		51.73		7240.38
		05/21/01		51.85		7240.26
		11/16/01		52.00		7240.11
		04/17/02		52.05		7240.06
		10/30/02		52.23		7239.88
		05/21/03		52.25		7239.86
		11/10/03		52.43		7239.68
		06/07/04		52.53		7239.58
		06/08/05		52.63		7239.48
5-01C cont.	7,292.11	07/10/06		52.85		7239.26
J-01C com.	7,232.11	07/25/07		52.93		7239.18
		09/22/08		53.06		7239.05
		08/04/09		52.99		7239.12
		05/18/10		52.99		7239.12
		09/25/11		52.79		7239.32
		06/12/12		52.99		7239.12
		07/23/13		53.14		7238.97
		08/29/90		47.60		7244.46
		11/08/90		47.72		7244.34
		01/11/91		47.88		7244.18
		02/12/91		47.90		7244.16
		03/05/91		47.93		7244.13
		04/11/91		47.92		7244.14
		05/20/91		48.14		7243.92
		06/18/91		48.23		7243.83
		07/24/91		48.36		7243.70
		09/05/91		48.55		7243.51
		10/03/91		48.62		7243.44
5-02B	7,292.06	11/05/91		48.73		7243.33
		12/12/91		48.68		7243.38
		01/09/92		48.58		7243.48
		01/28/92		48.48		7243.58
		02/20/92		48.27		7243.79
		03/19/92		47.98		7243.79
		04/29/92		47.38		7244.68
		10/06/92		46.09		7245.97
		10/14/92		46.07		7245.99
		04/19/93		45.38		7246.68
		04/22/93		45.36		7246.70
		11/14/95		49.32		7242.74

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		02/15/96		49.84		7242.22
		05/21/96		50.47		7241.59
		08/12/96		NM		
	7 202 24 (2)	11/21/96		51.66		7240.40
	7,293.24 (a)	02/24/97		TP		
		05/19/97		TP		
		08/18/97	NM	NM		
		11/16/97	NM	NM		
		02/10/98		NM		
		10/11/99	55.70	55.75	0.05	7237.53
		05/10/00		55.08		7238.16
		11/14/00		56.09		7237.28
		05/21/01	56.03	56.33	0.30	7237.14
5-02B cont.	7,293.24 (a)	11/16/01		56.36		7236.94
3-02B COIIL.		04/17/02	56.27	56.33	0.06	7236.96
		10/30/02		56.53		7236.91
		05/21/03		56.07		7237.17
		11/10/03		56.89		7236.35
		06/07/04		dry		dry
		06/08/05		dry		dry
		07/10/06		dry		dry
		07/25/07		dry		dry
		09/22/08		dry		dry
		08/04/09		dry		dry
		05/18/10		dry		dry
		09/25/11		56.36		7236.88
		06/12/12		dry		dry
		07/23/13		dry		
		02/10/98		53.15		7238.67
		06/08/98		53.36		7238.46
		09/29/98		53.88		7237.94
		04/27/99		54.05		7237.77
5-02C	7,291.82	08/03/99		54.40		7237.42
J-02C	7,231.02	08/27/99		54.47		7237.35
		10/11/99		54.58		7237.24
		02/28/00		54.26		7237.56
		05/10/00		54.07		7237.75
		11/14/00		54.81		7237.01

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		05/21/01		55.01		7236.81
		11/16/01		55.25		7236.57
		04/17/02		55.37		7236.45
		10/30/02		55.57		7236.25
		05/21/03		55.81		7236.01
		11/10/03		56.07		7235.75
		06/07/04		56.36		7235.46
		06/08/05		56.68		7235.14
5 030	7 204 02	07/10/06	57.47	57.74	0.27	7234.29
5-02C cont.	7,291.82	07/25/07	sheen	57.07	sheen	7234.75
		09/22/08	sheen	56.50	sheen	7235.32
		08/04/09	sheen	56.98	sheen	7234.84
		05/18/10	57.25	57.30	0.05	7234.56
		09/25/11		56.19		7235.63
		06/12/12	sheen	56.77	sheen	7235.05
		07/10/12	sheen	56.85	sheen	7234.97
		07/23/13	sheen	57.35	sheen	7234.47
		04/21/14	Sheen	57.57	Sheen	7234.25
		•			•	
		08/29/90		43.77		7259.99
		01/07/91		44.10		7259.66
		02/12/91		44.12		7259.64
		03/05/91		44.24		7259.52
		04/10/91		44.31		7259.45
		05/21/91		44.53		7259.23
		06/18/91		44.68		7259.08
		07/23/91		44.95		7258.81
		09/04/91		45.14		7258.62
5-03B	7 202 76	10/02/91		45.19		7258.57
3-036	7,303.76	11/05/91		45.15		7258.61
		12/10/91		44.90		7258.86
		01/09/92		44.67		7259.09
		01/27/92		44.43		7259.33
		02/19/92		44.19		7259.57
		03/17/92		43.82		7259.94
		04/28/92		43.26		7260.50
		10/06/92		42.06		7261.70
		10/07/92		42.09		7261.67
		04/19/93		41.92		7261.84

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		04/20/93		41.98		7261.78
		11/14/95		46.49		7257.27
		02/15/96		47.02		7256.74
		05/21/96		47.54		7256.22
		08/12/96		47.95		7255.81
		11/18/96		48.30		7255.46
		02/24/97		48.68		7255.08
		05/19/97		48.91		7254.85
		08/18/97		49.15		7254.61
		11/16/97		49.34		7254.42
		02/10/98		49.49		7254.27
		06/08/98		49.65		7254.11
		09/29/98		49.80		7253.96
		04/27/99		49.91		7253.85
	7303.76	10/11/99		49.96		7253.80
		05/10/00		50.08		7253.68
5-03B cont.		11/14/00		50.33		7253.43
		05/21/01		50.55		7253.21
		11/16/01		50.74		7253.02
		04/17/02		50.88		7252.88
		10/30/02		51.03		7252.73
		05/20/03		51.31		7252.45
		11/10/03		51.43		7252.33
		06/07/04		51.50		7252.26
		06/08/05		51.77		7251.99
		07/10/06		52.08		7251.68
		07/25/07		52.33		7251.43
		09/22/08		52.40		7251.36
		08/04/09		52.39		7251.37
		05/18/10		52.46		7251.30
		09/25/11		52.13		7251.63
		06/12/12		52.12		7251.64
		07/23/13		52.04		7251.72
		08/29/90		48.35		7244.04
		11/08/90		48.42		7243.97
5-04B	7,292.39	01/11/91		48.42		7243.97
		01/31/91		48.94		7243.45
		03/04/91		48.68		7243.71

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		04/12/91		48.79		7243.60
		05/21/91		49.90		7242.49
		06/17/91		49.00		7243.39
		07/24/91		49.15		7243.24
		09/04/91		49.34		7243.05
		10/03/91		49.44		7242.95
		11/05/91		49.50		7242.89
		12/12/91		48.40		7243.99
		01/09/92		49.23		7243.16
	7,292.39	01/28/92		49.11		7243.28
		02/19/92		48.91		7243.48
		03/18/92		47.22		7245.17
		04/28/92		46.65		7245.74
		10/06/92		46.36		7246.03
		10/13/92		46.35		7246.04
		04/19/93		45.77		7246.62
		04/21/93		45.79		7246.60
		11/14/95		50.21		7242.18
		02/15/96		50.82		7241.57
5-04B cont.		02/10/98		54.70		7238.02
		10/11/99		55.95		7236.77
		05/10/00		55.53		7237.19
		11/14/00		56.48		7236.24
		05/21/01		56.65		7236.07
		11/16/01		56.91		7235.81
		04/17/02		57.10		7235.62
		10/30/02		57.21		7235.51
		05/21/03		57.57		7235.15
	7,292.72 (a)	11/10/03		57.81		7234.91
	7,232.72 (0,7	06/07/04		58.55		7234.17
		06/08/05		58.56		7234.16
		07/10/06		dry		dry
		07/25/07		dry		dry
		09/22/08		dry		dry
		08/04/09		dry		dry
		05/18/10		dry		dry
		09/25/11		58.19		7234.53
		06/12/12		58.60		7234.12
		07/23/13		dry		

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		08/29/90		47.50		7243.33
		11/08/90		47.25		7243.58
		01/10/91		47.14		7243.69
		02/05/91		47.20		7243.63
		03/05/91		47.20		7243.63
		04/18/91		47.34		7243.49
		05/21/91		47.44		7243.39
		06/18/91		47.52		7243.31
		07/24/91		47.69		7243.14
		09/05/91		47.83		7243.00
		10/02/91		47.54		7243.29
		11/04/91		48.02		7242.81
		12/10/91		47.94		7242.89
	7,290.83	01/09/92		47.87		7242.96
		01/27/92		47.74		7243.09
		02/19/92		47.58		7243.25
		03/17/92		47.43		7243.40
		04/28/92		46.61		7244.22
E 0ED		10/06/92		45.39		7245.44
5-05B		10/12/92		45.37		7245.46
		04/19/93		44.76		7246.07
		04/21/93		44.75		7246.08
		11/14/95		48.59		7242.24
		02/15/96		49.12		7241.71
		05/21/96		49.71		7241.12
		08/12/96		50.22		7240.61
		11/18/96		50.65		7240.18
		02/24/97		51.14		7239.69
		05/19/97		NM		
		08/18/97		NM		
		11/16/97		NM		
		02/10/98		53.51		7238.51
		10/11/99		55.02		7237.00
		05/10/00		54.61		7237.41
	7,292.02 (a)	11/14/00		55.23		7236.79
		05/21/01		55.38		7236.64
		11/16/01		55.61		7236.41
		04/17/02		55.76		7236.26

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		10/30/02		56.01		7236.01
		05/21/03		56.27		7235.75
		11/10/03		56.53		7235.49
		06/07/04		56.85		7235.17
		06/08/05		57.29		7234.73
		07/10/06		57.74		7234.28
5-05B cont.	7292.02 (a)	07/25/07		57.96		7234.06
		09/22/08		57.85		7234.17
		08/04/09		57.15		7234.87
		05/18/10		58.31		7233.71
		09/25/11		57.38		7234.64
		06/12/12		58.77		7233.25
		07/23/13		58.53		7233.49
			•		•	
		08/29/90		43.47		7245.83
		11/08/90		43.24		7246.06
		01/08/91		43.42		7245.88
		02/12/91		43.50		7245.80
		03/05/91		43.50		7245.80
		04/18/91		43.61		7245.69
		05/21/91		43.66		7245.64
		06/18/91		43.74		7245.56
		07/23/91		43.83		7245.47
		09/05/91		44.00		7245.30
		10/03/91		44.06		7245.24
		11/05/91		44.16		7245.14
5-06B	7,289.30	12/10/91		44.17		7245.13
	·	01/09/92		44.16		7245.14
		01/27/92		44.08		7245.22
		02/20/92		43.94		7245.36
		03/18/92		43.76		7245.54
		04/29/92		43.43		7245.87
		10/06/92		42.52		7246.78
		10/14/92		42.49		7246.81
		04/19/93		41.94		7247.36
		11/14/95		44.64		7244.66
		02/15/96		44.99		7244.31
		05/21/96		45.41		7243.89
		08/12/96		45.65		7243.65

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
5-06B cont.		11/18/96		45.92		7243.38
		02/24/97		46.30		7243.00
	7,289.30	05/19/97		46.54		7242.76
		08/18/97		46.73		7242.57
		11/16/97		47.01		7242.29
			1			
		02/10/98		49.31		7242.15
		06/08/98		49.52		7241.94
		09/29/98		49.78		7241.68
		04/27/99		50.03		7241.43
		08/03/99		50.15		7241.31
		08/27/99		50.23		7241.23
		10/11/99		50.05		7241.41
		02/28/00		50.18		7241.28
		05/10/00		50.18		7241.28
		11/14/00		50.47		7240.99
		05/21/01		50.62		7240.84
		11/16/01		49.81		7241.65
		04/17/02		50.93		7240.53
5.000	7 204 46	10/30/02		51.11		7240.35
5-06C	7,291.46	05/21/03		51.19		7240.27
		11/10/03		51.37		7240.09
		06/07/04		51.45		7240.01
		06/08/05		51.61		7239.85
		07/10/06		51.90		7239.56
		07/25/07		52.09		7239.37
		09/22/08		52.26		7239.20
		08/04/09		52.26		7239.20
		05/18/10		52.16		7239.30
		09/25/11		52.16		7239.30
		06/12/12		52.28		7239.18
		07/10/12		52.30		7239.16
		07/23/13		52.36		7239.10
		04/22/14		52.38		7239.08
			•			
5-12B	7,279.61	08/14/90		48.85		7230.76
		11/15/90		48.92		7230.69
		01/09/91		48.96		7230.65
		02/13/91		49.00		7230.61

TABLE 1
SUMMARY OF GROUNDWATER LEVEL DATA
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		03/07/91		49.00		7230.61
		04/12/91		49.05		7230.56
		05/22/91		49.12		7230.49
		06/19/91		49.20		7230.41
		07/25/91		49.27		7230.34
		09/16/91		49.37		7230.24
		10/09/91		49.43		7230.18
		01/07/92		49.49		7230.12
		04/30/92		49.07		7230.54
		10/06/92		48.27		7231.34
		10/08/92		48.28		7231.34
		04/19/93		47.45		7232.16
		11/14/95		49.71		7229.90
		02/15/96		50.02		7229.59
		05/21/96		50.31		7229.30
	7,279.61	08/12/96		50.61		7229.00
		11/18/96		50.89		7228.72
		02/24/97		51.24		7228.37
		05/19/97		51.49		7228.12
5-12B cont.		08/18/97		51.78		7227.83
	•	11/16/97		52.07		7227.54
		02/10/98		52.28		7227.33
		06/08/98		52.51		7227.10
		09/29/98		52.78		7226.83
		04/27/99		53.11		7226.50
		10/11/99		53.37		7226.24
		05/10/00		53.36		7226.25
		11/14/00		NM		
		05/21/01		53.14		7226.47
		11/16/01		53.77		7225.84
		04/17/02		53.68		7225.93
		10/30/02		53.89		7225.72
		05/20/03		54.00		7225.61
		11/10/03		54.09		7225.52
		06/07/04		54.15		7225.46
		06/08/05		54.41		7225.20
		07/10/06		54.60		7225.01
		07/25/07		54.79		7224.82
		09/22/08		54.90		7224.71

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
5-12B cont.		08/04/09		54.95		7224.66
	7,279.61	05/18/10		54.94		7224.67
		09/25/11		54.83		7224.78
		06/12/12		54.77		7224.84
		07/23/13		54.96		7224.65
		•				
		08/14/90		52.43		7230.00
		11/15/90		52.76		7229.67
		01/09/91		52.82		7229.61
		02/07/91		52.89		7229.54
		03/07/91		52.92		7229.51
		04/12/91		53.00		7229.43
		05/22/91		53.06		7229.37
		06/19/91		53.15		7229.28
		07/26/91		53.26		7229.17
		09/16/91		53.36		7229.07
		10/10/91		53.42		7229.01
		01/08/92		53.58		7228.85
		05/01/92		52.88		7229.55
		10/06/92		51.80		7230.63
		10/13/92		51.78		7230.65
		04/19/93		51.08		7231.35
5-13B	7,282.43	11/14/95		53.85		7228.58
		02/15/96		54.18		7228.25
		05/21/96		54.52		7227.91
		08/12/96		54.81		7227.62
		11/18/96		55.05		7227.38
		02/24/97		55.37		7227.06
		05/19/97		55.60		7226.83
		08/18/97		55.87		7226.56
		11/16/97		56.13		7226.30
		02/10/98		56.36		7226.07
		06/08/98		56.63		7225.80
		09/29/98		56.90		7225.53
		04/27/99		57.31		7225.12
		10/11/99		57.75		7224.68
		05/10/00		57.90		7224.53
		11/14/00		58.18		7224.25
		05/21/01		58.31		7224.12

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		11/16/01		58.47		7223.96
		04/17/02		58.60		7223.83
		10/30/02		58.90		7223.53
		05/20/03		59.08		7223.35
		11/10/03		59.28		7223.15
		06/07/04		59.49		7222.94
		06/08/05		59.50		7222.93
5-13B cont.	7282.43	07/10/06		60.40		7222.03
		07/25/07		60.79		7221.64
		09/22/08		61.14		7221.29
		08/04/09		61.22		7221.21
		05/18/10		61.29		7221.14
		09/25/11		61.19		7221.24
		06/12/12		60.92		7221.51
		07/23/13		61.20		7221.23
		•	•			
		08/14/90		55.14		7230.62
		11/14/90		55.02		7230.74
		01/09/91		55.12		7230.64
		02/07/91		55.19		7230.57
		03/07/91		55.21		7230.55
	7,285.76	04/12/91		55.64		7230.12
		05/22/91		55.36		7230.40
		06/19/91		55.38		7230.38
		07/25/91		55.54		7230.22
5-14B		09/16/91		55.63		7230.13
		10/09/91		55.72		7230.04
		01/06/92		55.74		7230.02
		04/30/92		55.02		7230.74
		10/06/92		53.94		7231.82
		10/08/92		53.93		7231.83
		04/19/93		53.25		7232.51
		11/14/95		56.25		7229.51
		02/15/96		56.62		7229.14
		05/21/96		57.02		7228.74
		08/12/96		57.33		7228.43
		11/18/96		57.64		7228.12
		02/24/97		58.01		7227.75
		05/19/97		58.27		7227.49

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		08/18/97		58.56		7227.20
		11/16/97		58.86		7226.90
		02/10/98		59.08		7226.68
		06/08/98		59.41		7226.35
		09/29/98		59.69		7226.07
		04/27/99		60.17		7225.59
		10/11/99		60.43		7225.33
		05/10/00		60.56		7225.20
		11/14/00		60.71		7225.05
		05/21/01		60.77		7224.99
		11/16/01		60.98		7224.78
		04/17/02		61.19		7224.57
5-14B cont.	7285.76	10/30/02		61.55		7224.21
		05/20/03		61.84		7223.92
		11/10/03		62.11		7223.65
		06/07/04		62.36		7223.40
		06/08/05		62.92		7222.84
		07/10/06		63.48		7222.28
		07/25/07		63.95		7221.81
		09/22/08		64.50		7221.26
		08/04/09		64.83		7220.93
		05/18/10		65.15		7220.61
		09/25/11		65.66		7220.10
		06/12/12		66.18		7219.58
		07/23/13		66.43		7219.33
		08/14/90		49.86		7243.06
		11/14/90		49.98		7242.94
		01/10/91		50.10		7242.82
		02/07/91		50.16		7242.76
		03/06/91		50.17		7242.75
		04/10/91		50.25		7242.67
5-15B	7,292.92	05/23/91		50.45		7242.47
	,,	06/19/91		50.54		7242.38
		07/25/91		50.70		7242.22
		09/16/91		50.92		7242.00
		10/09/91		50.95		7241.97
		01/07/92		50.57		7242.35
		04/30/92		48.74		7244.18

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		10/06/92		47.75		7245.17
		10/08/92		47.74		7245.18
		04/19/93		47.41		7245.51
		11/14/95		51.84		7241.08
		02/15/96		52.42		7240.50
		05/21/96		53.04		7239.88
		08/12/96		53.52		7239.40
		11/18/96		53.99		7238.93
		02/24/97		54.48		7238.44
		05/19/97		54.60		7238.32
		08/18/97		55.18		7237.74
		11/16/97		55.48		7237.44
		02/10/98		55.70		7237.22
		06/08/98		56.00		7236.92
		09/29/98		56.35		7236.57
		04/27/99		56.55		7236.37
		08/03/99		57.02		7235.90
		08/27/99		57.10		7235.82
5 455 .	7 202 02	10/11/99		56.98		7235.94
5-15B cont.	7,292.92	02/28/00		56.60		7236.32
		05/10/00		56.63		7236.29
		11/14/00		56.78		7236.14
		05/21/01		57.03		7235.89
		11/16/01		57.28		7235.64
		04/17/02		57.56		7235.36
		10/30/02		57.74		7235.18
		05/21/03		58.05		7234.87
		11/10/03		58.36		7234.56
		06/07/04		58.73		7234.19
		06/08/05		59.35		7233.57
		07/10/06		59.99		7232.93
		07/25/07		60.65		7232.27
		09/22/08		60.77		7232.15
		08/04/09		60.81		7232.11
		05/18/10		60.91		7232.01
		09/25/11		60.36		7232.56
		06/12/12		60.26		7232.66
		07/23/13		61.03		7231.89

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		08/14/90		47.21		7241.61
		11/14/90		47.46		7241.36
		01/10/91		47.60		7241.22
		02/06/91		47.62		7241.20
		03/06/91		47.63		7241.19
		04/09/91		47.73		7241.09
		05/23/91		47.87		7240.95
		06/18/91		47.91		7240.91
		07/26/91		48.04		7240.78
		09/03/91		48.17		7240.65
		10/11/91		48.30		7240.52
		11/12/91		48.34		7240.48
		12/12/91		48.22		7240.60
		01/08/92		48.11		7240.71
		02/20/92		47.76		7241.06
		03/18/92		47.43		7241.39
		04/29/92		46.89		7241.93
		10/06/92		45.97		7242.85
		10/13/92		45.95		7242.87
5-16B	7,288.82	04/19/93		45.61		7243.21
	,	04/20/93		45.62		7243.20
		11/14/95		48.88		7239.94
		02/15/96		49.33		7239.49
		05/21/96		50.11		7238.71
		08/12/96		50.41		7238.41
		11/18/96		50.74		7238.08
		02/24/97		51.08		7237.74
		05/19/97		51.35		7237.47
		08/18/97		51.67		7237.15
		11/16/97		52.02		7236.80
		02/10/98		52.16		7236.66
		06/08/98		52.42		7236.40
		09/29/98		52.86		7235.96
		04/27/99		53.02		7235.80
		08/03/99		53.98		7234.84
		08/27/99		54.06		7234.76
		10/11/99		53.66		7235.16
		02/28/00		53.21		7235.61
		05/10/00		53.50		7235.32

TABLE 1
SUMMARY OF GROUNDWATER LEVEL DATA
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		11/14/00		53.52		7235.30
		05/21/01		53.71		7235.11
		11/16/01		53.93		7234.89
		04/17/02		54.11		7234.71
		10/30/02		54.34		7234.48
		05/21/03		54.65		7234.17
		11/10/03		54.94		7233.88
		06/07/04		55.32		7233.50
5 4 CD	7 200 02	06/08/05		55.94		7232.88
5-16B cont.	7,288.82	07/10/06		56.57		7232.25
		07/25/07		57.11		7231.71
		09/22/08		57.50		7231.32
		08/04/09		57.56		7231.26
		05/18/10		57.73		7231.09
		09/25/11		57.27		7231.55
		06/12/12		57.23		7231.59
		07/23/13		57.89		7230.93
		04/21/14		60.22		7228.60
		•	•		•	
		08/14/90		40.79		7243.96
		11/15/90		40.83		7243.92
		01/10/91		40.96		7243.79
		02/08/91		40.99		7243.76
		03/06/91		41.01		7243.74
		04/11/91		41.06		7243.69
		05/22/91		41.14		7243.61
		06/18/91		41.23		7243.52
		07/25/91		41.34		7243.41
F 17D	7 204 75	09/16/91		41.50		7243.25
5-17B	7,284.75	10/09/91		41.60		7243.15
		01/07/92		41.60		7243.15
		02/19/92		41.46		7243.29
		03/17/92		41.21		7243.54
		04/28/92		40.84		7243.91
		10/06/92		39.97		7244.78
		10/07/92		39.97		7244.78
		04/19/93		39.40		7245.35
		11/14/95		42.06		7242.69
		02/15/96		42.46		7242.29

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		05/21/96		42.94		7241.81
		08/12/96		43.33		7241.42
		11/18/96		43.72		7241.03
		02/24/97		44.14		7240.61
		05/19/97		44.44		7240.31
		08/18/97		44.76		7239.99
		11/16/97		45.07		7239.68
		02/10/98		45.30		7239.45
		06/08/98		45.58		7239.17
		09/29/98		45.97		7238.78
		04/27/99		46.36		7238.39
		10/11/99		46.78		7237.97
		05/10/00		46.57		7238.18
		11/14/00		47.19		7237.56
F 47D	7 204 75	05/21/01		47.34		7237.41
5-17B cont.	7,284.75	11/16/01		47.58		7237.17
		04/17/02		47.70		7237.05
		10/30/02		48.04		7236.71
		05/20/03		48.22		7236.53
		11/10/03		48.51		7236.24
		06/07/04		48.69		7236.06
		06/08/05		48.73		7236.02
		07/10/06		49.71		7235.04
		07/25/07		49.99		7234.76
		09/22/08		50.06		7234.69
		08/04/09		50.50		7234.25
		05/18/10		50.82		7233.93
		09/25/11		50.44		7234.31
		06/12/12		50.33		7234.42
		07/23/13		51.13		7233.62
	-	-	-	-	-	
		08/14/90		51.67		7234.74
		08/24/90		51.68		7234.73
		11/15/90		51.60		7234.81
F 10D	7 200 44	01/04/91		51.66		7234.75
5-18B	7,286.41	02/13/91		51.76		7234.65
		03/06/91		51.79		7234.62
		04/16/91		51.90		7234.51
		06/19/91		52.05		7234.36

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		07/26/91		52.21		7234.20
		09/16/91		52.35		7234.06
		10/11/91		52.41		7234.00
		01/08/92		52.40		7234.01
		05/01/92		51.38		7235.03
		10/06/92		50.24		7236.17
		10/13/92		50.22		7236.19
		04/19/93		49.68		7236.73
		04/22/93		49.70		7236.71
		11/14/95		53.04		7233.37
		02/15/96		53.49		7232.92
		05/21/96		53.94		7232.47
		08/12/96		54.31		7232.10
		11/18/96		54.64		7231.77
		02/24/97		55.03		7231.38
		05/19/97		55.25		7231.16
		08/18/97		55.51		7230.90
		11/16/97		55.75		7230.66
		02/10/98		55.94		7230.47
5-18B cont.	7,286.41	06/08/98		56.18		7230.23
		09/29/98		56.43		7229.98
		04/27/99		56.81		7229.60
		10/11/99		57.26		7229.15
		05/10/00		57.18		7229.23
		11/14/00		57.38		7229.03
		05/21/01		57.47		7228.94
		11/16/01		57.87		7228.54
		04/17/02		57.85		7228.56
		10/30/02		58.16		7228.25
		05/20/03		58.40		7228.01
		11/10/03		58.71		7227.70
		06/07/04		59.03		7227.38
		06/08/05		59.65		7226.76
		07/10/06		60.29		7226.12
		07/25/07		60.82		7225.59
		09/22/08		61.28		7225.13
		08/04/09		61.46		7224.95
		05/18/10		61.61		7224.80
		09/25/11		61.38		7225.03

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		06/12/12		61.18		7225.23
5-18B cont.	7,286.41	07/23/13		61.65		7224.76
		04/21/14		61.84		7224.57
		08/14/90		49.44		7241.08
		11/14/90		49.76		7240.76
		01/10/91		49.86		7240.66
		02/07/91		49.90		7240.62
		03/06/91		49.92		7240.60
		04/09/91		50.02		7240.50
		05/23/91		50.92		7239.60
		06/19/91		50.23		7240.29
		07/26/91		50.37		7240.15
		09/16/91		50.55		7239.97
		10/10/91		50.60		7239.92
		01/08/92		50.36		7240.16
		02/20/92		50.04		7240.48
		03/19/92		49.60		7240.92
		04/29/92		48.97		7241.55
		10/06/92		48.05		7242.47
		10/13/92		48.04		7242.48
5-19B	7,290.52	04/19/93		47.73		7242.79
		11/14/95		51.30		7239.22
		02/15/96		51.75		7238.77
		05/21/96		52.26		7238.26
		08/12/96		52.66		7237.86
		11/18/96		53.02		7237.50
		02/24/97		53.44		7237.08
		05/19/97		53.73		7236.79
		08/18/97		TP		
		11/16/97		54.29		7236.23
		02/10/98		54.49		7236.03
		06/08/98		54.74		7235.78
		09/29/98		55.05		7235.47
		04/27/99		55.26		7235.26
		08/03/99		55.78		7234.74
		08/27/99		55.87		7234.65
		10/11/99		55.73		7234.79
		02/28/00		55.33		7235.19

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		05/10/00		55.39		7235.13
		11/14/00		55.51		7235.01
		05/21/01		55.74		7234.78
		11/16/01		55.96		7234.56
		04/17/02		56.11		7234.41
		10/30/02		56.36		7234.16
		05/20/03		56.60		7233.92
		11/10/03		56.88		7233.64
F 10D comt	7 200 52	06/07/04		57.24		7233.28
5-19B cont.	7,290.52	06/08/05		57.84		7232.68
		07/10/06		58.43		7232.09
		07/25/07		58.89		7231.63
		09/22/08		59.24		7231.28
		08/04/09		59.31		7231.21
		05/18/10		59.42		7231.10
		09/25/11		58.95		7231.57
		06/12/12		58.86		7231.66
		07/23/13		59.53		7230.99
			•	•	•	
		08/14/90		48.50		7236.10
		01/09/91		48.70		7235.90
		02/07/91		48.79		7235.81
		03/07/91		48.80		7235.80
		04/16/91		48.88		7235.72
		05/20/91		48.92		7235.68
		06/19/91		49.02		7235.58
		07/26/91		49.13		7235.47
		09/16/91		49.25		7235.35
F 30D	7.204.60	10/10/91		49.32		7235.28
5-20B	7,284.60	01/08/92		49.36		7235.24
		05/01/92		48.48		7236.12
		10/06/92		47.61		7236.99
		10/12/92		47.58		7237.02
		04/19/93		47.26		7237.34
		04/21/93		47.31		7237.29
		11/14/95		49.63		7234.97
		02/15/96		50.03		7234.57
		05/21/96		50.39		7234.21
		08/12/96		50.66		7233.94

TABLE 1
SUMMARY OF GROUNDWATER LEVEL DATA
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		11/18/96		50.99		7233.61
		02/24/97		51.28		7233.32
		05/19/97		51.54		7233.06
		08/18/97		51.88		7232.72
		11/16/97		52.21		7232.39
		02/10/98		52.46		7232.14
		06/08/98		52.62		7231.98
		09/29/98		52.95		7231.65
		04/27/99		53.30		7231.30
		10/11/99		53.78		7230.82
		05/10/00		53.23		7231.37
		11/14/00		53.53		7231.07
		05/21/01		53.62		7230.98
		11/16/01		53.73		7230.87
5-20B cont.	7,284.60	04/17/02		53.78		7230.82
		10/30/02		54.04		7230.56
		05/20/03		54.17		7230.43
		11/10/03		54.29		7230.31
		06/07/04		54.45		7230.15
		06/08/05		54.50		7230.10
		07/10/06		55.33		7229.27
		07/25/07		55.74		7228.86
		09/22/08		56.02		7228.58
		08/04/09		56.13		7228.47
		05/18/10		56.15		7228.45
		09/25/11		55.82		7228.78
		06/12/12		55.80		7228.80
		07/23/13		56.24		7228.36
		04/21/14		56.56		7228.04
		-	-	-	-	-
		10/25/90		48.08		7244.66
		11/15/90		48.08		7244.66
		01/10/91		48.33		7244.41
		02/04/91		48.38		7244.36
5-22B	7,292.74	03/06/91		48.42		7244.32
		04/11/91		48.49		7244.25
		05/21/91		48.65		7244.09
		06/17/91		48.76		7243.98
		07/24/91		49.24		7243.50

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		09/04/91		49.06		7243.68
		10/03/91		49.19		7243.55
		11/04/91		49.26		7243.48
		12/12/91		49.15		7243.59
		01/10/92		49.00		7243.74
		01/28/92		48.84		7243.90
		02/19/92		48.67		7244.07
		03/18/92		48.24		7244.50
		04/28/92		47.46		7245.28
		10/06/92		45.97		7246.77
		10/08/92		45.98		7246.76
		04/19/93		45.34		7247.40
		11/14/95		NM		
		02/15/96		NM		
		05/21/96		51.25		7241.49
		08/12/96		51.91		7240.83
		11/18/96		NM		
		02/27/97		52.95		7239.79
		05/19/97		53.13		7239.61
5-22B cont.	7,292.74	08/18/97		53.51		7239.23
	,	11/16/97		53.79		7238.95
		02/10/98		dry		dry
		09/08/98		54.05		7238.69
		09/29/98		54.16		7238.58
		04/27/99		dry		dry
		10/11/99		dry		dry
		05/10/00		dry		dry
		11/14/00		dry		dry
		05/21/01		dry		dry
		11/16/01		dry		dry
		04/17/02		dry		dry
		10/30/02		dry		dry
		05/21/03		dry		dry
		11/10/03		dry		dry
		06/07/04		dry		dry
		06/08/05		dry		dry
		07/10/06		dry		dry
		07/25/07		dry		dry
		09/22/08		dry		dry

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		08/04/09		dry		dry
		05/18/10		dry		dry
5-22B cont.	7,292.74	09/25/11		53.48		7239.26
		06/12/12		54.00		7238.74
		07/23/13		54.32		7238.42
		•		•	•	
		10/25/90		55.78		7226.85
		11/15/90		55.75		7226.88
		01/03/91		55.90		7226.73
		02/07/91		56.20		7226.43
		03/07/91		56.02		7226.61
		04/16/91		56.08		7226.55
		05/22/91		56.14		7226.49
		06/19/91		56.17		7226.46
		07/25/91		56.28		7226.35
		09/03/91		56.38		7226.25
		10/09/91		56.47		7226.16
		11/11/91		56.56		7226.07
		12/13/91		56.63		7226.00
		01/07/92		56.58		7226.05
		02/18/92		56.58		7226.05
		03/17/92		56.42		7226.21
5-23B	7,282.63	04/30/92		56.12		7226.51
		10/06/92		55.19		7227.44
		10/09/92		55.19		7227.44
		04/19/93		54.56		7228.07
		11/14/95		57.02		7225.61
		02/15/96		57.39		7225.24
		05/21/96		57.79		7224.84
		08/12/96		58.11		7224.52
		11/18/96		58.38		7224.25
		02/24/97		58.75		7223.88
		05/19/97		59.01		7223.62
		08/18/97		59.33		7223.30
		11/16/97		59.66		7222.97
		02/10/98		59.97		7222.66
		06/08/98		60.36		7222.27
		09/29/98		60.73		7221.90
		04/27/99		61.29		7221.34

TABLE 1
SUMMARY OF GROUNDWATER LEVEL DATA
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		10/11/99		61.66		7220.97
		05/10/00		61.88		7220.75
		11/14/00		62.09		7220.54
		05/21/01		62.19		7220.44
		11/16/01		62.33		7220.30
		04/17/02		62.47		7220.16
		10/30/02		62.74		7219.89
		05/20/03		62.94		7219.69
		11/10/03		63.16		7219.47
5-23B cont.	7,282.63	06/07/04		63.40		7219.23
		06/08/05		63.93		7218.70
		07/10/06		64.52		7218.11
		07/25/07		65.07		7217.56
		09/22/08		65.63		7217.00
		08/04/09		65.89		7216.74
		05/18/10		66.11		7216.52
		09/25/11		66.23		7216.40
		06/12/12		66.17		7216.46
		07/23/13		66.44		7216.19
		10/25/90		53.64		7225.54
		11/15/90		53.72		7225.46
		01/03/91		53.76		7225.42
		01/09/91		53.78		7225.40
		02/07/91		53.86		7225.32
		03/07/91		53.86		7225.32
		04/16/91		53.94		7225.24
		05/22/91		54.00		7225.18
		07/26/91		54.15		7225.03
5-24B	7,279.18	09/03/91		54.21		7224.97
		10/10/91		54.30		7224.88
		11/11/91		54.38		7224.80
		12/13/91		54.43		7224.75
		01/07/92		54.40		7224.78
		02/18/92		54.40		7224.78
		03/17/92		54.25		7224.93
		04/30/92		53.98		7225.20
		10/06/92		53.06		7226.12
		10/13/92		53.02		7226.16

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		04/19/93		52.33		7226.85
		04/21/93		52.33		7226.85
		11/14/95		54.62		7224.56
		02/15/96		54.96		7224.22
		05/21/96		55.38		7223.80
		08/12/96		55.66		7223.52
		11/18/96		55.93		7223.25
		02/24/97		56.26		7222.92
		05/19/97		56.50		7222.68
		08/18/97		56.78		7222.40
		11/16/97		57.07		7222.11
		02/10/98		57.32		7221.86
		06/08/98		57.69		7221.49
		09/29/98		58.03		7221.15
		04/27/99		58.56		7220.62
		10/11/99		58.89		7220.29
5-24B cont.	7 270 10	05/10/00		59.04		7220.14
5-246 COIIL.	7,279.18	11/14/00		59.22		7219.96
		05/21/01		59.29		7219.89
		11/16/01		59.38		7219.80
		04/17/02		59.45		7219.73
		10/30/02		59.66		7219.52
		05/20/03		59.79		7219.39
		11/10/03		59.93		7219.25
		06/07/04		60.07		7219.11
		06/08/05		60.41		7218.77
		07/10/06		60.68		7218.50
		07/25/07		60.85		7218.33
		09/22/08		60.96		7218.22
		08/04/09		61.00		7218.18
		05/18/10		61.00		7218.18
		09/25/11		60.89		7218.29
		06/12/12		60.82		7218.36
		07/23/13		61.02		7218.16
		I 0=1:-:-	T		<u> </u>	
		05/12/92		48.62		7246.09
5-34B	7,294.71	05/13/92		48.60		7246.11
	,,234.71	05/14/92		48.58		7246.13
		06/19/92		48.18		7246.53

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		07/28/92		47.88		7246.83
		04/19/93		46.98		7247.73
		11/14/95		52.33		7242.38
		02/16/96		NM		
		08/12/96		NM		
		11/18/96		NM		
		02/24/97		NM		
		05/19/97		NM		
		08/18/97		NM		
		11/16/97		NM		
		02/10/98	NM	61.00		7233.71
		10/11/99	58.54	58.56	0.02	7236.17
		05/10/00	57.33	57.35	0.02	7237.38
		11/14/00		57.61		7237.10
		05/21/01	58.78	58.83	0.05	7235.92
5-34B cont.	7,294.71	11/16/01		59.26		7235.45
		04/17/02	59.09	59.86	0.77	7235.44
		10/30/02		60.10		7234.61
		05/21/03	59.48	60.72	1.24	7234.93
		11/10/03		61.31		7233.40
		06/07/04	60.32	61.38	1.06	7234.14
		06/08/05		61.26		7233.45
		08/05/05		61.33		7233.38
		07/10/06	61.02	61.56	0.54	7233.56
		07/25/07	62.44	62.97	0.53	7232.14
		09/22/08	61.35	61.40	0.05	7233.35
		08/04/09	61.05	61.06	0.01	7233.66
		05/18/10	61.73	61.78	0.05	7232.97
		09/25/11		60.61		7234.10
		06/12/12	sheen	60.89	sheen	7233.82
		07/23/13	61.55	61.58	0.03	7233.15
		05/05/92		50.55		7245.56
		05/14/92		50.32		7245.79
		05/30/92		50.14		7245.97
5-35B	7,296.11	06/19/92		49.94		7246.17
		06/29/92		49.81		7246.30
		07/24/92		49.61		7246.50
		08/07/92		49.51		7246.60

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		08/31/92		49.35		7246.76
		09/15/92		49.29		7246.82
		09/29/92		49.26		7246.85
		10/14/92		49.20		7246.91
		04/19/93		48.79		7247.32
		04/22/93		48.73		7247.38
	7 200 11	11/14/95	NM	NM		
	7,296.11	02/15/96	NM	NM		
		08/12/96	NM	NM		
		11/18/96	NM	NM		
		02/24/97	NM	NM		
		05/19/97	sheen	56.21	sheen	7240.67
		08/18/97		56.41		7240.47
		11/16/97	NM	NM		
		02/10/98		55.79		7239.54
		10/11/99	57.15	57.16	0.01	7238.18
		05/10/00		56.68		7238.65
5-35B cont.		11/14/00		57.30		7238.03
		05/21/01		57.51		7237.82
		11/16/01		57.75		7237.58
		04/17/02		57.96		7237.37
		10/30/02		57.97		7237.36
		05/21/03		58.31		7237.02
		11/10/03		58.43		7236.90
	7,295.33 (a)	06/07/04		58.69		7236.64
		06/08/05		58.89		7236.44
		07/10/06		58.99		7236.34
		07/25/07		58.97		7236.36
		09/22/08		58.43		7236.90
		08/04/09		58.60		7236.73
		05/18/10		58.72		7236.61
		09/25/11		57.71		7237.62
		06/12/12		58.23		7237.10
		07/23/13		58.75		7236.58
		04/22/14		58.91		7236.42
		10/06/92		61.03		7218.70
5-41B	7,279.73	10/09/92		60.99		7218.74
		04/19/93		60.38		7219.35

Well ID	Measuring Point Elevation (fmsl)	Date	(ft below MP)		PSH Thickness (ft)	Ground Water Elevation (fmsl)
		04/20/93		60.40		7219.33
		11/14/95		61.90		7217.83
		02/15/96		62.26		7217.47
		05/21/96		62.72		7217.01
		08/12/96		63.12		7216.61
		11/18/96		63.52		7216.21
5-41B cont.	7,279.73	02/24/97		63.97		7215.76
		05/19/97		64.36		7215.37
		08/18/97		64.72		7215.01
		11/16/97	NM	NM		
		02/10/98	NM	NM		
		05/10/00	NM	NM		
		11/14/00	NM	NM		
		•	•	•	•	
		10/06/92		62.71		7205.64
		10/07/92		62.71		7205.64
		04/19/93		62.18		7206.17
		04/20/93		62.20		7206.15
		11/14/95		62.77		7205.58
		02/15/96		63.27		7205.08
5-47B	7,268.35	05/21/96		63.83		7204.52
		08/12/96		64.31		7204.04
		11/18/96		64.75		7203.60
		02/24/97		TP		
		05/19/97		65.39		7202.96
		08/18/97		66.03		7202.32
		11/16/97		NM		
		•	•	•	•	
		10/06/92		46.80		7245.84
		10/12/92		46.96		7245.68
		04/19/93		46.52		7246.12
		04/21/93		46.51		7246.13
		11/14/95		51.00		7241.64
5-48B	7,292.64	02/15/96		51.60		7241.04
		05/21/96		52.22		7240.42
		08/12/96		52.75		7239.89
		11/18/96		53.24		7239.40
		02/24/97		53.76		7238.88
		05/19/97		54.11		7238.53

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		08/18/97		54.49		7238.15
		11/16/97		54.78		7237.86
		02/10/98		TP		
		06/08/98		TP		
		09/29/98		55.67		7236.97
		04/27/99		55.93		7236.71
		08/03/99		56.32		7236.32
		08/27/99		56.41		7236.23
		10/11/99		56.44		7236.20
		02/28/00		56.19		7236.45
		05/10/00		56.08		7236.56
		11/14/00		56.35		7236.29
		05/21/01		56.57		7236.07
		11/16/01		56.82		7235.82
5-48B cont.	7,292.64	04/17/02		57.05		7235.59
		10/30/02		57.22		7235.42
		05/21/03		57.54		7235.10
		11/10/03		57.82		7234.82
		06/07/04		58.23		7234.41
		06/08/05		58.86		7233.78
		07/10/06		59.44		7233.20
		07/25/07		59.84		7232.80
		09/22/08		dry		dry
		08/04/09		dry		dry
		05/18/10		dry		dry
		09/25/11		59.65		7232.99
		06/12/12		59.68		7232.96
		07/23/13				
		07/23/13		dry		dry
		04/19/93		59.97		7197.83
				60.21		7197.83
		11/14/95				
		02/15/96		60.58		7197.22
		05/21/96		61.03		7196.77
5-57B	7,257.80	08/12/96		61.44		7196.36
	,	11/18/96		61.80		7196.00
		02/24/97		62.20		7195.60
		05/19/97		62.51		7195.29
		08/18/97		62.82		7194.98
		11/16/97	NM	NM		
		T		1	T	
		04/19/93		64.09		7215.29
		11/14/95		65.55		7213.83
		02/15/96		66.16		7213.22
		05/21/96		66.83		7212.55
5-58B	7,279.38	08/12/96		67.37		7212.01
J-30b	1,213.30	11/18/96		67.86		7211.52
.]		02/24/97		68.42		7210.96
		05/19/97		68.82		7210.56
		08/18/97		69.21		7210.17
		11/16/97	NM	NM		

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		11/16/01		49.97		7240.85
		04/17/02		50.07		7240.75
		10/30/02		50.29		7240.53
		05/21/03		50.38		7240.44
		11/10/03		50.57		7240.25
		06/07/04		50.66		7240.16
		06/08/05		50.84		7239.98
		07/10/06		51.12		7239.70
5-59	7,290.82	07/25/07		51.32		7239.50
		09/22/08		51.50		7239.32
		08/04/09		51.49		7239.33
		05/18/10		51.42		7239.40
		09/25/11		51.40		7239.42
		06/12/12		51.51		7239.31
		07/10/12		51.53		7239.29
		07/23/13		51.59		7239.23
		04/22/14		51.63		7239.19
	•	•	•	•	•	
		11/16/01		52.01		7238.82
		04/17/02		52.07		7238.76
		10/30/02		52.27		7238.56
		05/21/03		52.33		7238.50
5-60	7,290.83	11/10/03		52.51		7238.32
	,	06/07/04		52.60		7238.23
		06/08/05		52.75		7238.08
		07/10/06		52.97		7237.86
		07/25/07		53.10		7237.73

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		09/22/08		53.26		7237.57
		08/04/09		53.30		7237.53
5-60 cont.	7,290.83	05/18/10		53.17		7237.66
5-00 COIIC.	7,290.03	09/25/11		52.83		7238.00
		06/12/12		53.09		7237.74
		07/23/13		53.47		7237.36
		02/10/98		58.35		7238.53
		10/11/99		59.28		7237.60
		05/10/00		58.78		7238.10
		11/14/00		59.07		7237.81
		11/16/01		59.83		7237.05
		04/17/02		60.01		7236.87
		10/30/02		60.20		7236.68
		05/21/03		60.54		7236.34
		11/10/03		60.84		7236.04
SVE-1	7,296.88	06/07/04		61.16		7235.72
		06/08/05		61.46		7235.42
		07/10/06		dry		dry
		07/25/07		dry		dry
		09/22/08		dry		dry
		08/04/09		dry		dry
		05/18/10		dry		dry
		09/25/11		61.39		7235.49
		06/12/12		61.31		7235.57
		07/23/13		61.43		7235.45
			-			
		02/10/98		58.85		7238.83
		10/11/99		59.57		7238.11
		05/10/00		58.99		7238.69
		11/14/00		59.29		7238.39
		11/16/01		60.14		7237.54
SVE-2	7 207 60	04/17/02		60.28		7237.40
SVE-Z	7,297.68	10/30/02		60.49		7237.19
		05/21/03		60.83		7236.85
		11/10/03		61.18		7236.50
		06/07/04		61.49		7236.19
		06/08/05		61.67		7236.01
		07/10/06		dry		dry

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		07/25/07		dry		dry
		09/22/08		dry		dry
		08/04/09		dry		dry
SVE-2 cont.	7,297.68	05/18/10		dry		dry
		09/25/11		61.57		7236.11
		06/12/12		dry		dry
		07/23/13		dry		dry
		02/10/98		56.24		7237.44
		10/11/99		57.42		7236.26
		11/16/01		57.81		7235.87
		04/17/02		58.01		7235.67
		10/30/02		58.18		7235.50
		05/21/03		58.49		7235.19
		11/10/03		58.76		7234.92
		06/07/04		59.15		7234.53
SVE-3	7 202 60	06/08/05		60.42		7233.26
3VE-3	7,293.68	07/10/06	60.05	60.71	0.66	7233.47
		07/25/07	60.51	60.52	0.01	7233.17
		09/22/08		60.53		7233.15
		08/04/09		60.08		7233.60
		05/18/10		60.91		7232.77
		09/25/11		60.13		7233.55
		06/12/12		60.25		7233.43
		07/23/13		60.99		7232.69
		04/22/14		61.80		7231.88
			T		T	
		02/10/98		52.91		7236.92
		10/11/99		54.48		7235.35
		11/16/01		54.75		7235.08
		04/17/02		54.94		7234.89
		10/30/02		55.19		7234.64
SVE-4	7,289.83	05/21/03		55.48		7234.35
3464	7,269.63	11/10/03		55.75		7234.08
		06/07/04		56.14		7233.69
		06/08/05		56.79		7233.04
		07/10/06		57.45		7232.38
		07/25/07		57.94		7231.89
		09/22/08		58.31		7231.52

Well ID	Measuring Point Elevation (fmsl)	Date	Depth to PSH (ft below MP)	Depth to Ground Water (ft below MP)	PSH Thickness (ft)	Ground Water Elevation (fmsl)
		08/04/09		58.36		7231.47
		05/18/10		58.57		7231.26
SVE-4 cont.	7,289.83	09/25/11		58.10		7231.73
		06/12/12		58.03		7231.80
		07/23/13		58.71		7231.12
I		10/11/99		58.90		7237.41
		05/10/00		58.46		7237.85
		11/14/00		58.99		7237.32
		11/16/01		59.46		7236.85
		04/17/02		59.64		7236.67
		10/30/02		59.71		7236.60
		05/21/03		59.94		7236.37
		11/10/03		60.14		7236.17
5-371	7,296.31	06/07/04		60.33		7235.98
3 371	7,230.31	06/08/05		60.37		7235.94
		07/10/06			7235.84	
		07/25/07		60.45		7235.86
		09/22/08		59.93		7236.38
		08/04/09		60.28		7236.03
		05/18/10		60.18		7236.13 7237.16
		09/25/11 06/12/12		59.15 59.71		7236.60
		07/23/13		60.27		7236.04
		07/23/13		00.27		7230.04
		10/11/99		60.76		7235.80
		05/10/00		59.76		7236.80
		11/14/00		59.25		7237.31
		11/16/01		61.31		7235.25
		04/17/02		61.51		7235.05
		10/30/02		61.59		7234.97
5-36E	7,296.56	05/21/03		61.46		7235.10
3 302	7,230.30	11/10/03		61.86		7234.70
		06/07/04		62.30		7234.26
		06/08/05		62.62		7233.94
		07/10/06		62.83		7233.73
		07/25/07		62.93		7233.63
		09/22/08		62.46		7234.10
		08/04/09	61.84			7234.72
		05/18/10		63.11 61.82		7233.45
5-36E cont.	7,296.56	09/25/11		62.25		7234.74 7234.31
		06/12/12 07/23/13		62.25		7234.31

MP = Measuring point

TABLE 2
SUMMARY OF FIELD PARAMETERS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Dissolved Oxygen (mg/L) Meter/Hach	рН	Temperature °C	Electrical Conductivity (mmhos)	Remarks
	11/21/95	3.8	7.37	12.8	1314	Muddy, no odor
	02/21/96	7.5	7.40	11.9	960	Turbid, no odor
	05/23/96	10.6a	7.28	13.2	1327	Turbid
5-01B	08/14/96	NM	7.51	15.8	1324	Turbid, no odor
3-016	11/21/96	6.3	7.13	13.0	1080	Turbid
	02/27/97	4.57	7.49	7.7	820	Turbid
	05/21/97	3.73	7.02	14.0	990	Slightly turbid
	08/20/97	NM	7.29	14.7	1312	Turbid, no odor
	11/23/97	5.5	7.59	14.9	1252	Clear
	02/12/98	3.4	7.86	11.3	1137	Clear
	06/11/98	5.9	7.77	17.5	1248	Clear
	10/01/98	2.8	7.70	13.9	1255	Clear
	04/29/99	/2.8	7.67	13.1	1262	Clear
	10/13/99	4.1	7.78	14.9	1294	Clear
	05/12/00	0.0/1.2	7.57	12.8	1390	Clear
	11/17/00	2.6	7.57	13.0	1467	Clear
	05/22/01	2.6/2.6	7.48	14.0	1510	Clear
5.04.0	11/18/01	2.5	7.46	14.7	1506	Clear
5-01C	04/20/02	3.2	7.50	14.5	1494	Clear
	10/30/02	3.6	7.48	14.8	1498	Cloudy
	05/21/03	3.5	7.43	15.7	1571	Clear
	11/10/03	3.9	7.32	12.5	1387	Clear
	06/07/04	2.7	7.43	14.5	1637	Clear
	06/08/05		7.39	14.1	1658	
	07/11/06	3.3	7.28	13.4	1318	Clear
	07/25/07	3.3	7.61	13.4	1300	Clear
	09/23/08	3.0	7.88	13.0	1310	Clear
	08/04/09	3.9	7.08	14.2	1718	Cloudy
		Į.				,
	11/21/95	2.1	6.89	14.5	920	Slightly cloudy, HC odor
	02/22/96	4.0	7.14	11.9	1010	Colorless, suspended black silt, HC odor
	05/23/96	1.4	7.21	14.0	1430	HC odor, suspended black fine sand and silt
5-02B	08/14/96	NM	7.36	15.0	1000	HC odor, suspended black fine sand and silt
	11/21/96	2.9	7.02	13.0	990	Black, HC odor
	02/28/97	2.17	7.20	9.6	990	Clear
	11/24/97	3.0	7.24	12.5	1439	Turbid, Reddish
	02/11/98	0.9	7.24	10.1	1397	Clear
	06/10/98	1.3	7.15	13.5	1502	Slightly turbid, odor
F 622	10/01/98	2.1	7.17	14.6	1617	Cloudy, odor
5-02C	04/28/99	/0.8	7.10	13.4	1756	Clear, Strong HC odor
	10/13/99	0.9	7.12	14.1	1858	Cloudy, odor
	05/13/00	0.9	7.11	13.4	1821	Clear, strong odor
	11/17/00	2.2	7.18	13.1	1832	Clear, odor

TABLE 2
SUMMARY OF FIELD PARAMETERS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Dissolved Oxygen (mg/L) Meter/Hach	рН	Temperature °C	Electrical Conductivity (mmhos)	Remarks
	05/24/01	2.6/1.6	7.11	15.8	1800	Clear, odor
	11/17/01	NM	7.14	14.8	1806	Clear, odor
	04/20/02	1.5	7.15	15.0	1829	Cloudy, sweet odor
	10/31/02	0.9	7.11	15.6	1811	Cloudy, odor
	05/22/03	1.2	7.10	16.4	1833	Cloudy, odor
5-02C cont.	11/11/03	1.7	7.03	12.9	1541	Cloudy, odor
5-02C COIII.	06/08/04	1.3	7.04	15.9	1934	Clear
	06/09/05		7.04	14.3	1984	
	09/25/11					sheen, odor, very turbid, bailing down
	07/10/12					sheen, odor, very turbid, bailing down
	07/23/13					pulled in psh, odor, very turbid
	04/21/14					LNAPL
		<u>.                                    </u>				
	11/15/95	8.0	7.59	14.0	860	Clear, no odor
	05/20/96	7.0b	8.26	13.4	1282	Turbid
	08/12/96	8.6b	7.91	14.2	1000	Turbid
	11/18/96	8.0/7.0	7.77	12.0	1110	Turbid
ľ	02/24/97	5.74/7.0	7.77	10.2	980	Turbid
	05/20/97	8.8/8.0	7.73	13.8	1060	Turbid
	05/18/97	8.0	7.69	13.5	1423	Turbid, Reddish
	11/17/97	7.36/8.0	7.64	13.4	1100	Turbid
	02/10/98	8.17	7.36	12.5	1000	Turbid
5-03B	06/08/98	8.8	7.58	13.4	1375	Turbid
	06/11/98	8.8	7.60	13.3	1379	Turbid (Resample - 1st Voa's broke)
	09/29/98	8.3/8.0	7.59	13.9	1390	Turbid
	04/27/99	8.6	7.72	13.8	1357	Redish silt, Turbid
	10/11/99	8.6/8.0	7.75	13.1	1326	Redish silt, Turbid
	05/11/00	7.6/7.5	7.78	13.1	1311	Redish turbid
	05/22/01	8.5/8.0	7.79	14.1	1314	Redish turbid
	04/18/02	8.2	7.81	14.9	1347	Red sand, turbid
	05/20/03	8.1	7.74	16.0	1415	Red sand, turbid
	06/07/04	2.7	7.65	14.2	1450	Red sand, turbid
	00,07,01	2.,	7.03	12	1.50	nea sarray carbia
	11/17/95	NM	7.15	14.6	1097	Clear, moderate HC odor
	11/22/95	5.6	7.87	14.0	720	Slightly cloudy, no HC odor
	05/14/00					Bailed dry @ 0.3 gals
	11/17/00	1.9	7.57	12.1	1851	Bailed dry @ 0.3 gals, turbid
	05/22/01	2.7/2.6	7.54	16.1	1994	Bailed dry @ 0.3 gals, turbid
5-04B	11/18/01	4.0	7.56	16.6	1994	Turbid w/odor. Bailed dry @ 0.2 gal
	04/19/02	4.8	7.48	17.0	1974	Turbid, Bailed dry @ 0.15 gal
	10/30/02	4.9	7.43	17.1	1961	Turbid, Bailed dry @ 0.13 gal
	05/21/03	7.1	7.52	18.5	1966	Clear, Bailed dry @ 0.08 gal
	11/10/03	8.9	7.85	14.9	1669	Muddy, Bailed dry @ 0.07 gal
	11/10/03	0.3	1.03	14.3	1003	ividualy, balled dry @ 0.07 gal
5-05B	11/17/95	2.9	7.04	13.0	1350	Clear, moderate HC odor

TABLE 2
SUMMARY OF FIELD PARAMETERS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Dissolved Oxygen (mg/L) Meter/Hach	рН	Temperature °C	Electrical Conductivity (mmhos)	Remarks
	05/22/96	1.4	7.36	13.8	1419	Clear, no odor
	08/14/96	1.08	7.61	14.3	1395	Cloudy, HC odor
	11/20/96	4.2	7.26	12.2	1110	Clear
	02/25/97	2.86	7.46	8.2	890	Cloudy, HC odor
	10/13/99	7.1	7.42	13.2	1512	Clear
	05/11/00	2.2/2.4	7.38	13.3	1565	Cloudy
5.050	11/17/00	2.5	7.43	12.8	1592	Cloudy
5-05B cont.	05/22/01	2.5	7.37	14.4	1578	Cloudy, bailing down
	11/18/01	1.1	7.45	14.8	1290	Muddy, debris in well, odor (not hydrocarb)
	04/18/02	0.8	7.41	17.9	1444	Turbid (muddy water)
	10/30/02	1.2	7.29	15.1	1495	Turbid
	05/21/03	1.0	7.29	15.8	1515	Turbid (muddy water)
	11/10/03	2.1	7.16	12.4	1316	Turbid (muddy water)
	06/08/04	1.0	7.21	13.9	1555	Cloudy
		•		•		
	11/21/95	3.2	7.51	14.0	880	Slightly cloudy, no HC odor
	02/22/96	7.2	7.71	12.6	880	Clear, slight HC ordor
	05/23/96	1.7	7.90	13.2	1248	Clear
F 06D	08/15/96	NM	7.57	15.0	980	Clear, possible slight HC odor
5-06B	11/22/96	4.5	7.34	11.9	900	Clear
	02/28/97	1.11	7.78	11.7	895	Clear
	05/22/97	1.66	7.29	13.5	920	Clear
	08/20/97	2.7/2.2	7.62	14.2	1140	Clear
				•		
	11/23/97	0.5/0.8	7.67	14.3	1181	Turbid
	02/12/98	0.0	7.75	11.9	1072	Clear
	06/11/98	3.2/0.6	7.67	16.0	1159	Clear
	10/02/98	0.7	7.64	13.6	1152	Clear
	04/29/99	/1.0	7.55	12.8	1135	Clear
	10/14/99	0.2/0.4	7.66	13.3	1156	Clear
	05/13/00	0.4/0.6	7.65	13.2	1178	Clear
	11/17/00	2.1	7.62	13.0	1287	Turbid
	05/22/01	0.9	7.61	13.9	1252	Turbid
	11/18/01	1.1	7.62	14.4	1241	Cloudy
5-06C	04/20/02	1.4	7.64	14.4	1256	Clear
	10/30/02	0.5	7.62	14.7	1265	Clear
	05/21/03	1.7	7.47	15.2	1432	Cloudy
	11/10/03	1.8	7.38	12.3	1244	Cloudy
	06/07/04	1.4	7.43	14.4	1441	Turbid
	06/09/05		7.34	12.7	1560	
	07/11/06	2.0	7.42	13.7	1145	Clear
	07/25/07	3.0	7.57	13.0	1094	Clear
	09/23/08	3.1	7.88	13.2	1115	Clear
	08/04/09	2.8	7.06	13.4	1461	Clear
	05/18/10	2.9	6.83	12.6	1538	Clear

TABLE 2
SUMMARY OF FIELD PARAMETERS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Dissolved Oxygen (mg/L) Meter/Hach	рН	Temperature °C	Electrical Conductivity (mmhos)	Remarks
	09/25/11	6.9	7.24	13.8	1351	Cloudy
	06/12/12	3.6	7.00	13.3	1469	Clear
5-06C cont.	07/10/12	3.7	7.15	13.2	1455	Clear
	07/23/13	3.1	6.80	13.3	1517	Clear
	04/22/14	3.8	6.95	15.4	1585	Clear
	11/16/95	6.5	7.38	13.9	900	Clear, no odor
	05/24/96	8.0	7.44	15.0	870	Clear
	08/13/96	8.6	8.27	13.9	1242	Clear
	11/19/96	/8.0	7.25	12.5	890	Clear, no odor
	02/26/97	4.78/6.5	7.58	11.8	895	Clear
	05/21/97	6.15	7.48	13.7	905	Clear
	08/19/97	/7.0	7.61	14.9	1255	Clear
	11/17/97	8.49	7.65	13.9	990	Clear
F 12D	02/11/98	6.2 /7.0	7.70	11.3	1114	Clear
5-12B	06/09/98	10.2/8.0	7.65	17.1	1217	Clear
	09/30/98	8.1/7.0	7.67	15.4	1232	Clear
	04/27/99	7.8	7.70	12.8	1240	Clear
	10/12/99	7.2	7.87	14.2	1241	Clear
	05/11/00	6.7	7.83	14.4	1248	Clear
	05/23/01	6.7	7.78	15.2	1251	Clear
	04/19/02	7.4	8.04	15.1	1241	Clear
	05/20/03	8.6	8.00	15.8	1242	Clear
	06/08/04	3.9	8.03	16.3	1323	Clear
	· · ·					
	11/20/95	4.3	7.59	13.9	800	Clear, HC odor
	02/21/96	4.2	7.67	13.8	840	Clear, HC odor
	05/22/96	1.4	7.68	13.8	860	Clear
	08/13/96	3.04	8.71	14.5	850	Clear, HC odor
	11/20/96	2.7	7.49	13.0	850	Clear, HC odor
	02/26/97	1.51	7.53	11.9	850	Clear
	05/21/97	2.79	7.31	13.4	880	Clear, Slight HC odor
	08/19/97	1.2/0.8	7.49	17.6	1205	Clear, HC odor
	11/18/97	/1.2	7.78	10.1	1060	Clear
	02/11/98	1.3/1.0	7.81	11.0	1077	Clear, Odor
5-13B	06/09/98	1.8	7.54	14.6	1166	Clear, Odor
	09/30/98	1.2/1.4	7.57	14.3	1187	Clear, HC odor
	04/27/99		7.54	12.8	1223	Clear, HC odor
	10/12/99	3.0	7.62	13.4	1257	Clear
	05/11/00	0.1/0.8	7.50	13.2	1274	Clear
	11/16/00	2.1/1.0	7.44	13.2	1306	Clear
	05/23/01	2.3	7.47	14.1	1296	Clear
	11/17/01	2.2	7.53	15.0	1288	Clear
	04/19/02	1.9	7.49	15.2	1267	Cloudy
	10/31/02	1.7	7.47	15.4	1265	Clear

TABLE 2
SUMMARY OF FIELD PARAMETERS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Dissolved Oxygen (mg/L) Meter/Hach	рН	Temperature °C	Electrical Conductivity (mmhos)	Remarks
	05/20/03	1.9	7.44	15.5	1263	Clear
5-13B cont.	11/11/03	1.8	7.34	12.9	1112	Clear
	06/08/04	1.5	7.95	16.4	1330	Clear
	11/16/95	8.0	8.03	14.6	1056	Very slightly cloudy
	05/21/96	9.8a	8.01	13.9	1011	Clear
	08/13/96	6.89	8.64	15.6	992	Clear
	11/19/96	6.1	7.42	12.5	720	Silty amber, no odor
	02/26/97	/6.5	7.87	10.5	931	Clear, no odor
	05/21/97	6.81/7.0	7.87	13.2	964	Clear
	11/17/97	6.8	7.86	11.9	841	Clear
	02/10/98	8.12	6.91	10.2	630	Clear
5-14B	06/09/98	8.7/8.5	7.85	17.3	923	Clear
	09/30/98	6.70	7.79	15.0	1064	Slightly Turbid
	04/27/99	7.5/6.5	7.79	13.3	1058	Turbid
	10/12/99	7.9	7.88	13.5	1075	Cloudy
	05/11/00	7.3	7.85	13.0	1014	Clear
	05/24/01	8.1	7.86	14.3	1027	Clear
	04/19/02	6.9	7.86	15.5	1148	Turbid
	05/22/03	7.2	7.79	16.1	1168	Cloudy
	06/08/04	3.4	7.82	16.2	1246	Red Cloudy
		II.				,
	11/16/95	6.9	7.98	12.5	982	Clear, no odor
	05/22/96	4.9	7.67	13.0	710	Clear
	08/14/96	9.85	8.26	14.4	1006	Clear
	11/20/96	/8.0	7.54	14.0	720	Clear
	02/26/97	/6.8	7.82	11.4	977	Clear, no odor
	05/21/97	6.49	7.77	12.9	1020	Clear
	08/19/97	8.0/8.0	7.80	14.5	934	Clear
	11/17/97	6.4/6.5	7.78	11.8	904	Clear
	02/11/98	6.22/7.0	7.39	13.1	720	Slightly Turbid
5-15B	06/10/98	8.0/7.0	7.73	14.4	979	Slightly Turbid
	09/30/98	9.6	7.76	16.1	1031	Turbid
	04/28/99	/7.0	7.73	13.0	1022	Cloudy
	10/12/99	5.8	7.87	13.3	950	Clear
	05/12/00	8.1	7.65	13.1	1008	Clear
	05/24/01	6.4	7.77	14.6	1049	Clear
	04/19/02	6.0	7.79	15.6	1116	Clear
	05/22/03	5.2	7.73	17.0	1150	Clear
	06/08/04	3.1	7.69	15.2	1159	Cloudy
	30,00,04	J.±	,.05	13.2	1133	J
	11/20/95	2.4	7.50	13.0	800	Clear, strong HC odor
	02/21/96	3.5	7.58	13.8	840	Clear, HC odor
5-16B	05/23/96	1.3	7.47	13.2	1181	Clear, very strong HC odor
	08/15/96	1.9/1.0	7.46	14.3	1214	Clear, very strong HC odor

## TABLE 2 SUMMARY OF FIELD PARAMETERS THOREAU COMPRESSOR STATION NO. 5 MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Dissolved Oxygen (mg/L) Meter/Hach	рН	Temperature °C	Electrical Conductivity (mmhos)	Remarks	
	11/21/96	/1.0	7.45	13.0	1000	Clear, HC odor	
	02/27/97	2.31	7.52	12.0	1131	Clear, strong HC odor	
	05/22/97	1.13	7.30	14.9	900	Clear, strong HC odor	
	08/20/97	1.6/0.4	7.41	15.4	1100	Clear, HC odor, Film on top	
	11/19/97	0.4/0.4	7.46	12.6	1096	Clear, HC odor	
	02/11/98	2.78	7.16	11.6	840	Clear, HC odor, film/sheen	
	06/10/98					Clear w/sheen, turns blk, PSH odor	
	10/01/98					Clear w/sheen, turns blk, PSH odor	
	04/28/99					Clear w/sheen, turns blk, PSH odor	
	10/13/99					Clear w/sheen, turns blk, PSH odor	
	05/12/00					Clear w/blk particulates, sheen, strong odor	
	11/17/00					Clear w/blk particulates, sheen, strong odor	
	05/24/01					Clear w/blk particulates, sheen, strong odor	
	11/18/01					Clear w/blk suspended solids, sheen	
5-16B cont.	04/20/02					Clear w/blk suspended solids, sheen	
	10/31/02					Clear w/blk suspended solids, sheen	
	05/22/03					Clear w/blk suspended solids, sheen	
	11/11/03					Clear w/blk suspended solids, sheen	
	06/08/04	1.47	7.76	15.60	544	Brackish, strong odor	
	06/08/05		7.67	15.30	1566	Strong odor	
	07/10/06					Clear w/blk suspended solids, sheen	
	07/25/07					Clear w/blk suspended solids, sheen	
	09/23/08					Clear w/blk suspended solids, sheen	
	08/04/09					Clear w/blk suspended solids, sheen	
	05/18/10					Clear w/blk suspended solids, sheen,odor	
	09/25/11					bailed down, turbid, odor, sheen, blk	
	06/12/12					bailed down, turbid, odor, sheen, blk	
	07/23/13					bailed down, turbid, odor, sheen, blk	
	04/21/14	2.00	6.88	14.72	1596.00	Cloudy with HC odor	
	11/20/95	7.4	7.65	13.4	1525	Clear, no odor	
	05/22/96	6.4	7.03	12.5	1005	Clear	
	08/14/96	NM	7.44	17.0	1003	Clear	
	11/20/96	NM	7.69	13.6	1160	Clear	
	02/27/97	4.57	7.64	11.6	930	Clear	
			7.64	14.2	990	Clear	
	05/21/97 08/20/97	NM 9.0/8.0	7.64	15.8	1335	Clear, no odor	
5-17B	11/18/97	9.0/8.0	7.67	12.0	990	Clear	
3-1/6	02/11/98	9.5 NM	7.91	10.2	910	Clear	
	06/10/98	9.4	7.23	13.9	1331	Clear	
	10/02/98						
	04/28/99	10.0	7.70 7.69	15.0 13.7	1345	Clear	
		/7.8			1344	Clear	
	10/13/99	8.8/9.0	7.77	12.9	1381	Clear	
	05/12/00	8.2	7.76	12.9	1363	Clear	
	11/17/00	8.5	7.78	13.1	1385	Clear	

TABLE 2
SUMMARY OF FIELD PARAMETERS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Dissolved Oxygen (mg/L) Meter/Hach	рН	Temperature °C	Electrical Conductivity (mmhos)	Remarks
	05/23/01	9.2/8.0	7.73	14.6	1405	Clear
	11/17/01	NM	7.73	14.9	1388	Clear
	04/19/02	8.4	7.80	14.8	1401	Clear
	10/31/02	8.5	7.75	15.3	1361	Clear
	05/22/03	8.6	7.71	15.7	1383	Clear
5-17B cont.	11/11/03	8.9	7.61	12.6	1231	Clear
3-176 COIIL.	06/08/04	3.3	7.44	14.9	1529	Clear
	06/08/05		7.36	13.9	1816	
	07/10/06	3.2	7.25	13.1	1597	Clear
	07/25/07	4.7	7.48	13.6	1557	Clear
	09/23/08	5.6	7.83	13.1	1583	Clear
	08/04/09	5.9	7.02	13.7	2005	Clear
	11/17/95	1.4	7.68	14.0	720	Clear, HC odor
	02/21/96	5.6	7.76	12.2	760	Clear, HC odor
	05/22/96	1.5	7.62	13.3	790	Clear
	08/14/96	2.38	8.27	14.2	1071	Clear, HC odor
	11/20/96	2.3	7.70	13.0	890	Clear, HC odor
	02/27/97	1.29	7.78	11.7	988	Clear, HC odor
	05/22/97	4.45	7.71	13.3	1065	Clear, HC odor
	08/19/97	0.8/0.4	7.69	14.1	988	Clear, HC odor
	11/17/97	7.76	7.72	12.9	860	Clear
	02/11/98	2.28	7.33	12.8	790	Clear, HC odor
	06/10/98	0.6/0.6	7.61	13.6	1095	Clear, Odor
	09/30/98	2.2/0.8	7.60	15.6	1142	Clear, HC odor
	04/28/99	/1.4	7.53	12.7	1144	Clear, HC odor
	10/12/99	2.3/2.0	7.64	14.0	1164	Clear, HC odor
	05/12/00	2.4	7.54	13.4	1198	Clear, Odor
- 100	11/16/00	3.8	7.52	13.0	1257	Clear, Odor
5-18B	05/24/01	3.8	7.51	15.7	1264	Clear
	11/17/01	3.8	7.51	15.4	1234	Clear
	04/20/02	2.0	7.61	14.5	1124	Clear
	10/31/02	1.0	7.56	15.5	1112	Clear, slight odor
	05/22/03	1.6	7.52	15.6	1117	Clear, Odor
	11/11/03	1.9	7.45	13.0	976	Clear, Odor
	06/08/04	1.8	7.43	16.5	1171	
	06/08/05		7.52	14.7	1198	
	07/10/06	3.0	7.39	13.9	964	Clear
	07/25/07	1.3	7.59	14.8	962	Clear
	09/23/08	2.9	7.91	14.5	989	Clear
	08/04/09	1.1	7.04	15.2	1233	Clear w/susp. solids, Bailed down
	05/18/10	1.7	6.78	13.2	1341	Turbid, bailing down
	09/25/11	2.1	7.10	13.5	1389	Turbid
	06/12/12	2.1	6.97	13.5	1362	Turbid
	07/23/13	2.4	6.93	14.2	1363	Turbid

TABLE 2
SUMMARY OF FIELD PARAMETERS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Dissolved Oxygen (mg/L) Meter/Hach	рН	Temperature °C	Electrical Conductivity (mmhos)	Remarks
5-18B cont.	04/21/14	5.4	7.11	21.0	1312	clear
	11/20/95	2.00	7.68	13.0	700	Clear, slight HC odor
	02/21/96	4.4	7.81	12.7	730	Clear, HC odor
	05/22/96	2.0	7.78	14.1	1023	Clear, slight HC odor
	08/14/96	3.0	7.99	14.7	1022	Clear
	11/21/96	3.2	7.79	12.8	840	Clear, HC odor
	02/27/97	1.9/1.8	7.83	10.2	951	Clear, HC odor
	05/21/97	2.7	7.84	12.8	1002	Clear, HC odor
	08/20/97	2.5/1.6	7.82	15.7	939	Clear, HC odor
	11/17/97	3.68/1.0	7.91	12.3	800	Clear, Slight HC odor
	02/11/98	2.26	7.47	12.0	710	Clear, HC odor
	06/10/98	0.5	7.80	13.8	968	Clear, Odor
5-19B	10/01/98	0.2/0.4	7.75	14.0	982	Clear, HC odor
	04/28/99	/0.4	7.89	12.7	982	Clear, HC odor
	10/12/99	0.2	8.00	13.6	990	Clear, HC odor
	05/12/00	0.6/0.8	7.89	13.0	986	Clear, slight odor
	11/17/00	1.2/1.4	7.96	13.2	999	Clear, Odor
	05/24/01	1.8/1.6	7.93	14.9	1007	Clear
	11/17/01	1.5	7.92	15.2	1019	Clear
	04/19/02	0.7	8.00	15.1	1038	Clear
	10/31/02	2.6	7.95	15.5	1051	Clear
	05/22/03	1.0	7.88	16.2	1094	Clear
	11/11/03	1.4	7.81	13.0	971	Clear
	06/08/04	1.5	7.87	15.0	1147	Cloudy
	,,-					1
	11/17/95	2.9	7.16	13.7	1200	Clear, slight HC odor
	05/22/96	1.8	7.18	14.4	1120	Clear
	08/14/96	4.84	7.82	16.2	1629	Clear, HC odor
	11/20/96	NM	7.04	12.5	1180	Clear
	02/27/97	1.51	7.21	11.1	1120	Slightly Cloudy
	05/22/97	1.83/1.0	7.39	13.4	1537	Clear, HC odor
	08/19/97	2.5/1.2	7.13	16.9	1590	Clear, HC odor
	11/18/97	6.91	7.42	12.4	1200	Clear, HC odor
	02/11/98	0.00	7.35	10.9	1369	Clear
5-20B	06/09/98	2.80	7.29	16.1	1481	Clear
- = <del></del>	10/01/98	2.4/1.8	7.31	15.8	1467	Clear
	04/28/99	/0.8	7.30	13.4	1362	Clear
	10/12/99	2.6/2.2	7.46	14.4	1334	Clear
	05/12/00	0.5/0.6	7.25	12.7	1325	Clear, slight odor
	11/16/00	1.4/1.4	7.45	12.7	1337	Clear, slight odor
	05/24/01	1.1/0.8	7.48	14.4	1290	Clear, slight odor
	11/17/01	1.4	7.52	15.2	1260	Clear, slight odor
	04/19/02	0.7	7.49	14.9	1275	Clear
	10/31/02	1.1	7.49	15.3	1273	Clear

TABLE 2
SUMMARY OF FIELD PARAMETERS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

		I				<u> </u>
Well ID	Date	Dissolved Oxygen (mg/L) Meter/Hach	рН	Temperature °C	Electrical Conductivity (mmhos)	Remarks
	05/22/03	0.5	7.42	15.7	1306	Clear
	11/11/03	1.5	7.35	12.9	1149	Clear
	06/08/04	1.6	7.41	13.9	1332	Clear
	06/08/05		7.43	15.0	1347	
	07/10/06	1.3	7.46	13.5	1030	Clear
	07/25/07	1.3	7.55	14.3	1028	Clear
5-20B cont.	09/23/08	1.9	7.88	13.6	1032	Clear
	08/04/09	0.3	6.99	14.1	1335	Clear
_	05/18/10	2.1	6.99	12.9	1419	Clear
	09/25/11	1.9	7.17	13.3	1401	Turbid
	06/12/12	1.6	7.03	13.4	1390	Clear
	07/23/13	1.7	6.89	13.4	1353	Clear
	04/21/14	3.4	6.98	18.4	1213	Clear
	11/15/95	6.4	7.70	12.9	990	Clear, no odor
	02/22/96	6.6	7.47	12.3	1030	Turbid, very light brown, no odor
	05/20/96	NM	8.32	13.8	1549	Slightly turbid
ļ.	08/12/96	8.01	7.63	15.0	1100	Turbid, no odor
5-22B	11/18/96	5.6	7.48	12.2	1300	Slightly cloudy
	02/27/97	3.53	7.39	10.0	1180	Turbid, HC odor
	05/22/97	NM	7.49	13.0	1899	Turbid
	08/20/97	3.0/2.2	7.32	14.8	2060	Clear, HC odor
	11/18/97	/1.8	7.80	13.6	1740	Turbid, slight odor
	, -, -	, -				
	11/16/95	3.8	7.31	13.3	800	Clear, no odor
	05/22/96	2.6	7.66	13.0	1077	Clear
	08/13/96	5.06	8.80	15.0	780	Clear
	11/19/96	4.4	7.69	13.0	880	Clear
	02/26/97	/3.4	7.73	11.8	1018	Clear, no odor (3.4 DO is low range of Hach)
	05/21/97	4.1/4.0	7.73	12.6	1036	Clear, (low range Hach DO = 3.8)
	08/19/97	3.0/2.8	7.75	14.5	949	Clear
	11/17/97	2.0	7.74	11.1	920	Clear
F 22D	02/10/98	1.0	7.77	10.7	928	Clear
5-23B	06/08/98	2.8/2.2	7.01	13.7	1004	Clear
	09/29/98	2.6/2.0	7.67	13.7	1013	Clear
	04/27/99	2.6/2.0	7.72	12.9	1015	Clear
	10/12/99	1.6/1.8	7.83	12.8	1024	Clear
	05/11/00	1.5/1.8	7.77	13.0	1035	Clear
	05/23/01	2.1	7.72	14.0	1084	Clear
	04/19/02	1.5	7.72	15.0	1103	Clear
	05/20/03	1.2	7.71	15.6	1112	Clear
	06/08/04	1.6	7.63	14.3	1131	Clear
			-			
5-24B	11/17/95	1.7	7.33	13.2	1050	Slight cloudy, HC odor
	05/21/96	3.5	7.41	13.9	1050	Clear

TABLE 2
SUMMARY OF FIELD PARAMETERS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

<u> </u>		1 1		1		T	
Well ID	Date	Dissolved Oxygen (mg/L) Meter/Hach	рН	Temperature °C	Electrical Conductivity (mmhos)	Remarks	
	08/13/96	2.32	8.07	16.0	1050	Clear	
	11/19/96	3.30	7.36	12.6	1210	Slightly turbid, faint odor	
	02/26/97	/1.4	7.42	11.6	1468	Clear, slight odor	
	05/20/97	4.83	7.56	12.6	1240	Clear	
	05/21/97	3.44	7.24	13.1	1110	Slight odor, little cloudy	
	08/19/97	3.8/4.0	7.32	15.5	1568	Slightly turbid, Red	
	11/18/97	2.20	7.39	12.2	1386	Slightly turbid	
	02/10/98	3.2/3.0	7.44	11.2	1392	Slightly turbid	
	06/09/98	4.30	7.34	14.6	1492	Cloudy, turbid	
	09/29/98	5.5	7.32	13.6	1499	Turbid	
5-24B cont.	04/27/99	9.7/8.0	7.37	14.1	1501	Slightly Cloudy	
	10/11/99	4.3	7.46	13.6	1468	Very Turbid	
	05/11/00	4.8	7.43	13.5	1454	Cloudy	
	11/16/00	7.4/6.0	7.52	12.6	1467	Red, very turbid	
	05/23/01	2.9	7.52	15.0	1475	Turbid, redish color	
	11/17/01	4.9	7.54	15.3	1449	Clear	
	04/19/02	2.2	7.56	15.0	1426	Very turbid, red sand	
	10/31/02	4.1	7.62	15.3	1413	Very turbid	
	05/20/03	1.3	7.51	15.4	1397	Turbid	
	11/11/03	4.8	7.46	13.0	1215	Turbid	
	06/08/04	2.8	7.68	15.4	1428	Turbid	
	05/18/10	1.6	6.48	15.1	1834	Black, odor, flim like sheen	
	09/25/11	1.5	6.96	17.5	1554	Black, odor, sups. solids	
5-35B	06/12/12	1.7	6.84	15.8	1643	Turbid, odor, light sheen	
	07/23/13				-	Black, odor, sheen, bailed down	
	04/22/14	1.85	6.49	15.45	1644.00	Black, odor, sheen, bailed down	
5-371	08/15/96	1.67	8.48	17.2	1382	Turbid, green cloudy color, strong HC odor	
3 371	11/22/96	NM	7.70	14.9	1080	Greenish black, strong HC odor	
	11/16/95	2.00	7.28	14.5	940	Clear, no odor	
	05/21/96	1.82	7.41	15.8	920	Clear	
	08/13/96	2.68	7.99	15.0	910	Clear	
5-41B	11/19/96	3.80	7.41	13.8	1080	Clear	
	02/25/97	1.65	7.43	12.5	930	Clear	
	05/20/97	4.83/3.0	7.56	12.6	1230	Clear ( Hach DO low range = 2.6)	
	08/18/97	/2.2	7.55	14.1	1285	Clear	
	11/15/95	2.50	7.83	13.0	900	Slightly cloudy, no odor	
	05/21/96	4.70	7.54	14.6	1080	Clear	
5-47B	08/13/96	3.17	7.98	15.2	1060	Clear	
3-476	11/19/96	NM	7.56	19.1	1110	Clear	
	02/26/97	2.20	7.71	11.0	1000	Clear	
	05/20/97	3.18/2.6	7.74	13.8	1100	Slightly turbid	

TABLE 2
SUMMARY OF FIELD PARAMETERS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

				1			
Well ID	Date	Dissolved Oxygen (mg/L) Meter/Hach	рН	Temperature °C	Electrical Conductivity (mmhos)	Remarks	
5-47B cont.	08/18/97	/4.0	7.68	16.3	1470	Clear	
		1 1		T		Tal	
	11/20/95	1.40	7.60	13.7	1035	Clear, strong HC odor	
	02/21/96	3.60	7.54	14.0	750	Very slightly cloudy, HC odor	
	05/22/96	2.20	7.62	14.6	1032	Clear, HC odor	
	08/14/96	2.80	7.62	15.5	800	Clear, strong HC odor	
	11/21/96	3.10	7.45	15.2	780	Clear, strong HC odor	
	02/27/97	2.40	7.61	11.8	950	Clear, strong HC odor	
	05/22/97	2.52	7.33	14.1	820	Clear, strong HC odor	
	08/20/97	2.2/0.4	7.34	18.3	1139	Yellow tint, strong HC odor	
	11/19/97	5.57/1.6	7.48	14.0	900	Clear, Strong HC odor	
	02/12/98	2.23	7.44	14.8	810	Clear, HC odor	
	06/11/98 10/01/98	3.6/2.0 0.2	7.53 7.56	16.3 15.7	1176 1239	Clear, HC odor Cloudy w/blk flec's, turns dark in light,odor	
5-48B	04/28/99		7.30	15.4		Clear w/blk flec's, strong HC odor, sheen	
	10/12/99				1261 	Clear w/blk flec's, strong HC odor, sheen	
	05/12/00					Blk, turbid, odor, sheen streamers	
	11/17/00					Blk, turbid, odor, sheen streamers	
	05/22/01					Blk, turbid, odor, sheen streamers	
	11/18/01					Blk, suspended solids, odor, sheen	
	04/20/02	0.9	7.54	15.7	1524	Turbid, odor	
	10/30/02		7.34			Blk, suspended solids, turbid, odor, sheen	
	05/21/03					Blk, suspended solids, turbid, odor, sheen	
	11/11/03					Blk, suspended solids, turbid, odor, sheen	
	06/07/04	0.9	7.51	16.2	1550	Black	
	06/09/05		7.31	15.5	1530	Black, brackish	
	00/03/03		7.51	13.5	1330	black, brackish	
	11/15/95	4.60	7.59	13.1	880	Brown muddy	
	05/20/96	3.10	8.75	13.2	1212	Slightly turbid	
	08/12/96	5.24	7.76	14.0	875	Slightly turbid, no odor	
5-57B	11/18/96	5.4/2.2	7.53	12.9	980	Slightly cloudy	
	02/25/97	/3.4	7.71	10.6	1191	Light amber, no odor	
	05/20/97	6.01	7.69	12.8	1130	Slightly cloudy, reddish tint, no odor	
	08/18/97	0.7/2.6	7.69	14.4	1071	Slightly turbid	
	, ,					, ,	
	11/16/95	8.10	7.47	14.8	740	Cloudy brown, no odor	
	05/20/96	6.70	8.71	13.2	1073	Slightly turbid	
	08/12/96	6.44	7.71	14.5	750	Slightly turbid, no odor	
5-58B	11/18/96	7.00	7.58	12.6	880	Slightly cloudy	
	02/25/97	7.0b	7.69	11.4	1073	Light amber, no odor	
	05/20/97	6.84	7.73	13.2	790	Slightly turbid	
	08/18/97	5.8/6.5	7.68	15.2	964	Slightly turbid	
5-59	11/18/01	6.2	7.50	14.5	1430	Turbid, bailed down	
J-JJ	04/20/02	6.7	7.60	14.1	1431	Turbid, bailed down	

TABLE 2
SUMMARY OF FIELD PARAMETERS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Dissolved Oxygen (mg/L) Meter/Hach	рН	Temperature °C	Electrical Conductivity (mmhos)	Remarks	
	10/30/02	8.1	7.68	14.6	1437	Very turbid, bailed down	
	05/21/03	5.9	7.40	15.3	1519	Turbid, bailed down	
	11/11/03	6.8	7.21	12.4	1295	Turbid, bailed down	
	06/08/04	3.2	7.38	12.8	1495	Turbid, bailed down	
	06/09/05		7.37	14.2	1453		
	07/10/06	6.7	7.42	13.3	1112	Turbid, bailed down	
	07/25/07	5.5	7.33	14.1	1124	Turbid, bailed down	
5-59 cont.	09/23/08	6.0	7.84	12.9	1143	Turbid, bailed down	
	08/04/09	5.8	7.13	14.3	1501	Clear, bailed down	
	05/18/10	6.5	6.62	12.9	1555	Turbid, bailed down	
	09/25/11	8.0	7.06	13.6	1546	Cloudy, bailed down	
	06/12/12	7.0	6.87	13.6	1573	Turbid, red, bailed down	
	07/10/12	6.2	7.22	14.8	1543	Turbid, red, bailed down	
	07/23/13	5.8	6.83	14.2	1590	Turbid, red, bailed down	
	04/22/14	6.67	6.93	19.21	1640.00	Tan, silty	
-		-		<u>-</u>		•	
	11/18/01	6.5	7.67	14.5	1296	Very turbid, bailed down	
	04/20/02	6.6	7.74	14.1	1291	Very turbid, bailed down	
	10/30/02	7.4	7.67	14.9	1272	Turbid, bailed down	
	05/21/03	7.7	7.63	15.6	1297	Very turbid, bailed down	
	11/10/03	7.5	7.72	12.4	1171	Very turbid, bailed down	
5-60	06/07/04	3.1	7.60	13.9	1415	Cloudy, bailed down	
	06/09/05		7.65	12.5	1428		
	07/10/06	7.4	7.40	13.3	1095	Turbid, bailed down	
	07/25/07	6.9	7.50	13.6	1059	Turbid, bailed down	
	09/23/08	6.8	7.87	12.9	1034	Turbid, bailed down	
	08/04/09	7.2	7.23	14.1	1362	Turbid, bailed down	
	05/11/00	7.8	7.90	13.5	992	Red turbid	
	11/16/00	8.0	7.85	13.6	1008	Red turbid	
	11/18/01	8.3	7.90	15.6	1016	Turbid	
SVE-1	04/18/02	8.3	7.96	15.7	1017	Turbid, bailing down	
J v ⊏-T	10/30/02	8.5	7.58	16.1	1000	Turbid	
	05/21/03	8.5	7.80	17.7	1009	Clear	
	11/10/03	8.8	7.90	14.0	904	Clear	
	06/07/04	2.1	7.98	21.7	1062		
	05/18/10					Sheen, odor, bailed down, turbid	
	09/25/11					Sheen, odor, bailed down, turbid, blk	
SVE-3	06/12/12					Sheen, odor, bailed down, turbid, blk	
	07/23/13					Sheen, odor, bailed down, turbid, blk	
	04/22/14	1.39	6.83	14.27	1701.00	Sheen, odor, gray	
HC = Hydroca	rbon						

TABLE 3
SUMMARY OF ANALYTICAL RESULTS FOR BTEX COMPOUNDS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Lab	Benzene	Toluene	Ethylbenzene	Total Xylenes
٨	IMWQCC Standa	rd	10	750	750	620
	12/1/1989	ER	< 5.0	6.3	< 5.0	NA
	7/1/1991		< 0.50	< 0.50	< 0.50	6.0
	1/27/1992	ER	< 0.50	< 0.50	< 0.50	0.79
	2/20/1992	ER	< 0.50	< 0.50	< 0.50	5.2
5-01B	10/14/1992	ATI-P	< 0.5	< 0.5	< 0.5	4.7
	11/21/1995	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	5/21/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	8/15/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	11/22/1996	HEAL	0.8	< 0.5	< 0.5	< 0.5
	1			T	<u> </u>	<u> </u>
	11/23/1997	HEAL	1.4	< 0.5	< 0.5	< 0.5
	2/12/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	10/2/1998	HEAL	5.2	< 0.5	< 0.5	< 0.5
	10/14/1999	OAL	< 1	< 2	< 2	< 4
	11/17/2000	NCA	< 0.500	< 0.500	< 0.500	< 1.00
	11/19/2001	ANALYSYS	< 1	< 1	< 1	< 2
	4/20/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
5-01C	10/30/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
3 010	5/21/2003	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
	11/10/2003	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
	6/7/2004	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
	6/8/2005	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
	7/11/2006	HEAL	< 1.0	< 1.0	< 1.0	< 3.0
	7/25/2007	HEAL	< 1.0	< 1.0	< 1.0	< 2.0
	9/23/2008	HEAL	< 1.0	< 1.0	< 1.0	< 2.0
	8/4/2009	HEAL	< 1.0	< 1.0	< 1.0	< 2.0
	5/1/1989	ER	1800	2000	< 200	NA
	8/1/1989	ER	2500	4700	< 500	NA
	11/1/1989	ER	1800	3100	250	NA
	3/1/1990	ER	2300	3800	< 250	2400
	6/1/1990	ER	1900	3100	< 250	2300
	8/1/1990	AS	1400	2300	180	1700
5-02B	11/1/1990	EH	1500	2400	230	1900
	1/1/1991	EH	600	730	110	940
	2/1/1991	EH	460	580	75	600
	3/1/1991	EH	2400	3300	290	2600
	4/1/1991	EH	830	1200	110	920
	5/1/1991	EH	830	1200	150	1300

# TABLE 3 SUMMARY OF ANALYTICAL RESULTS FOR BTEX COMPOUNDS THOREAU COMPRESSOR STATION NO. 5 MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Lab	Benzene	Toluene	Ethylbenzene	Total Xylenes
	6/1/1991	EH	5.1	7.0	0.57	4.7
	7/1/1991	EH	400	600	49	420
	9/1/1991	EH	510	750	57	530
	10/1/1991	ER	290	450	37	310
	11/1/1991	ER	740	1200	97	950
	12/1/1991	ER	330	580	31	320
	1/9/1992	ER	360	710	52	480
	1/28/1992	ER	420	810	64	560
	2/20/1992	ER	890	1600	140	1200
5-02B cont.	3/19/1992	ATI-P	910	2100	170	1700
5-02B COIIL.	4/29/1992	ATI-P	1700	3800	240	2200
	10/14/1992	ATI-P	800	700	74	640
	4/22/1993	ATI-A	120	< 0.5	11	38
	12/9/1994	HEAL	2100	2600	220	1800
	6/26/1995	HEAL	1200	2700	130	1200
	10/6/1995	HEAL	490	1600	66	640
	11/21/1995	HEAL	740	2900	160	1100
	2/22/1996	HEAL	260	1000	62	600
	5/21/1996	HEAL	380	120	1300	1100
	2/28/1997	HEAL	260	500	90	680
	2/11/1998	HEAL	110	7.0	33	8.3
	10/1/1998	HEAL	1300	3500	230	1800
	10/13/1999	OAL	1300	3900	320	3100
	11/17/2000	NCA	671	1000	372	3820
	11/17/2001	ANALYSYS	587	15.2	365	3622
5-02C	4/20/2002	HEAL	450	< 10	300	3100
3-02C	10/31/2002	HEAL	330	< 5.0	230	2000
	5/22/2003	HEAL	290	< 10	200	800
	11/11/2003	HEAL	450	< 2.5	240	770
	6/8/2004	HEAL	270	28	160	1000
	6/9/2005	HEAL	300	< 10	190	1700
	7/10/2012	HEAL	40	12	130	730
	11/1/1989	ER	< 5.0	< 5.0	< 5.0	NA
	7/1/1991	EH	< 0.50	< 0.50	< 0.50	< 1.0
5-03B	1/27/1992	ER	< 0.50	< 0.50	< 0.50	< 0.50
3-036	4/28/1992	ATI-P	< 0.5	< 0.5	< 0.5	< 0.5
	12/9/1994	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	11/15/1995	HEAL	< 0.5	< 0.5	< 0.5	< 0.5

TABLE 3
SUMMARY OF ANALYTICAL RESULTS FOR BTEX COMPOUNDS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Lab	Benzene	Toluene	Ethylbenzene	Total Xylenes
	11/18/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	8/18/1997	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	2/10/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	6/11/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
5-03B cont.	9/29/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	4/27/1999	OAL	< 1	< 1	< 1	< 1
	10/11/1999	OAL	< 1	< 2	< 2	< 4
	5/11/2000	OAL	< 1	< 2	< 2	< 4
	4/18/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
				T		1
	1/1/1990	ER	21	< 5.0	< 5.0	NA
	7/1/1991	EH	71	< 0.5	4.5	43
	1/28/1992	ER	48	2.8	6.5	44
	2/19/1992	ER	42	< 1.0	3.4	39
	1/10/1995	HEAL	9.8	2.3	< 0.5	2.0
	3/7/1995	HEAL	93	1.5	6.1	1.9
5-04B	6/8/1995	HEAL	9.4	1.4	0.6	< 0.5
	10/5/1995	HEAL	44	1.7	3.1	< 0.5
	2/20/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	11/17/2000	NCA	1.65	< 0.500	< 0.500	< 1.00
	5/22/2001	ANALYSYS	1.72	< 1	< 1	< 2
	11/18/2001	ANALYSYS	<1	< 1	< 1	< 2
	10/31/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
				·		I
	11/1/1989	ER	< 5.0	< 5.0	< 5.0	NA
	7/1/1991	EH	0.51	< 0.50	< 0.50	< 1.0
	1/27/1992	ER	< 0.50	< 0.50	< 0.50	< 0.50
	2/19/1992	ER	< 0.50	< 0.50	< 0.50	< 0.50
	10/12/1992	ATI-P	770	110	25	160
	12/12/1994	HEAL	150	33	16	47
	11/17/1995	HEAL	5.0	< 0.5	< 0.5	< 0.5
5-05B	2/20/1996	HEAL	0.9	< 0.5	< 0.5	< 0.5
	5/21/1996	HEAL	1.0	< 0.5	< 0.5	< 0.5
	11/20/1996	HEAL	3.3	1.5	< 0.5	< 0.5
	10/14/1999	OAL	< 1	< 2	< 2	< 4
	11/17/2000	NCA	0.981	< 0.500	< 0.500	< 1.00
	11/18/2001	ANALYSYS	7.4	< 1	< 1	< 2
	4/18/2002	HEAL	5.2	< 0.50	< 0.50	< 0.50
	5/21/2003	HEAL	2.1	0.92	1.0	2.6

TABLE 3
SUMMARY OF ANALYTICAL RESULTS FOR BTEX COMPOUNDS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Lab	Benzene	Toluene	Ethylbenzene	Total Xylenes
	1/1/1990	ER	< 5.0	< 5.0	8.3	NA
	9/1/1991	EH	3.5	< 0.50	< 0.50	13
	1/27/1992	ER	1.3	1.3 < 0.50		2.6
	4/29/1992	ATI-P	1.4	< 0.50	< 0.50	3.6
5-06B	10/14/1992	ATI-P	1.0	< 0.50	< 0.50	2.8
	4/17/1996	HEAL	8.9	< 0.5	< 0.5	0.5
	5/21/1996	HEAL	1.2	< 0.5	< 0.5	< 0.5
	8/15/1996	HEAL	2.4	< 0.5	< 0.5	< 0.5
	11/22/1996	HEAL	0.9	< 5.0	< 5.0	< 0.5
	12/8/1998	HEAL	< 0.5	< 0.5	5.7	
	2/12/1998	HEAL	2.2	1.4	< 0.5	1.3
	10/2/1998	HEAL	1.5	1.3	< 0.5	< 0.5
	10/14/1999	OAL	< 1	< 2	< 2	< 4
	11/17/2000	NCA	< 0.500	< 0.500	< 0.500	< 1.00
	11/19/2001	ANALYSYS	1.19	< 1	< 1	< 2
	4/20/2002	HEAL	1.1	< 0.50	< 0.50	< 0.50
	10/30/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
F 000	5/21/2003	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
5-06C	11/10/2003	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
	6/7/2004	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
	6/9/2005	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
	7/11/2006	HEAL	< 1.0	< 1.0	< 1.0	< 3.0
	7/25/2007	HEAL	< 1.0	< 1.0	< 1.0	< 2.0
	9/23/2008	HEAL	< 1.0	< 1.0	< 1.0	< 2.0
	8/4/2009	HEAL	< 1.0	< 1.0	< 1.0	< 2.0
	5/18/2010	HEAL	< 1.0	< 1.0	< 1.0	< 2.0
	6/12/2012	HEAL	< 1.0	< 1.0	< 1.0	< 2.0
	4/1/1991	EH	< 0.50	< 0.50	< 0.50	< 1.0
	10/1/1991	ER	< 0.50	< 0.50	< 0.50	< 0.50
	4/30/1992	ATI-P	< 0.5	< 0.5	< 0.5	< 0.5
	11/16/1995	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	11/19/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
5-12B	8/19/1997	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
J-17D	2/11/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	6/9/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	9/30/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	4/27/1999	OAL	< 1	< 1	< 1	< 1
	10/12/1999	OAL	< 1	< 2	< 2	< 4
	5/11/2000	OAL	< 1	< 2	< 2	< 4

CRA 086242

TABLE 3
SUMMARY OF ANALYTICAL RESULTS FOR BTEX COMPOUNDS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Lab	Benzene	Toluene	Ethylbenzene	Total Xylenes
	5/23/2001	ANALYSYS	< 1	< 1	< 1	< 2
5-12B cont.	4/19/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
3-12B COIIC.	5/20/2003	HEAL	< 0.50 < 0.50		< 0.50	< 0.50
	6/8/2004	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
	8/1/1990	AS	54	13	< 1	330
	11/1/1990	EH	61	< 10	< 10	480
	1/1/1991	EH	180	17	< 5.0	310
	2/1/1991	EH	270	25	< 10	460
	3/1/1991	EH	240	< 50	< 50	480
	4/1/1991	EH	430	< 0.50	< 0.50	620
	5/1/1991	EH	290	< 10	< 10	450
	6/1/1991	EH	330	0.53	< 0.50	600
	7/1/1991	EH	97	0.72	< 0.50	760
	10/1/1991	ER	71	< 5.0	< 5.0	510
	1/8/1992	ER	150	< 25	< 25	570
	5/1/1992	ATI-P	76	8.0	< 0.5	67
	10/13/1992	ATI-P	88	8.7	< 0.5	1.5
	10/5/1995	HEAL	0.6	2.5	0.5	1.9
	11/20/1995	HEAL	< 0.5	< 0.5	0.6	2.0
	2/21/1996	HEAL	1.0	0.7	< 0.5	< 0.5
5-13B	5/21/1996	HEAL	0.7	< 0.5	< 0.5	0.8
2-120	8/13/1996	HEAL	1	5.4	< 0.5	< 0.5
	11/21/1996	HEAL	1.2	6.1	< 0.5	< 0.5
	2/26/1997	HEAL	1.5	5.9	< 0.5	2.5
	5/21/1997	HEAL	1.1	4.3	< 0.5	0.7
	8/19/1997	HEAL	1.2	2.9	< 0.5	0.6
	11/18/1997	HEAL	1.3	2	< 0.5	< 0.5
	2/11/1998	HEAL	0.9	1.5	< 0.5	< 0.5
	6/9/1998	HEAL	0.8	0.7	< 0.5	< 0.5
	9/30/1998	HEAL	< 0.5	1.5	< 0.5	< 0.5
	4/27/1999	OAL	< 1	< 1	< 1	< 1
	10/12/1999	OAL	< 1	< 2	< 2	< 4
	5/11/2000	OAL	< 1	< 2	< 2	< 4
	11/16/2000	NCA	< 0.500	< 0.500	< 0.500	< 1.00
	5/23/2001	ANALYSYS	< 1	< 1	< 1	< 2
	11/17/2001	ANALYSYS	< 1	< 1	< 1	< 2
	4/19/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
	5/20/2003	HEAL	< 0.50	< 0.50	< 0.50	< 0.50

TABLE 3
SUMMARY OF ANALYTICAL RESULTS FOR BTEX COMPOUNDS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Lab	Benzene	Toluene	Ethylbenzene	Total Xylenes	
	4/1/1991	EH	< 0.50	< 0.50	< 0.50	< 1.0	
	10/1/1991	ER	< 0.50	< 0.50	< 0.50	< 0.50	
	4/30/1992	ATI-P	< 0.5	< 0.5	< 0.5	< 0.5	
	11/16/1995	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	11/19/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	8/19/1997	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
5-14B	2/10/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	6/9/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	9/30/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	4/27/1999	OAL	< 1	< 1	< 1	< 1	
	10/12/1999	OAL	< 1	< 2	< 2	< 4	
	5/11/2000	OAL	< 1	< 2	< 2	< 4	
	4/19/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50	
	4/1/1991	EH	< 0.50	< 0.50	< 0.50	< 1.0	
	10/1/1991	ER	< 0.50	< 0.50	< 0.50	< 0.50	
	4/30/1992	ATI-P	< 0.5	< 0.5	< 0.5	< 0.5	
	11/16/1995	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	11/20/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	8/19/1997	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
5-15B	2/11/1998	HEAL	1.5	< 0.5	1.0	1.2	
	6/10/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	9/30/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	4/28/1999	OAL	< 1	< 1	< 1	< 1	
	10/12/1999	OAL	< 1	< 2	< 2	< 4	
	5/12/2000	OAL	< 1	< 2	< 2	< 4	
	5/24/2001	ANALYSYS	< 1	< 1	< 1	< 2	
	7/1/1991	EH	260	140	400	2400	
	1/8/1992	ER	200	500	410	3000	
	3/18/1992	ATI-P	53	89	400	2400	
	4/29/1992	ATI-P	23	3.3	210	1000	
	11/20/1995	HEAL	970	7100	430	3100	
5-16B	11/21/1996	HEAL	460	2200	130	2500	
3 100	2/27/1997	HEAL	250	1100	190	2000	
	5/22/1997	HEAL	130	720	110	1500	
	8/20/1997	HEAL	130	820	120	1300	
	11/19/1997	HEAL	85	730	100	1100	
	2/11/1998	HEAL	41	360	90	660	
	6/10/1998	HEAL	23	210	56	590	

Well ID	Date	Lab	Benzene	Toluene	Ethylbenzene	Total Xylenes
	4/28/1999	OAL	200	170	45	620
	12/5/1999	OAL	720	390	130	570
	11/17/2000	NCA	1360	742	213	1010
	11/18/2001	ANALYSYS	2330	948	356	1987
	4/20/2002	HEAL	1800	660	230	1400
	10/31/2002	HEAL	1300	240	170	1100
	5/22/2003	HEAL	1300	130	180	950
5.465	11/11/2003	HEAL	2300	240	340	1700
5-16B cont.	6/8/2004	HEAL	890	< 5	110	260
	6/8/2005	HEAL	1400	< 5	160	520
	7/10/2006	HEAL	1600	< 20	150	380
	7/25/2007	HEAL	1700	< 20	170	590
	9/23/2008	HEAL	1900	< 5	180	600
	8/4/2009	HEAL	1300	< 5	150	590
	5/18/2010	HEAL	3800	11	340	2200
	6/12/2012	HEAL	3300	< 50	230	1600
	0/12/2012	112/12	3333	133	230	1333
	4/1/1991	EH	< 0.50	< 0.50	< 0.50	< 1.0
	2/19/1992	ER	< 0.50	< 0.50	< 0.50	< 0.50
	4/28/1992		ATI-P < 0.5 < 0.5		< 0.5	< 0.5
	11/20/1995	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	11/20/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	8/20/1997	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	2/11/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	10/1/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
5-17B	10/13/1999	OAL	< 1	< 2	< 2	< 4
0	11/17/2000	NCA	< 0.500	< 0.500	< 0.500	< 1.00
	11/17/2001	ANALYSYS	< 1	< 1	< 1	< 2
	4/19/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
	10/31/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
	5/22/2003	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
	11/11/2003	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
	6/8/2004 6/8/2005	HEAL HEAL	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50
	7/25/2007	HEAL	< 1.0	< 1.0	< 1.0	< 2.0
	7/23/2007	TILAL	` 1.0	` 1.0	` 1.0	` 2.0
	3/1/1991	EH	260	1.8	< 0.50	23
	7/1/1991	EH	1500	3.0	1.5	70
5.400	1/8/1992	ER	1100	< 25	< 25	88
5-18B	5/1/1992	ATI-P	790	2.7	< 0.5	36
	11/17/1995	HEAL	240	24	22	53
	11/21/1996	HEAL	210	5	48	< 0.5

TABLE 3
SUMMARY OF ANALYTICAL RESULTS FOR BTEX COMPOUNDS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Lab	Benzene	Toluene	Ethylbenzene	Total Xylenes	
	8/19/1997	HEAL	1.1	4.9	110	1.5	
	2/11/1998	HEAL	0.9	6.4	120	1.1	
	9/30/1998	HEAL	5.6	1.3	17	1.0	
	10/12/1999	OAL	17	< 2	5	42	
	11/16/2000	NCA	1.93	< 0.500	< 0.500	1.60	
	11/17/2001	ANALYSYS	<1	< 1	< 1	< 2	
	4/20/2002	HEAL	0.55	< 0.50	0.72	0.89	
	10/31/2002	HEAL	0.68	< 0.50	< 0.50	0.95	
	5/22/2003	HEAL	< 0.50	5.9	< 0.50	2.5	
	11/11/2003	HEAL	< 0.50	< 0.50	< 0.50	< 0.50	
5-18B cont.	6/8/2004	HEAL	< 0.50	< 0.50	0.91	1.2	
	6/8/2005	HEAL	< 0.50	< 0.50	< 0.50	< 0.50	
	7/10/2006	HEAL	< 1.0	< 1.0	< 1.0	< 3.0	
	7/25/2007	HEAL	< 1.0	< 1.0	< 1.0	< 2.0	
	9/23/2008	HEAL	< 1.0	< 1.0	< 1.0	< 2.0	
	8/4/2009	HEAL	< 1.0	< 1.0	< 1.0	< 2.0	
	5/18/2010	HEAL	< 1.0	< 1.0	< 1.0	< 2.0	
	9/25/2011	HEAL	< 1.0	< 1.0	< 1.0	< 2.0	
	6/12/2012	HEAL	< 1.0	< 1.0	< 1.0	< 2.0	
	7/23/2013	HEAL	< 1.0	< 1.0	< 1.0	< 2.0	
	4/21/2014	HEAL	< 1.0	< 1.0	< 1.0	< 2.0	
				•	•		
	8/1/1990	AS	190	3.5	5.8	44	
	11/1/1990	EH	180	11	< 10	< 20	
	1/1/1991	EH	150	< 0.30	0.60	15	
	2/1/1991	EH	200	5.8	< 2.5	14	
	3/1/1991	EH	200	30	180	880	
	4/1/1991	EH	290	< 25	210	880	
	5/1/1991	EH	240	< 0.50	0.71	21	
	6/1/1991	EH	290	7.5	2.2	22	
F 10D	7/1/1991	EH	240	< 0.50	0.58	14	
5-19B	10/1/1991	ER	140	< 2.5	< 2.5	12	
	1/8/1992	ER	240	< 5.0	< 5.0	9.0	
	2/20/1992	ER	150	< 2.5	< 2.5	4.2	
	3/19/1992	ATI-P	140	< 0.5	< 0.5	5.9	
	4/29/1992	ATI-P	190	< 0.5	< 0.5	4.3	
	10/13/1992	ATI-P	130	< 0.5	< 0.5	4.4	
	10/5/1995	HEAL	1.0	0.7	< 0.5	< 0.5	
	11/20/1995	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	2/21/1996	HEAL	0.9	0.8	< 0.5	< 0.5	

TABLE 3
SUMMARY OF ANALYTICAL RESULTS FOR BTEX COMPOUNDS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Lab	Benzene	Toluene	Ethylbenzene	Total Xylenes
	5/21/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	8/14/1996	HEAL	0.7	0.6	< 0.5	< 0.5
	11/21/1996	HEAL	0.9	0.6	< 0.5	< 0.5
	2/27/1997	HEAL	1.3 1 < 0.5		0.7	
	5/21/1997	HEAL	1.2	1	< 0.5	< 0.5
	8/20/1997	HEAL	1.7	1.3	0.6	< 0.5
	11/17/1997	HEAL	2.5	2.0	0.9	0.7
	2/11/1998	HEAL	2.3	1.8	0.8	0.7
5-19B cont.	6/10/1998	HEAL	1.5	1.4	1.5	0.6
5-19B CONL.	10/1/1998	HEAL	7.4	3.9	1.6	2.9
	4/28/1999	OAL	43	< 1	1	3
	10/12/1999	OAL	13	< 2	< 2	< 4
	5/12/2000	OAL	16	< 2	3	4
	11/17/2000	NCA	1.03	< 0.500	1.88	< 1.00
	5/24/2001	ANALYSYS	< 1	< 1	1.17	< 2
	11/17/2001	ANALYSYS	< 1	< 1	< 1	<2
	4/19/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
	5/22/2003	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
	4/1/1991	EH	180	< 1.0	< 1.0	19
	7/1/1991	EH	73	1.1	1.0	24
	1/8/1992	ER	31	< 1.2	< 1.2	6.7
	10/12/1992	ATI-P	52	2.7	4.4	11
	11/17/1995	HEAL	12	2.3	< 0.5	2.6
	11/20/1996	HEAL	7.2	0.9	1.4	< 0.5
	8/19/1997	HEAL	10.0	1.0	1.9	1.4
	2/11/1998	HEAL	< 0.5	1.3	2.3	0.5
	10/1/1998	HEAL	1.5	1.4	1.5	1.3
	10/12/1999	OAL	< 1	< 2	< 2	< 4
5-20B	11/16/2000	NCA	0.961	< 0.500	0.763	< 1.00
	11/17/2001	ANALYSYS	< 1	< 1	< 1	< 2
	4/19/2002	HEAL	0.86	< 0.50	< 0.50	< 0.50
	10/31/2002	HEAL	0.76	0.70	< 0.50	< 0.50
	5/22/2003	HEAL	1.0	0.91	< 0.50	< 0.50
	11/11/2003	HEAL	0.5	< 0.50	< 0.50	< 0.50
	6/8/2004	HEAL	1.1	< 0.50	< 0.50	< 0.50
	6/8/2005	HEAL	1.0	0.53	< 0.50	< 0.50
	7/12/2006	HEAL	1.3	< 1	< 1	< 3
	7/25/2007	HEAL	< 1	< 1	< 1	< 2
	9/23/2008	HEAL	< 1	< 1	< 1	< 2

Well ID	Date	Lab	Benzene	Toluene	Ethylbenzene	Total Xylenes
	8/4/2009	HEAL	< 1	< 1	< 1	< 2
5-20B cont.	5/18/2010	HEAL	< 1	< 1	< 1	< 2
	9/25/2011	HEAL	< 1	< 1	< 1	< 2
	7/1/1991	EH	< 0.50	< 0.50	< 0.50	< 1.0
	1/28/1992	ER	< 0.50	< 0.50	< 0.50	< 0.50
	4/28/1992	ATI-P	< 0.5	< 0.5	< 0.5	< 0.5
5-22B	10/8/1992	ATI-P	< 0.5	< 0.5	< 0.5	< 0.5
J-22B	11/15/1995	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	8/12/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	11/18/1996	HEAL	< 0.5	< 0.5	< 0.5	1.9
	5/22/1997	HEAL	3.6	< 0.5	< 0.5	7.1
	7/1/1991	EH	2.0	< 0.50	< 0.50	1.3
	2/18/1992	ER	< 0.50	< 0.50	< 0.50	< 0.50
	4/30/1992	ATI-P	< 0.5	< 0.5	< 0.5	< 0.5
	11/16/1995	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	11/19/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	8/19/1997	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
5-23B	2/10/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	6/8/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	9/29/1998	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	4/27/1999	OAL	< 1	< 1	< 1	< 1
	10/12/1999	OAL	< 1	< 2	< 2	< 4
	5/11/2000	OAL	< 1	< 2	< 2	< 4
	4/19/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50
					•	•
	7/1/1991	EH	130	< 0.50	< 0.50	8.7
	1/7/1992	ER	120	< 2.5	< 2.5	< 2.5
	3/17/1992	ATI-P	120	< 2.5	0.8	1.4
	10/13/1992	ATI-P	1.2	< 0.5	0.8	0.8
	11/17/1995	HEAL	1.2	0.8	0.5	1.0
	11/19/1996	HEAL	0.9	< 0.5	0.6	0.8
5-24B	8/19/1997	HEAL	1.2	0.5	0.9	< 5.0
	2/10/1998	HEAL	0.5	< 0.5	0.7	< 0.5
	9/29/1998	HEAL	< 0.5	0.6	< 0.5	< 0.5
	10/11/1999	OAL	< 1	< 2	< 2	< 4
	11/16/2000	NCA	< 0.500	< 0.500	< 0.500	< 1.00
	11/17/2001	ANALYSYS	< 1	< 1	< 1	< 2
	4/19/2002	HEAL	< 0.50	< 0.50	< 0.50	0.59

Well ID	Date	Lab	Benzene	Toluene	Ethylbenzene	Total Xylenes
	1 / - / - 000					
	1/7/1992	ER	120	< 2.5	< 2.5	< 2.5
	2/18/1992	ER	140	< 2.5	< 2.5	< 2.5
	3/17/1992	ATI-P	120	< 0.5	0.8	1.4
5-34B	4/30/1992	ATI-P	100	2.1	1.4	2.2
	10/13/1992	ATI-P	1.2	< 0.5	0.8	0.8
	4/21/1993	ATI-A	< 0.5	< 0.5	0.7	1.4
	12/13/1994	HEAL	4700	13,000	460	5,900
	4/22/1993	ATI-A	360	1400	130	1700
5-35B	5/18/2010	HEAL	5700	< 100	310	1900
3 336	9/25/2011	HEAL	3700	< 100	170	900
	9/23/2011	ПЕАL	3700	< 100	170	900
5-36E	12/14/1994	HEAL	620	2700	230	3300
	-					
	2/22/1996	HEAL	640	520	24	990
5-371	4/16/1996	HEAL	580	300	22	600
5-3/1	5/21/1996	HEAL	590	19	340	600
	8/15/1996	HEAL	310	54	14	430
	10/9/1992	ATI-P	47	3.9	0.7	1.0
	11/16/1995	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
5-41B	5/21/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
3-416	8/13/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	11/19/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	5/20/1997	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	1				T	<del></del>
	10/7/1992	ATI-P	1.0	< 0.5	< 0.5	< 0.5
	11/15/1995	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	5/21/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
5-47B	8/13/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	11/19/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	5/20/1997	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	8/18/1997	HEAL	< 0.5	< 0.5	< 0.5	< 0.5
	1/16/1006	ΠΕVI	600	1700	420	2100
	4/16/1996	HEAL	600		+	3100
E 40D	5/22/1997	HEAL	1100	8000	450	4400
5-48B	12/9/1997	HEAL	1800	7700	430	4700
	2/11/1998	HEAL	2100	8000	460	4600
	10/1/1998	HEAL	2100	6100	420	4300

Well ID	Date	Lab	Benzene	Toluene	Ethylbenzene	Total Xylenes	
	10/12/1999	OAL	1000	1900	320	2900	
	11/17/2000	NCA	860	157	259	2360	
	11/18/2001	ANALYSYS	841	24.3	241	1893	
5-48B cont.	4/20/2002	HEAL	1100	23	190	1700	
	10/30/2002	HEAL	5600	51	350	3100	
	11/11/2003	HEAL	4100	< 25	520	4700	
	6/9/2005	HEAL	2500	< 25	200	1500	
	11/15/1995	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	5/21/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
5-57B	8/12/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	2/25/1997	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	8/18/1997	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	11/16/1995	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	5/21/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
E E0D	8/12/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
5-58B	11/18/1996	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	2/25/1997	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	8/18/1997	HEAL	< 0.5	< 0.5	< 0.5	< 0.5	
	11/19/2001	ANALYSYS	< 1	< 1	< 1	< 2	
	4/20/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50	
	10/30/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50	
	5/21/2003	HEAL	< 0.50	< 0.50	< 0.50	< 0.50	
	11/11/2003	HEAL	< 0.50	< 0.50	< 0.50	< 0.50	
	6/8/2004	HEAL	< 0.50	< 0.50	< 0.50	< 0.50	
5-59	6/9/2005	HEAL	< 0.50	< 0.50	< 0.50	< 0.50	
5-59	7/11/2006	HEAL	< 1.0	< 1.0	< 1.0	< 3.0	
	7/25/2007	HEAL	< 1.0	< 1.0	< 1.0	< 2.0	
	9/23/2008	HEAL	< 1.0	< 1.0	< 1.0	< 2.0	
	8/4/2009	HEAL	< 1.0	< 1.0	< 1.0	< 2.0	
	5/18/2010	HEAL	< 1.0	< 1.0	< 1.0	< 2.0	
	9/25/2011	HEAL	< 1.0	< 1.0	< 1.0	< 2.0	
	7/23/2013	HEAL	< 1.0	< 1.0	< 1.0	< 2.0	
						<del></del>	
	11/18/2001	ANALYSYS	< 1	< 1	< 1	< 2	
E 60	4/20/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50	
5-60	10/31/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50	
	5/21/2003	HEAL	< 0.50	< 0.50	< 0.50	< 0.50	

Well ID	Date	Lab	Benzene	Toluene	Ethylbenzene	Total Xylenes				
	11/11/2003	HEAL	< 0.50	< 0.50	< 0.50	< 0.50				
	6/8/2004	HEAL	< 0.50	< 0.50	< 0.50	< 0.50				
5-60 cont.	6/9/2005	HEAL	< 0.50	< 0.50	< 0.50	< 0.50				
	7/25/2007	HEAL	< 1.0	< 1.0	< 1.0	< 2.0				
	9/23/2008	HEAL	< 1.0	< 1.0	< 1.0	< 2.0				
	5/11/2000	OAL	< 1	< 2	< 2	< 4				
	11/18/2001	ANALYSYS	ANALYSYS < 1		< 1	< 2				
	4/18/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50				
SVE-1	10/31/2002	HEAL	< 0.50	< 0.50	< 0.50	< 0.50				
	5/22/2003	HEAL	< 0.50	< 0.50	< 0.50	< 0.50				
	11/11/2003	HEAL	< 0.50	< 0.50	< 0.50	< 0.50				
	6/8/2004	HEAL	< 0.50	< 0.50	< 0.50	< 0.50				
	5/18/2010	HEAL	6300	< 50	430	3900				
	9/25/2011	HEAL	6300	< 100	380	3300				
SVE-3	6/12/2012	HEAL	5400	< 100	240	3500				
	7/23/2013	HEAL	6200	< 100	280	2700				
	4/22/2014	HEAL	6800	< 50	280	1900				

### † Lab Designations

ABB = ASEA Brown Boveri

AEN = American Environmental Network, Inc. (Albuquerque)

AS = Assaigai Laboratories (Albuquerque)

ATI-A = Analytical Technologies, Inc. (Albuquerque)

ATI-P = Analytical Technologies, Inc. (Phoenix)

ER = Enseco (Rocky Mountain Analytical)

EH = Enseco (Houston)

HEAL = Hall Environmental Analysis Laboratory (Albuquerque)

OAL = Oregon Analytical Laboratory (Portland, OR)

NCA = North Creek Analytical (Portland, OR)

ANALYSYS = Analysys, Inc. (Austin, TX)

NA = Not Analyzed

TABLE 4
SUMMARY OF ANALYTICAL RESULTS FOR PCB COMPOUNDS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Lab †		PC	CB Concentr	ation by Ar	oclor (μg/L	)	
weii ib	Date	LUD	1016	1221	1232	1242	1248	1254	1260
NM	NQCC Standa	rd	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	8/1/1989	ER	2.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	12/1/1989	ER	< 1.0	< 1.0	< 1.0	2.0	< 1.0	< 1.0	< 1.0
	3/1/1990	ER	< 1.0	94	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/1/1990	ER	< 1.0	< 1.0	< 1.0	11	< 1.0	< 1.0	< 1.0
	8/1/1990	AS	< 1.0	< 1.0	< 1.0	2.0	< 1.0	< 1.0	< 1.0
	11/1/1990	EH	< 1.0	< 1.0	< 1.0	5.5	< 1.0	< 1.0	< 1.0
	1/1/1991	EH	< 1.0	< 1.0	< 1.0	28	< 1.0	< 1.0	< 1.0
	2/1/1991	EH	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/1/1991	EH	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/1/1991	EH	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	5/1/1991	EH	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/1/1991	EH	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	7/1/1991	EH	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/1/1991	EH	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/1/1991	ER	< 1.0	210	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	11/1/1991	ER	< 1.0	76	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	12/1/1991	ER	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
5-01B	1/9/1992	ER	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
3 016	1/27/1992	ER	< 1.0	67	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	2/20/1992	ER	< 1.0	82	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/18/1992	ATI-P	< 1.0	54	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/29/1992	ATI-P	< 1.0	71	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/14/1992	ATI-P	< 1.0	82	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	12/13/1994	ATI-P	4.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/27/1995	NET	< 1.0	< 1.0	< 1.0	4.18	< 1.0	< 1.0	< 1.0
	10/6/1995	NET	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	11/21/1995	NET	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	2/22/1996	NET	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/17/1996	NET	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/17/1996	PA	< 1.0	0.93	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	5/24/1996	NET	< 1.0	34	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	8/15/1996	NET	< 1.0	14.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	11/22/1996	EPIC	< 1.0	15.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	2/28/1997	EPIC	< 1.0	15.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	5/22/1997	EPIC	< 1.0	11.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	8/21/1997	EPIC	< 1.0	18.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	<del>,</del>								
5-01C	11/23/1997	EPIC	< 1.0	79.7	< 1.0	49.0	< 1.0	< 1.0	< 1.0
3 010	1/8/1998	HEAL	< 1.0	38	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

TABLE 4
SUMMARY OF ANALYTICAL RESULTS FOR PCB COMPOUNDS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Deta	Lab †		PC	CB Concentr	ation by Ar	oclor (μg/L)		
Well ID	Date	Lab '	1016	1221	1232	1242	1248	1254	1260
NMV	VQCC Standa	ırd	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	2/12/1998	HEAL	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/11/1998	HEAL	< 1.0	38	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/2/1998	HEAL	< 1.0	10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/29/1999	OAL	3.8	9.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/14/1999	OAL	4.9	3.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	5/12/2000	OAL	2.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	11/17/2000	NCA	< 0.5	< 1.0	< 0.5	1.9	< 0.5	< 0.5	< 0.5
	5/22/2001	Analysys		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	11/19/2001	Analysys		< 0.5	< 0.5	13.5	< 0.5	< 0.5	< 0.5
5-01C cont .	4/20/2002	NCA	< 0.5	1.37	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	10/30/2002	HEAL	1.5	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	5/21/2003	HEAL		2.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	11/10/2003	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/7/2004	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/8/2005	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	7/11/2006	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	7/25/2007	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/23/2008	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	8/4/2009	HEAL	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/1/1989	ER	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	12/1/1989	ER	< 1.0	180	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	1/1/1990	ER	< 1.0	100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/1/1990	ER	< 1.0	170	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/1/1990	ER	< 1.0	< 1.0	< 1.0	39	< 1.0	< 1.0	< 1.0
	8/1/1990	AS	< 1.0	< 1.0	< 1.0	1.1	< 1.0	< 1.0	< 1.0
	11/1/1990	EH	< 1.0	< 1.0	< 1.0	65	< 1.0	< 1.0	< 1.0
	1/1/1991	EH	< 1.0	< 1.0	< 1.0	39	< 1.0	< 1.0	< 1.0
	2/1/1991	EH	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
5-06B	3/1/1991	EH	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/1/1991	EH	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	5/1/1991	EH	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/1/1991	EH	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	7/1/1991	EH	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/1/1991	EH	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/1/1991	ER	< 1.0	250	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	11/1/1991	ER	< 1.0	140	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	11/1/1991	ATI	< 1.0	210	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	12/1/1991	ER	< 1.0	270	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Well ID	Deta	Lab †		PC	CB Concentr	ation by Ar	oclor (μg/L	)	
vveii iD	Date	Lab '	1016	1221	1232	1242	1248	1254	1260
NMV	NMWQCC Standard           1/9/1992         ER		1.0	1.0	1.0	1.0	1.0	1.0	1.0
	1/9/1992	ER	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	1/27/1992	ER	< 1.0	190	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	2/20/1992	ER	< 1.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/18/1992	ATI-P	< 1.0	140	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/29/1992	ATI-P	< 1.0	150	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/14/1992	ATI-P	< 1.0	280	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	12/14/1994	NET	88	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/27/1995	NET	< 1.0	< 1.0	< 1.0	26.3	< 1.0	< 1.0	< 1.0
	10/6/1995	NET	< 1.0	< 1.0	< 1.0	30.1	< 1.0	< 1.0	< 1.0
5-06B cont.	11/21/1995	NET	< 1.0	< 1.0	< 1.0	44.4	< 1.0	< 1.0	< 1.0
	2/22/1996	NET	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/17/1996	NET	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	5/23/1996	NET	< 1.0	78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	8/15/1996	NET	< 1.0	166.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	8/15/1996	AEN	< 1.0	260	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	11/22/1996	EPIC	< 1.0	42.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	2/28/1997	EPIC	< 1.0	48.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	5/22/1997	EPIC	< 1.0	7.29	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	8/20/1997	EPIC	< 1.0	16.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	11/23/1997	EPIC	< 0.5	160	< 0.5	114	< 0.5	< 0.5	< 0.5
	12/9/1997	HEAL	< 0.5	< 0.5	65	< 0.5	< 0.5	< 0.5	< 0.5
	1/8/1998	HEAL	< 0.5	220	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	6/11/1998	HEAL	< 0.5	180	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	4/29/1999	OAL	7.1	320	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	5/13/2000	OAL	7.2	< 0.5	< 0.5	266	< 0.5	< 0.5	< 0.5
	11/17/2000	NCA	< 0.5	< 1.0	< 0.5	5.23	< 0.5	< 0.5	< 0.5
	5/22/2001	Analysys		< 0.5	< 0.5	3.1	< 0.5	< 0.5	< 0.5
	5/22/2001	Analysys		< 0.5	< 0.5	5.81	< 0.5	< 0.5	< 0.5
5-06C	11/18/2001	Analysys		< 0.5	< 0.5	43.7	< 0.5	< 0.5	< 0.5
	11/18/2001	Analysys		< 0.5	< 0.5	40.5	< 0.5	< 0.5	< 0.5
	4/20/2002	NCA	< 10.0	150	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
	4/20/2002	NCA	< 10.0	168	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
	10/30/2002	HEAL		41	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	11/10/2003	HEAL	1.7	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/9/2005	HEAL	2.2	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	7/25/2007	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	1.1	< 1.0	< 1.0
	9/23/2008	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	8/4/2009	HEAL	1.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

TABLE 4
SUMMARY OF ANALYTICAL RESULTS FOR PCB COMPOUNDS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Desta	Lab †		PC	CB Concentr	ation by Ar	oclor (μg/L	)	
Well ID	Date	Lab '	1016	1221	1232	1242	1248	1254	1260
NMV	VQCC Standa	rd	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	5/18/2010	HEAL	4.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	5/18/2010	HEAL	2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/25/2011	HEAL	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/25/2011	HEAL	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
5-06C cont.	6/12/2012	HEAL	< 1.0	< 1.0	< 1.0	3.1	< 1.0	< 1.0	< 1.0
	6/12/2012	HEAL	< 1.0	< 1.0	< 1.0	4.0	< 1.0	< 1.0	< 1.0
	7/10/2012	HEAL	< 1.0	< 1.0	< 1.0	1.2	< 1.0	< 1.0	< 1.0
	7/23/2013	HEAL	< 1.0	< 1.0	< 1.0	1.2	< 1.0	< 1.0	< 1.0
	4/22/2014	HEAL	< 0.25	< 0.25	< 0.25	1.4	< 0.25	< 0.25	< 0.25
	5/12/2000	OAL	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	11/17/2000	NCA	< 0.5	< 1.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	5/23/2001	Analysys		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	11/17/2001	Analysys		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	4/19/2002	NCA	< 0.5	< 1.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	10/31/2002	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
5-17B	5/22/2003	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	11/11/2003	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/8/2004	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/8/2005	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	7/10/2006	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	7/25/2007	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	8/4/2009	HEAL	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
					_				_
	11/19/2001	Analysys		< 0.5	< 0.5	30.7	< 0.5	< 0.5	< 0.5
	10/30/2002	HEAL		19	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	5/21/2003	HEAL		14	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	11/11/2003	HEAL	11	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/8/2004	HEAL	10	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/8/2004	HEAL	11	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/9/2005	HEAL	4.6	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
5-59	6/9/2005	HEAL	3.3	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	7/11/2006	HEAL	3.4	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	7/11/2006	HEAL	3.3	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	7/25/2007	HEAL	1.8	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/23/2008	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	8/4/2009	HEAL	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	5/18/2010	HEAL	1.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/25/2011	HEAL	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

TABLE 4
SUMMARY OF ANALYTICAL RESULTS FOR PCB COMPOUNDS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well ID	Date	Lab †		PC	CB Concentr	ation by Ar	oclor (μg/L)		
VVCII ID	Dute	Lub	1016	1221	1232	1242	1248	1254	1260
NMWQCC Standard		1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	6/12/2012	HEAL	< 1.0	< 1.0	< 1.0	2.6	< 1.0	< 1.0	< 1.0
5-59 cont .	7/10/2012	HEAL	< 1.0	< 1.0	< 1.0	1.0	< 1.0	< 1.0	< 1.0
3-39 cont .	7/23/2013	HEAL	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/22/2014	HEAL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
	11/18/2001	Analysys		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	4/20/2002	NCA	< 0.5	< 1.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	10/31/2002	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	5/22/2003	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	11/11/2003	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
5-60	6/8/2004	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/9/2005	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	7/11/2006	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	7/25/2007	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/23/2008	HEAL	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	8/4/2009	HEAL	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Notes:

TABLE 5
SUMMARY OF SOIL ANALYTICAL RESULTS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

							Total			ТРН-	
Well ID	Samuelo ID	Campula Data	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX		TPH-DRO		TPH Total
Well ID	Sample ID	Sample Date	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
	S-086242-111914-CB-B-1-44-45.5	11/19/2014	< 0.51	< 0.51	< 0.51	4.2	4.2	360	410	< 52	770
B-1	S-086242-111914-CB-B-1-54-55.5	11/20/2014	< 0.052	< 0.052	< 0.052	< 0.1	< 0.256	< 5.2	< 11	< 54	< 70.2
D-1	S-086242-111914-CB-B-1-56-58	11/20/2014	< 1	2	3	46	51	1100	1300	< 560	2400
	S-086242-111914-CB-B-1-60-61.5	11/20/2014	< 1.2	22	4.3	47	73.3	910	1000	< 62	1910
	S-086242-112114-CB-B-2-54-55.5	11/21/2014	< 0.05	< 0.05	< 0.05	< 0.1	< 0.25	< 5	< 11	< 54	< 70
B-2	S-086242-112114-CB-B-2-55.5-57	11/21/2014	< 0.056	< 0.056	< 0.056	< 0.11	< 0.278	36	28	< 58	64
D-Z	S-086242-112114-CB-B-2-57-58.5	11/21/2014	2.2	49	11	100	162.2	2700	840	< 59	3540
	S-086242-112114-CB-B-2-60-62	11/21/2014	< 0.057	0.058	< 0.057	0.7	0.758	32	21	< 60	53
B-3	S-086242-112414-CB-B3-54-55.5	11/24/2014	< 0.058	< 0.058	< 0.058	< 0.12	< 0.294	< 5.8	< 12	< 62	< 79.8
D-3	S-086242-112414-CB-B3-58-60	11/24/2014	< 0.056	< 0.056	< 0.056	< 0.11	< 0.278	< 5.6	< 12	< 59	< 76.6
B-4	S-086242-112514-CB-B4-56-58	11/25/2014	< 0.054	< 0.054	< 0.054	< 0.11	< 0.272	< 5.4	< 12	< 58	< 75.4
B-4	S-086242-112514-CB-B4-58-60	11/25/2014	< 0.052	< 0.052	< 0.052	< 0.1	< 0.256	19	< 11	< 53	19
	S-086242-112514-CB-B5-14-15.5	11/25/2014	< 0.052	< 0.052	< 0.052	< 0.1	< 0.256	< 5.2	< 11	< 53	< 69.2
B-5	S-086242-112514-CB-B5-56-58.5	11/25/2014	< 0.057	< 0.057	< 0.057	< 0.11	< 0.281	< 5.7	< 12	< 58	< 75.7
D-3	S-086242-112514-CB-B5-60-62	11/25/2014	18	180	39	390	627	7500	7100	< 570	14600
	S-086242-112514-CB-B5-62-63	11/25/2014	< 0.59	6.5	1.2	14	21.7	240	370	< 61	610
	NMOCD RRAL		10				50				1000

### **Notes:**

TPH = Total petroleum hydrocarbons

GRO/DRO/ORO = Gasoline/diesel/oil organics

NMOCD RRAL = New Mexico Oil Conservation Division Recommended Remedial Action Limit

mg/kg = milligrams per kilogram (parts per million)

< 10.4 = Below Laboratory Detection Limit of 10.4 mg/kg

< = Below Laboratory Detection Limit

**BOLD** = Concentrations that exceed the NMWQCC groundwater quality standard

TABLE 6
PLUGGED AND ABANDONED WELL SPECIFICATIONS
THOREAU COMPRESSOR STATION NO. 5
MCKINLEY COUNTY, NEW MEXICO

Well	Date of Completion	Date Last Sampled	Total Depth of Boring (ft bgs)	Screen Interval (ft bgs)	Plug and Abandonment Date	Field Verified Total Depth at time of Plugging (ft bgs)	Theoretical Grout Volume (gallons)	Actual Grout Volume (gallons)
5-02B	05/12/89	02/28/97	55.5	37.5-51.0	11/26/2014	57.00	9.12	18
5-04B	06/16/89	11/11/03	58.8	38.7-57.2	11/18/2014	55.00	8.80	18
5-12B	06/28/90	06/08/04	65.0	45.0-65.0	11/17/2014	64.97	10.39	18
5-13B	06/28/90	06/08/04	69.4	49.3-69.4	11/17/2014	69.51	11.12	18
5-14B	06/27/90	06/08/04	72.3	42.3-72.3	11/17/2014	71.68	11.47	20
5-15B	06/29/90	06/08/04	65.6	45.6-65.6	11/18/2014	65.09	10.41	20
5-19B	07/10/90	06/08/04	63.3	43.3-63.3	11/18/2014	65.00	10.40	20
5-22B	09/13/90	11/18/97	55.8	45.8-55.8	11/26/2014	55.80	8.93	15
5-23B	09/21/90	06/08/04	80.1	50.1-80.1	11/17/2014	79.70	12.75	25
5-24B	09/25/90	06/08/04	75.5	45.5-75.5	11/17/2014	75.21	12.03	25
5-41B	07/24/92	08/18/97	77.0	55.0-72.0	11/26/2014	72.70	11.63	25
SVE-1	03/29/96	06/08/04	60.0	35.0-60.0	11/18/2014	61.65	9.86	18
SVE-2	03/29/96	NA	61.0	35.0-60.0	11/18/2014	61.84	9.89	18

# **Appendix A**

**Groundwater Laboratory Analytical Report** 





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

May 06, 2014

Angie Bown Conestoga-Rovers & Associates 6121 Indian School Rd. NE Suite 200 Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: Thoreau Compressor Station No 5 OrderNo.: 1404961

### Dear Angie Bown:

Hall Environmental Analysis Laboratory received 10 sample(s) on 4/23/2014 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. 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. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. 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.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

Inly

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 5/6/2014

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Conestoga-Rovers & Associates Client Sample ID: GW-086241-042114-CM-5-16B

Project:Thoreau Compressor Station No 5Collection Date: 4/21/2014 1:05:00 PMLab ID:1404961-001Matrix: AQUEOUSReceived Date: 4/23/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	5000	50	μg/L	50	4/24/2014 3:58:06 PM	R18204
Toluene	ND	50	μg/L	50	4/24/2014 3:58:06 PM	R18204
Ethylbenzene	360	50	μg/L	50	4/24/2014 3:58:06 PM	R18204
Xylenes, Total	2500	100	μg/L	50	4/24/2014 3:58:06 PM	R18204
Surr: 4-Bromofluorobenzene	106	82.9-139	%REC	50	4/24/2014 3:58:06 PM	R18204

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

Page 1 of 13

- P Sample pH greater than 2.
- RL Reporting Detection Limit

## Date Reported: 5/6/2014

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Conestoga-Rovers & Associates Client Sample ID: GW-086242-042114-CM-5-18B

Project: Thoreau Compressor Station No 5 Collection Date: 4/21/2014 2:25:00 PM

Lab ID: 1404961-002 Matrix: AQUEOUS Received Date: 4/23/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	1.0	μg/L	1	4/24/2014 4:28:23 PM	R18204
Toluene	ND	1.0	μg/L	1	4/24/2014 4:28:23 PM	R18204
Ethylbenzene	ND	1.0	μg/L	1	4/24/2014 4:28:23 PM	R18204
Xylenes, Total	ND	2.0	μg/L	1	4/24/2014 4:28:23 PM	R18204
Surr: 4-Bromofluorobenzene	102	82.9-139	%REC	1	4/24/2014 4:28:23 PM	R18204

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

Page 2 of 13

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Date Reported: 5/6/2014

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Conestoga-Rovers & Associates Client Sample ID: GW-086242-042114-CM-5-20B

Project:Thoreau Compressor Station No 5Collection Date: 4/21/2014 3:40:00 PMLab ID:1404961-003Matrix: AQUEOUSReceived Date: 4/23/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	1.0	μg/L	1	4/25/2014 1:59:40 PM	R18223
Toluene	ND	1.0	μg/L	1	4/25/2014 1:59:40 PM	R18223
Ethylbenzene	ND	1.0	μg/L	1	4/25/2014 1:59:40 PM	R18223
Xylenes, Total	ND	2.0	μg/L	1	4/25/2014 1:59:40 PM	R18223
Surr: 4-Bromofluorobenzene	94.7	82.9-139	%REC	1	4/25/2014 1:59:40 PM	R18223

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 3 of 13

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Date Reported: 5/6/2014

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Conestoga-Rovers & Associates

Client Sample ID: GW-086242-042214-CM-5-59

Project: Thoreau Compressor Station No 5 Collection Date: 4/22/2014 11:05:00 AM

Lab ID: 1404961-004 Matrix: AQUEOUS Received Date: 4/23/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8082: PCB'S					Analyst	: SCC
Aroclor 1016	ND	0.25	μg/L	1	5/2/2014 2:25:42 PM	12860
Aroclor 1221	ND	0.25	μg/L	1	5/2/2014 2:25:42 PM	12860
Aroclor 1232	ND	0.25	μg/L	1	5/2/2014 2:25:42 PM	12860
Aroclor 1242	ND	0.25	μg/L	1	5/2/2014 2:25:42 PM	12860
Aroclor 1248	ND	0.25	μg/L	1	5/2/2014 2:25:42 PM	12860
Aroclor 1254	ND	0.25	μg/L	1	5/2/2014 2:25:42 PM	12860
Aroclor 1260	ND	0.25	μg/L	1	5/2/2014 2:25:42 PM	12860
Surr: Decachlorobiphenyl	69.2	33.2-131	%REC	1	5/2/2014 2:25:42 PM	12860
Surr: Tetrachloro-m-xylene	64.4	34.7-138	%REC	1	5/2/2014 2:25:42 PM	12860
EPA METHOD 8021B: VOLATILES					Analyst	:: NSB
Benzene	ND	1.0	μg/L	1	4/25/2014 2:29:46 PM	R18223
Toluene	ND	1.0	μg/L	1	4/25/2014 2:29:46 PM	R18223
Ethylbenzene	ND	1.0	μg/L	1	4/25/2014 2:29:46 PM	R18223
Xylenes, Total	5.9	2.0	μg/L	1	4/25/2014 2:29:46 PM	R18223
Surr: 4-Bromofluorobenzene	99.6	82.9-139	%REC	1	4/25/2014 2:29:46 PM	R18223

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

Page 4 of 13

- P Sample pH greater than 2.
- RL Reporting Detection Limit

### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 5/6/2014

CLIENT: Conestoga-Rovers & Associates Client Sample ID: GW-086242-042214-CM-5-6C

Project: Thoreau Compressor Station No 5 Collection Date: 4/22/2014 12:30:00 PM

Lab ID: 1404961-005 Matrix: AQUEOUS Received Date: 4/23/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8082: PCB'S					Analys	t: SCC
Aroclor 1016	ND	0.25	μg/L	1	5/2/2014 3:12:32 PM	12860
Aroclor 1221	ND	0.25	μg/L	1	5/2/2014 3:12:32 PM	12860
Aroclor 1232	ND	0.25	μg/L	1	5/2/2014 3:12:32 PM	12860
Aroclor 1242	1.4	0.25	μg/L	1	5/2/2014 3:12:32 PM	12860
Aroclor 1248	ND	0.25	μg/L	1	5/2/2014 3:12:32 PM	12860
Aroclor 1254	ND	0.25	μg/L	1	5/2/2014 3:12:32 PM	12860
Aroclor 1260	ND	0.25	μg/L	1	5/2/2014 3:12:32 PM	12860
Surr: Decachlorobiphenyl	71.6	33.2-131	%REC	1	5/2/2014 3:12:32 PM	12860
Surr: Tetrachloro-m-xylene	67.6	34.7-138	%REC	1	5/2/2014 3:12:32 PM	12860
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	1.0	μg/L	1	4/24/2014 5:59:00 PM	R18204
Toluene	ND	1.0	μg/L	1	4/24/2014 5:59:00 PM	R18204
Ethylbenzene	ND	1.0	μg/L	1	4/24/2014 5:59:00 PM	R18204
Xylenes, Total	ND	2.0	μg/L	1	4/24/2014 5:59:00 PM	R18204
Surr: 4-Bromofluorobenzene	98.3	82.9-139	%REC	1	4/24/2014 5:59:00 PM	R18204

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 5 of 13

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Date Reported: 5/6/2014

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Conestoga-Rovers & Associates Client Sample ID: GW-086242-042214-CM5-35B

Project:Thoreau Compressor Station No 5Collection Date: 4/22/2014 1:30:00 PMLab ID:1404961-006Matrix: AQUEOUSReceived Date: 4/23/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES				Ana	lyst: NSB
Benzene	2500	100	μg/L	100 4/24/2014 6:29:16 [	PM R18204
Toluene	ND	20	μg/L	20 4/25/2014 2:59:52 F	PM R18223
Ethylbenzene	110	20	μg/L	20 4/25/2014 2:59:52	PM R18223
Xylenes, Total	830	40	μg/L	20 4/25/2014 2:59:52 F	PM R18223
Surr: 4-Bromofluorobenzene	105	82.9-139	%REC	20 4/25/2014 2:59:52 F	PM R18223

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- Page 6 of 13
- RL Reporting Detection Limit

### Date Reported: 5/6/2014

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Conestoga-Rovers & Associates Client Sample ID: GW-086242-042214.CM-SVE-0

Project:Thoreau Compressor Station No 5Collection Date: 4/22/2014 1:45:00 PMLab ID:1404961-007Matrix: AQUEOUSReceived Date: 4/23/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES				Ar	alyst: NSB
Benzene	6800	100	μg/L	100 4/25/2014 4:00:20	PM R18223
Toluene	ND	50	μg/L	50 4/24/2014 7:29:34	PM R18204
Ethylbenzene	280	50	μg/L	50 4/24/2014 7:29:34	PM R18204
Xylenes, Total	1900	100	μg/L	50 4/24/2014 7:29:34	PM R18204
Surr: 4-Bromofluorobenzene	106	82.9-139	%REC	50 4/24/2014 7:29:34	PM R18204

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 7 of 13

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Date Reported: 5/6/2014

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Conestoga-Rovers & Associates Client Sample ID: GW-086242-042214-CM-DUP

**Project:** Thoreau Compressor Station No 5 Collection Date: 4/22/2014

**Lab ID:** 1404961-008 **Matrix:** AQUEOUS **Received Date:** 4/23/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES				An	alyst: <b>NSB</b>
Benzene	6800	100	μg/L	100 4/25/2014 4:30:26	PM R18223
Toluene	ND	50	μg/L	50 4/24/2014 7:59:46	PM R18204
Ethylbenzene	280	50	μg/L	50 4/24/2014 7:59:46	PM R18204
Xylenes, Total	1900	100	μg/L	50 4/24/2014 7:59:46	PM R18204
Surr: 4-Bromofluorobenzene	103	82.9-139	%REC	50 4/24/2014 7:59:46	PM R18204

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

Page 8 of 13

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Date Reported: 5/6/2014

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Conestoga-Rovers & Associates Client Sample ID: WC-086242-042214-CM-Waste

Project:Thoreau Compressor Station No 5Collection Date: 4/22/2014 1:50:00 PMLab ID:1404961-009Matrix: AQUEOUSReceived Date: 4/23/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8082: PCB'S					Analys	t: SCC
Aroclor 1016	ND	0.25	μg/L	1	5/2/2014 3:58:22 PM	12860
Aroclor 1221	ND	0.25	μg/L	1	5/2/2014 3:58:22 PM	12860
Aroclor 1232	ND	0.25	μg/L	1	5/2/2014 3:58:22 PM	12860
Aroclor 1242	ND	0.25	μg/L	1	5/2/2014 3:58:22 PM	12860
Aroclor 1248	ND	0.25	μg/L	1	5/2/2014 3:58:22 PM	12860
Aroclor 1254	ND	0.25	μg/L	1	5/2/2014 3:58:22 PM	12860
Aroclor 1260	ND	0.25	μg/L	1	5/2/2014 3:58:22 PM	12860
Surr: Decachlorobiphenyl	73.6	33.2-131	%REC	1	5/2/2014 3:58:22 PM	12860
Surr: Tetrachloro-m-xylene	62.0	34.7-138	%REC	1	5/2/2014 3:58:22 PM	12860

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

Page 9 of 13

- P Sample pH greater than 2.
- RL Reporting Detection Limit

## **Analytical Report**

Lab Order **1404961**Date Reported: **5/6/2014** 

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Conestoga-Rovers & Associates Client Sample ID: TB-086242-042214-CM-001

**Project:** Thoreau Compressor Station No 5 Collection Date:

**Lab ID:** 1404961-010 **Matrix:** AQUEOUS **Received Date:** 4/23/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES				Ar	nalyst: <b>NSB</b>
Benzene	ND	1.0	μg/L	1 4/25/2014 12:31:	34 AM R18204
Toluene	ND	1.0	μg/L	1 4/25/2014 12:31:3	34 AM R18204
Ethylbenzene	ND	1.0	μg/L	1 4/25/2014 12:31:3	34 AM R18204
Xylenes, Total	ND	2.0	μg/L	1 4/25/2014 12:31:3	34 AM R18204
Surr: 4-Bromofluorobenzene	99.7	82.9-139	%REC	1 4/25/2014 12:31:3	34 AM R18204

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 10 of 13
- P Sample pH greater than 2.
- RL Reporting Detection Limit

### **QC SUMMARY REPORT**

### Hall Environmental Analysis Laboratory, Inc.

20

1100

WO#: **1404961** 

06-May-14

Client: Conestoga-Rovers & Associates

Project: Thoreau Compressor Station No 5

Sample ID 5ML RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: **PBW** Batch ID: R18204 RunNo: 18204 Prep Date: Analysis Date: 4/24/2014 SeqNo: 525419 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 ND Ethylbenzene 1.0 Xylenes, Total ND 2.0 Surr: 4-Bromofluorobenzene 19 20.00 96.8 82.9 139

Sample ID 100NG BTEX LCS SampType: LCS TestCode: EPA Method 8021B: Volatiles Batch ID: R18204 Client ID: **LCSW** RunNo: 18204 Prep Date: Analysis Date: 4/24/2014 SeqNo: 525420 Units: µg/L Analyte **PQL** SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** LowLimit Qual 21 20.00 O 106 80 120 Benzene 1.0 Toluene 21 1.0 20.00 0 105 80 120 Ethylbenzene 21 20.00 0 105 80 120 1.0 Xylenes, Total 64 2.0 60.00 0 106 80 120

20.00

1000

Sample ID 1404961-001AMS SampType: MS TestCode: EPA Method 8021B: Volatiles GW-086241-042114-Client ID: Batch ID: R18204 RunNo: 18204 Analysis Date: 4/24/2014 SeaNo: 525422 Units: µg/L Prep Date: Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Benzene 6100 50 1000 4993 113 71 129 Ε Toluene 1100 50 1000 0 110 68.4 135 365.0 1500 50 1000 110 69.4 135 Ethylbenzene Xylenes, Total 5800 100 3000 2549 108 72.4 135

99.0

110

82.9

82.9

139

139

Sample ID 1404961-001AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles Client ID: GW-086241-042114-Batch ID: R18204 RunNo: 18204 Prep Date: Analysis Date: 4/24/2014 SeqNo: 525423 Units: µg/L SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQL SPK value LowLimit HighLimit Qual 5900 50 1000 4993 95.6 71 129 2.82 20 Е Benzene Toluene 1100 50 1000 0 106 68.4 135 3.20 20 Ethylbenzene 1400 50 1000 365.0 107 69.4 135 2.05 20 Xylenes, Total 5600 100 3000 2549 103 72.4 135 2.40 20 Surr: 4-Bromofluorobenzene 1100 1000 109 82.9 0 0 139

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range

Surr: 4-Bromofluorobenzene

Surr: 4-Bromofluorobenzene

- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Page 11 of 13

## **QC SUMMARY REPORT**

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1404961** 

06-May-14

Client: Conestoga-Rovers & Associates

Project: Thoreau Compressor Station No 5

Sample ID 5ML RB	SampT	уре: МЕ	BLK	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID: PBW	Batch	n ID: <b>R1</b>	8223	F	RunNo: 1	8223				
Prep Date:	Analysis D	Date: 4/	25/2014	8	SeqNo: 5	26174	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	19		20.00		94.3	82.9	139			

Sample ID 100NG BTEX LO	CS SampT	ype: LC	s	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSW	Batch	n ID: <b>R1</b>	8223	F	RunNo: 1	8223				
Prep Date:	Analysis D	ate: 4/	25/2014	S	SeqNo: 5	26175	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	108	80	120			
Toluene	22	1.0	20.00	0	108	80	120			
Ethylbenzene	21	1.0	20.00	0	106	80	120			
Xylenes, Total	65	2.0	60.00	0	108	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		102	82.9	139			

### Qualifiers:

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

Page 12 of 13

## **QC SUMMARY REPORT**

**Client:** 

## Hall Environmental Analysis Laboratory, Inc.

Conestoga-Rovers & Associates

WO#: **1404961** 

06-May-14

	au Compressor St								
Sample ID MB-12860	SampType:	MBLK	Tes	tCode: <b>EPA</b> I	Method	8082: PCB's			
Client ID: PBW	Batch ID:	12860	F	RunNo: <b>1833</b>	4				
Prep Date: 4/24/2014	Analysis Date:	5/1/2014	8	SeqNo: <b>5297</b>	73	Units: µg/L			
Analyte	Result PC	QL SPK value	SPK Ref Val	%REC Lo	owLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	ND 0	.25							
Aroclor 1221	ND 0	.25							
Aroclor 1232	ND 0	.25							
Aroclor 1242	ND 0	.25							
Aroclor 1248	ND 0	.25							
Aroclor 1254	ND 0	.25							
Aroclor 1260	ND 0	.25							
Surr: Decachlorobiphenyl	1.9	2.500		74.8	33.2	131			
Surr: Tetrachloro-m-xylene	1.7	2.500		69.2	34.7	138			
Sample ID LCS-12860	SampType:	LCS	Tes	tCode: <b>EPA I</b>	Method	8082: PCB's			
Client ID: LCSW	Batch ID:	12860	F	RunNo: <b>1833</b>	4				
Prep Date: 4/24/2014	Analysis Date:	5/1/2014	S	SeqNo: <b>5297</b>	75	Units: µg/L			
Analyte	Result PC	QL SPK value	SPK Ref Val	%REC Lo	owLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	2.6 0	.25 5.000	0	51.4	15	134			
Aroclor 1260	3.2 0	.25 5.000	0	63.5	32.1	148			
Surr: Decachlorobiphenyl	1.4	2.500		57.6	33.2	131			
Surr: Tetrachloro-m-xylene	1.3	2.500		52.4	34.7	138			
Sample ID MB-12918	SampType:	MBLK	Tes	tCode: <b>EPA</b> I	Method	8082: PCB's			
Client ID: PBW	Batch ID:	12918	F	RunNo: <b>1833</b>	4				
Prep Date: 4/29/2014	Analysis Date:	5/1/2014	S	SeqNo: <b>5297</b>	77	Units: %REC	;		
Analyte	Result PC	QL SPK value	SPK Ref Val	%REC Lo	owLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	1.7	2.500		68.4	33.2	131			
Surr: Tetrachloro-m-xylene	1.6	2.500		62.0	34.7	138			
Sample ID LCS-12918	SampType:	LCS	Tes	tCode: <b>EPA I</b>	Method	8082: PCB's	-		
Client ID: LCSW	Batch ID:	12918	F	RunNo: <b>1833</b>	4				
Prep Date: 4/29/2014	Analysis Date:	5/1/2014	S	SeqNo: <b>5297</b>	79	Units: %REC	;		
Analyte	Result PC	QL SPK value	SPK Ref Val	%REC Lo	owLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	1.6	2.500		65.6	33.2	131			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.

1.5

E Value above quantitation range

Surr: Tetrachloro-m-xylene

- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded

34.7

138

ND Not Detected at the Reporting Limit

59.6

P Sample pH greater than 2.

2.500

RL Reporting Detection Limit

Page 13 of 13



4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

### Sample Log-In Check List

Website: www.hallenvironmental.com Client Name: CONESTOGA-ROVERS Work Order Number: 1404961 RcptNo: 1 104/23/14 Received by/date: anne Am Logged By: 4/23/2014 8:00:00 AM Anne Thorne Completed By: **Anne Thorne** Reviewed By: Chain of Custody Yes  $\square$ No 🗀 Not Present 🗸 1. Custody seals intact on sample bottles? 2. Is Chain of Custody complete? Yes 🗸 No  $\square$ Not Present 3. How was the sample delivered? Client Log In No 🗀 4. Was an attempt made to cool the samples? Yes 🔽 NA 🗀 5. Were all samples received at a temperature of >0° C to 6.0°C NA 🗌 No □ Sample(s) in proper container(s)? Yes 🗸 Yes 🔽 7. Sufficient sample volume for indicated test(s)? No 🗌 **V** No 🗌 8. Are samples (except VOA and ONG) properly preserved? Yes No 🔽 NA 🗌 9. Was preservative added to bottles? Yes 10.VOA vials have zero headspace? **V** No 🗌 No VOA Vials Yes 11. Were any sample containers received broken? No 🔽 Yes # of preserved bottles checked 12. Does paperwork match bottle labels? for pH: Yes 🔽 No 🗌 (Note discrepancies on chain of custody) (<2 or >12 unless noted) Adjusted? No 🗆 13. Are matrices correctly identified on Chain of Custody? **~** 14. Is it clear what analyses were requested? ~ No 🗌 Yes 15. Were all holding times able to be met? Yes 🗹 No 🗌 Checked by: (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Yes NA 🔽 No 🗌 Person Notified: Date By Whom: Via: In Person eMail Phone Fax Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information

Cooler No

1.0

Temp °C | Condition |

Good

Seal Intact

Not Present

Seal No

Seal Date

& ASSOCIATES

Address: 612 | 1714 | Report 1 | 1714 | Phone: 505-884

CHAIN OF CUSTO

COCNO. 32878
PAGE OF

(See Reverse Side for Instruct

Project No. 7 Lab Contact Project Name: Proj	Physopycotal	Lab Quote Mod	SSOW ID: Cooler No:
Project Location: Sample Sample Cheffish Confects	CONTAINER QUANTITY & PRESERVATION	ANALYSIS REQUESTED (See Back of COC for Definitions)	Carrier:
Annue Devile Sample (C) CAR (C) CAR (C) Sample (C) C (C) C) C (C) C) C (C) C (C) C) C (C) C (C) C) C) C (C) C) C	drochloric Acid (HCI)  drochloric Acid (HCI)  filuric Acid (H <sub>2</sub> SO <sub>4</sub> )  filuric Acid (HCI)  filuric Acid (HCI)  filuric Acid (HCI)	Allully of LE	Airbill No: Date Shipped;
14-CM-5-16B 4/21/14 1305 WG (14)	HO DO STATE OF THE		SPECIAL INSTRUCTION
11-08/242-042214-(M1-5-208 4/21)	30		22
101-026/242-047214-CM-5-59 4/22/14 1105 1106 16	30		33
W-086247-042214-0715-35B4/221413201061G	200		37-
12-086242-042214-011-DIK 41244 13-50 16 G			32
1 00 027 - 2 - 010 00 1 102 10 102 102 102 102 102 102			
			2
nt TATs). her:	otal Number of Cont ples in Cooler must I	Notes/ Special Requirements:	1.0
200 Mothue (2014 4/22/4)	1725 1. C. M. RECEIVED BY 1725 1. C. M. M. C. M.	CRA	4/22/14 1728 4/23/14 0800

# **Appendix B**

**Soil Laboratory Analytical Report** 





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

OrderNo.: 1411986

December 03, 2014

Bernie Bockish

**CRA** 

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: Thoreau Compressor Station No. 5

### Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 5 sample(s) on 11/21/2014 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. 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. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. 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.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

## Hall Environmental Analysis Laboratory, Inc. Date Reported: 12/3/2014

**CLIENT:** CRA **Client Sample ID:** S.086242.111914.CB.B-1-44-45.

 Project:
 Thoreau Compressor Station No. 5
 Collection Date: 11/19/2014 1:00:00 PM

 Lab ID:
 1411986-001
 Matrix: SOIL
 Received Date: 11/21/2014 2:54:00 PM

Analyses	Result	RL Qual Units			DF	Batch	
EPA METHOD 8015D: DIESEL RAN	GE ORGANICS					Analyst	: JME
Diesel Range Organics (DRO)	410	10		mg/Kg-dry	1	11/25/2014 4:06:17 PM	l 16541
Motor Oil Range Organics (MRO)	ND	52		mg/Kg-dry	1	11/25/2014 4:06:17 PM	l 16541
Surr: DNOP	80.2	63.5-128		%REC	1	11/25/2014 4:06:17 PM	l 16541
EPA METHOD 8015D: GASOLINE R	ANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	360	100		mg/Kg-dry	20	11/26/2014 10:30:57 P	M 16538
Surr: BFB	153	80-120	S	%REC	20	11/26/2014 10:30:57 P	M 16538
PERCENT MOISTURE						Analyst	:: KJH
Percent Moisture	5.4	1.0		wt%	1	12/1/2014 11:00:00 AM	R22872
EPA METHOD 8260B: VOLATILES	SHORT LIST					Analyst	: cadg
Benzene	ND	0.51		mg/Kg-dry	10	11/26/2014 1:18:23 PM	l 16538
Toluene	ND	0.51		mg/Kg-dry	10	11/26/2014 1:18:23 PM	l 16538
Ethylbenzene	ND	0.51		mg/Kg-dry	10	11/26/2014 1:18:23 PM	l 16538
Xylenes, Total	4.2	1.0		mg/Kg-dry	10	11/26/2014 1:18:23 PM	l 16538
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	10	11/26/2014 1:18:23 PM	l 16538
Surr: 4-Bromofluorobenzene	78.4	70-130		%REC	10	11/26/2014 1:18:23 PM	l 16538
Surr: Dibromofluoromethane	92.6	70-130		%REC	10	11/26/2014 1:18:23 PM	l 16538
Surr: Toluene-d8	100	70-130		%REC	10	11/26/2014 1:18:23 PM	l 16538

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

Page 1 of 11

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/3/2014

**CLIENT:** CRA **Client Sample ID:** S.086242.112014.CB.B-1-54-55.

 Project:
 Thoreau Compressor Station No. 5
 Collection Date: 11/20/2014 12:39:00 PM

 Lab ID:
 1411986-002
 Matrix: SOIL
 Received Date: 11/21/2014 2:54:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed B	atch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst: <b>J</b>	ME
Diesel Range Organics (DRO)	ND	11	mg/Kg-dry	1	11/25/2014 4:27:44 PM 1	6541
Motor Oil Range Organics (MRO)	ND	54	mg/Kg-dry	1	11/25/2014 4:27:44 PM 1	6541
Surr: DNOP	94.0	63.5-128	%REC	1	11/25/2014 4:27:44 PM 1	6541
EPA METHOD 8015D: GASOLINE RA	ANGE				Analyst: N	ISB
Gasoline Range Organics (GRO)	ND	5.2	mg/Kg-dry	1	11/26/2014 12:41:18 AM 1	6538
Surr: BFB	91.3	80-120	%REC	1	11/26/2014 12:41:18 AM 1	6538
PERCENT MOISTURE					Analyst: <b>K</b>	IJΗ
Percent Moisture	6.9	1.0	wt%	1	12/1/2014 11:00:00 AM R	22872
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst: c	adg
Benzene	ND	0.052	mg/Kg-dry	1	11/26/2014 12:24:03 AM 1	6538
Toluene	ND	0.052	mg/Kg-dry	1	11/26/2014 12:24:03 AM 1	6538
Ethylbenzene	ND	0.052	mg/Kg-dry	1	11/26/2014 12:24:03 AM 1	6538
Xylenes, Total	ND	0.10	mg/Kg-dry	1	11/26/2014 12:24:03 AM 1	6538
Surr: 1,2-Dichloroethane-d4	100	70-130	%REC	1	11/26/2014 12:24:03 AM 1	6538
Surr: 4-Bromofluorobenzene	101	70-130	%REC	1	11/26/2014 12:24:03 AM 1	6538
Surr: Dibromofluoromethane	101	70-130	%REC	1	11/26/2014 12:24:03 AM 1	6538
Surr: Toluene-d8	97.9	70-130	%REC	1	11/26/2014 12:24:03 AM 1	6538

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - of Detected at the Reporting Limit Page 2 of 11
- $P \hspace{0.5cm} \hbox{Sample pH greater than 2.} \\$
- RL Reporting Detection Limit

## Date Reported: 12/3/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** CRA **Client Sample ID:** S.086242.112014.CB.B-1-56-58

**Project:** Thoreau Compressor Station No. 5 **Collection Date:** 11/20/2014 1:00:00 PM

**Lab ID:** 1411986-003 **Matrix:** SOIL **Received Date:** 11/21/2014 2:54:00 PM

Analyses	Result	RL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS					Analys	t: JME
Diesel Range Organics (DRO)	1300	110		mg/Kg-dry	10	11/26/2014 7:28:20 AM	1 16541
Motor Oil Range Organics (MRO)	ND	560		mg/Kg-dry	10	11/26/2014 7:28:20 AM	1 16541
Surr: DNOP	0	63.5-128	S	%REC	10	11/26/2014 7:28:20 AM	1 16541
EPA METHOD 8015D: GASOLINE R.	ANGE					Analys	t: NSB
Gasoline Range Organics (GRO)	1100	100		mg/Kg-dry	20	11/26/2014 1:09:56 AM	1 16538
Surr: BFB	242	80-120	S	%REC	20	11/26/2014 1:09:56 AM	1 16538
PERCENT MOISTURE						Analys	t: <b>KJH</b>
Percent Moisture	11	1.0		wt%	1	12/1/2014 11:00:00 AM	1 R22872
EPA METHOD 8260B: VOLATILES S	SHORT LIST					Analys	t: cadg
Benzene	ND	1.0		mg/Kg-dry	20	11/26/2014 12:50:48 A	M 16538
Toluene	2.0	1.0		mg/Kg-dry	20	11/26/2014 12:50:48 A	M 16538
Ethylbenzene	3.0	1.0		mg/Kg-dry	20	11/26/2014 12:50:48 A	M 16538
Xylenes, Total	46	2.1		mg/Kg-dry	20	11/26/2014 12:50:48 A	M 16538
Surr: 1,2-Dichloroethane-d4	95.3	70-130		%REC	20	11/26/2014 12:50:48 A	M 16538
Surr: 4-Bromofluorobenzene	76.6	70-130		%REC	20	11/26/2014 12:50:48 A	M 16538
Surr: Dibromofluoromethane	85.1	70-130		%REC	20	11/26/2014 12:50:48 A	M 16538
Surr: Toluene-d8	101	70-130		%REC	20	11/26/2014 12:50:48 A	M 16538

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 3 of 11

- P Sample pH greater than 2.
- RL Reporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/3/2014

**CLIENT:** CRA **Client Sample ID:** S.086242.112014.CB.B-1-60-61.

 Project:
 Thoreau Compressor Station No. 5
 Collection Date: 11/20/2014 1:40:00 PM

 Lab ID:
 1411986-004
 Matrix: SOIL
 Received Date: 11/21/2014 2:54:00 PM

Analyses	Result	RL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS					Analyst:	JME
Diesel Range Organics (DRO)	1000	12		mg/Kg-dry	1	11/25/2014 5:11:01 PM	16541
Motor Oil Range Organics (MRO)	ND	62		mg/Kg-dry	1	11/25/2014 5:11:01 PM	16541
Surr: DNOP	94.1	63.5-128		%REC	1	11/25/2014 5:11:01 PM	16541
EPA METHOD 8015D: GASOLINE RA	ANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	910	290		mg/Kg-dry	50	11/26/2014 1:38:29 AM	16538
Surr: BFB	133	80-120	S	%REC	50	11/26/2014 1:38:29 AM	16538
PERCENT MOISTURE						Analyst:	KJH
Percent Moisture	18	1.0		wt%	1	12/1/2014 11:00:00 AM	R22872
EPA METHOD 8260B: VOLATILES S	HORT LIST					Analyst:	cadg
Benzene	ND	1.2		mg/Kg-dry	20	11/26/2014 2:38:22 PM	16538
Toluene	22	1.2		mg/Kg-dry	20	11/26/2014 2:38:22 PM	16538
Ethylbenzene	4.3	1.2		mg/Kg-dry	20	11/26/2014 2:38:22 PM	16538
Xylenes, Total	47	2.3		mg/Kg-dry	20	11/26/2014 2:38:22 PM	16538
Surr: 1,2-Dichloroethane-d4	95.4	70-130		%REC	20	11/26/2014 2:38:22 PM	16538
Surr: 4-Bromofluorobenzene	94.3	70-130		%REC	20	11/26/2014 2:38:22 PM	16538
Surr: Dibromofluoromethane	85.2	70-130		%REC	20	11/26/2014 2:38:22 PM	16538
Surr: Toluene-d8	101	70-130		%REC	20	11/26/2014 2:38:22 PM	16538

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

Page 4 of 11

- P Sample pH greater than 2.
- RL Reporting Detection Limit

## **Analytical Report**

### Lab Order **1411986**

Date Reported: 12/3/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CRA Client Sample ID: Trip Blank

**Project:** Thoreau Compressor Station No. 5 Collection Date:

**Lab ID:** 1411986-005 **Matrix:** TRIP BLANK **Received Date:** 11/21/2014 2:54:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	11/26/2014 9:47:13 PN	M R22836
Surr: BFB	89.5	80-120	%REC	1	11/26/2014 9:47:13 PN	M R22836
EPA METHOD 8260: VOLATILES SH	ORT LIST				Analys	t: <b>KJH</b>
Benzene	ND	1.0	μg/L	1	11/26/2014 7:32:21 PN	1 R22837
Toluene	ND	1.0	μg/L	1	11/26/2014 7:32:21 PN	1 R22837
Ethylbenzene	ND	1.0	μg/L	1	11/26/2014 7:32:21 PN	1 R22837
Xylenes, Total	ND	1.5	μg/L	1	11/26/2014 7:32:21 PN	1 R22837
Surr: 1,2-Dichloroethane-d4	94.3	70-130	%REC	1	11/26/2014 7:32:21 PN	1 R22837
Surr: 4-Bromofluorobenzene	99.1	70-130	%REC	1	11/26/2014 7:32:21 PN	1 R22837
Surr: Dibromofluoromethane	89.2	70-130	%REC	1	11/26/2014 7:32:21 PN	1 R22837
Surr: Toluene-d8	91.1	70-130	%REC	1	11/26/2014 7:32:21 PN	1 R22837

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

Page 5 of 11

- P Sample pH greater than 2.
- RL Reporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1411986** 

03-Dec-14

Client: CRA

**Project:** Thoreau Compressor Station No. 5

Sample ID MB-16541 SampType: MBLK TestCode: EPA Method 8015D: Diesel Range Organics Client ID: **PBS** Batch ID: 16541 RunNo: 22764 Prep Date: 11/24/2014 Analysis Date: 11/25/2014 SeqNo: 672638 Units: mg/Kg Analyte **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) ND 10 Motor Oil Range Organics (MRO) ND 50 Surr: DNOP 7.5 10.00 74.9 63.5 128

Sample ID LCS-16541 SampType: LCS TestCode: EPA Method 8015D: Diesel Range Organics Client ID: LCSS Batch ID: 16541 RunNo: 22764 Prep Date: 11/24/2014 Analysis Date: 11/25/2014 SeqNo: 672743 Units: mg/Kg Analyte SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 10 87.9 68.6 44 50.00 130 Surr: DNOP 3.5 5.000 69.6 63.5 128

#### Qualifiers:

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

Page 6 of 11

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1411986** 

03-Dec-14

Client: CRA

**Project:** Thoreau Compressor Station No. 5

Sample ID MB-16538 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 16538 RunNo: 22780

Prep Date: 11/24/2014 Analysis Date: 11/25/2014 SeqNo: 672974 Units: mg/Kg

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

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 910 1000 91.3 80 120

Sample ID LCS-16538 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 16538 RunNo: 22780

Prep Date: 11/24/2014 Analysis Date: 11/25/2014 SeqNo: 672975 Units: mg/Kg

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

 Gasoline Range Organics (GRO)
 23
 5.0
 25.00
 0
 92.4
 65.8
 139

 Surr: BFB
 1000
 1000
 102
 80
 120

#### Qualifiers:

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

Page 7 of 11

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1411986** 

03-Dec-14

Client: CRA

**Project:** Thoreau Compressor Station No. 5

Sample ID 5ML RB SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBW Batch ID: R22836 RunNo: 22836

Prep Date: Analysis Date: 11/26/2014 SeqNo: 673913 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 17 20.00 86.5 80 120

Sample ID 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSW Batch ID: R22836 RunNo: 22836 Prep Date: Analysis Date: 11/26/2014 SeqNo: 673914 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

 Gasoline Range Organics (GRO)
 0.45
 0.050
 0.5000
 0
 89.8
 80
 120

 Surr: BFB
 18
 20.00
 92.4
 80
 120

#### Qualifiers:

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

Page 8 of 11

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1411986** 

03-Dec-14

Client: CRA

**Project:** Thoreau Compressor Station No. 5

Sample ID mb-16538	SampT	ype: ME	BLK	Tes	tCode: El	8260B: Volatiles Short List				
Client ID: PBS	Batch	Batch ID: 16538 RunNo: 228								
Prep Date: 11/24/2014	Analysis D	Date: 11	1/25/2014	S	SeqNo: 672834 Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		104	70	130			
Surr: 4-Bromofluorobenzene	0.46		0.5000		91.6	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130			
Surr: Toluene-d8	0.45		0.5000		89.9	70	130			

Sample ID Ics-16538	Samp1	SampType: LCS TestCode: EPA Method							d 8260B: Volatiles Short List			
Client ID: LCSS	Batcl	Batch ID: <b>16538</b> RunNo: <b>22801</b>										
Prep Date: 11/24/2014	Analysis D	Date: 11	1/25/2014	9	SeqNo: 6	72835						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	1.1	0.050	1.000	0	110	70	130					
Toluene	0.87	0.050	1.000	0	87.2	70	130					
Surr: 1,2-Dichloroethane-d4	0.54		0.5000		108	70	130					
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.6	70	130					
Surr: Dibromofluoromethane	0.54		0.5000		108	70	130					
Surr: Toluene-d8	0.46		0.5000		91.5	70	130					

Sample ID 1411986-001ams	<b>s</b> SampT	ype: MS	3	Tes	tCode: El	PA Method 8260B: Volatiles Short List				
Client ID: S.086242.111914	4.CB Batch	n ID: <b>16</b>	538	F	RunNo: 2	2838				
Prep Date: 11/24/2014	1/26/2014	SeqNo: 674015 Units: mg/Kg-dry								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.51	1.012	0.07284	94.3	32.2	145			
Toluene	0.97	0.51	1.012	0	96.0	29.1	139			
Surr: 1,2-Dichloroethane-d4	5.0		5.058		99.5	70	130			
Surr: 4-Bromofluorobenzene	4.4		5.058		87.7	70	130			
Surr: Dibromofluoromethane	4.4		5.058		87.1	70	130			
Surr: Toluene-d8	5.2		5.058		103	70	130			

Sample ID 1411986-001ams	986-001amsd SampType: MSD TestCode: EPA Method 8260B: Volatiles Short List									
Client ID: S.086242.111914	I.CB Batch	ID: <b>16</b>	538	R	RunNo: 2	2838				
Prep Date: 11/24/2014	te: 11/24/2014 Analysis Date: 11/26/2014						Units: mg/Kg-dry			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.51	1.012	0.07284	96.5	32.2	145	2.11	20	
Toluene	0.96	0.51	1.012	0	95.2	29.1	139	0.868	20	

### Qualifiers:

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

Page 9 of 11

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1411986

03-Dec-14

**Client:** CRA

**Project:** Thoreau Compressor Station No. 5

Sample ID 1411986-001amsd SampType: MSD TestCode: EPA Method 8260B: Volatiles Short List

Client ID: **\$.086242.111914.CB** Batch ID: 16538 RunNo: 22838

Prep Date: 11/24/2014	Analysis D	ate: <b>1</b>	1/26/2014	S	SeqNo: 6	74016	Units: mg/k	(g-dry		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	5.1		5.058		101	70	130	0	0	
Surr: 4-Bromofluorobenzene	4.6		5.058		91.6	70	130	0	0	
Surr: Dibromofluoromethane	4.7		5.058		92.7	70	130	0	0	
Surr: Toluene-d8	5.3		5.058		105	70	130	0	0	

### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits J
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank В
- Η Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- Reporting Detection Limit

Page 10 of 11

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1411986** 

03-Dec-14

Client: CRA

**Project:** Thoreau Compressor Station No. 5

Sample ID 5mL-rb	SampT	SampType: MBLK TestCode: EPA Method 8						d 8260: Volatiles Short List				
Client ID: PBW	Batch	Batch ID: <b>R22837</b> RunNo: <b>22837</b>										
Prep Date:	Analysis D	ate: 11	1/26/2014	8	SeqNo: 6	73988	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	1.5										
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.0	70	130					
Surr: 4-Bromofluorobenzene	9.4		10.00		94.5	70	130					
Surr: Dibromofluoromethane	9.0		10.00		90.3	70	130					
Surr: Toluene-d8	9.1		10.00		90.9	70	130					

Sample ID 100ng Ics	SampT	SampType: LCS TestCode: EPA Method 8260: Volatiles Short List								
Client ID: LCSW	Batch	n ID: <b>R2</b>	2837	F	RunNo: 2	2837				
Prep Date:	Analysis D	)ate: 11	1/26/2014	9	SeqNo: 6	73989	Units: μg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	22	1.0	20.00	0	108	80	120			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.6	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.4	70	130			
Surr: Dibromofluoromethane	9.2		10.00		92.1	70	130			
Surr: Toluene-d8	9.1		10.00		91.4	70	130			

### Qualifiers:

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

Page 11 of 11



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:	CRA Albuque	rque	Work Order Numb	er: 141198	36			RcptN	o: <b>1</b>
Received by/dat	e: (S	>	11/21/14						
Logged By:	Lindsay Mar	ngin	11/21/2014 2:54:00	PM		Juney 44			
Completed By:	Lindsay Mar	-	11/22/2014 10:38:55	5 AM		Straky H.	go .		
Reviewed By:		()s	11/24/14						•
Chain of Cus		<b>C.</b> .3	( ) be ( ) is						
	als intact on sar	nple bottles?		Yes		No [		Not Present	
2. Is Chain of 0				Yes		No [		Not Present	
3. How was the				Client					
Login									
Log In  4. Was an atte	emot made to c	ool the samples	?	Yes		No		na [	
1. 1140 011 011.	ompt made to e	001 1110 011111111111111111111111111111							
5. Were all sa	mples received	at a temperature	e of >0° C to 6.0°C	Yes		No [		NA 🗆	
6. Sample(s)	in proper contai	ner(s)?		Yes		No			
7. Sufficient sa	ample volume f	or indicated test	s)?	Yes		No			
8. Are sample	s (except VOA	and ONG) prope	rly preserved?	Yes		No		_	_
9. Was preser	vative added to	bottles?		Yes		No.		NA L	
10.VOA vials h	nave zero heads	space?		Yes	4	× No		No VOA Viais	•
		· ers received brok	en?	Yes	□ ^	V No		# af n-account	
•	·							# of preserved bottles checked	
	rwork match bo			Yes		No	!	for pH:	<2 or >12 unless noted)
	epancies on cha	tified on Chain o	f Custody?	Yes		No		Adjusted?	,
14. Is it clear w			, , , , , , , , , , , , , , , , , , , ,	Yes		No			
	olding times able			Yes		No		Checked b	oy:
(If no, notify	y customer for a	authorization.)							
Special Han	dlina (if ann	dicable)							
		screpancies with	this order?	Yes		No		NA 1	
		Sorcpanolos an					······································		
	on Notified:		Date Via:	•	اند	Phone	Fax	n Person	
	/hom: irding:		VIA	☐ <b>CIA</b> IC	an	THORE	I GA	[] III 1 0.0011	·
i	t Instructions:					· · · · · · · · · · · · · · · · · · ·	·····		<del>ded</del> -
17. Additional	,		·						
18. <u>Cooler Int</u> Cooler		Condition	Seal Intact   Seal No	Seal D	ate	Signed E	<sub>Bv</sub>		
1	4.8	1	ot Present			- 9			

## ## ## ## ## ## ## ## ## ## ## ## ##	## 1901 Hawkins NE - Abuquerque, NM 87109  Tel. 505-345-3975  Tel. 505-345-4107  Tel. 505	Tel. 505-345-3975  Tel. 505-345-345-345-345-345-345-345-345-345-34
Te. See See See See See See See See See S	Tel. 505-345-3075  Tel. 505-345-345  Tel. 505-	Tel. 505-345-3970  Tel. 505-345-345-3970  Tel. 505-345-345-3970  Tel. 505-345-345-3970  Tel. 505-345-345-345-3970  Tel. 505-345-345-345-345-345-345-345-345-345-34
## ## ## ## ## ## ## ## ## ## ## ## ##	## HEAL No.    HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL NO	## Pale
### ### ### ### ### ### ### ### ### ##	BTEX + MTBE + TMB's (8021)  BTEX + MTBE + TPH (Gas only)  CON	Bee Time  Design 1 Time  Design 2 Time  Design 2 Time  Design 3 Time  Design 3 Time  Design 4 Ti
## Part	Date   17   17   17   17   17   17   17   1	Bare Time  Date Date Date Time  Date Date Date Date Date Date Date Date
### ### ### ### ### ### ### ### ### ##	## ## ## ## ## ## ## ## ## ## ## ## ##	Date Time  Date Date Time  Date Time  Date Time  Date Time  Date Date Date Date Date Date Date Date
### ### ### ### ### #### #### #### #####	## ## ## ## ## ## ## ## ## ## ## ## ##	## HEAL No.    HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL No.   HEAL NO
BTEX + MTBE BTEX +	### Pate   Pate	HEAL No.  HORITOR HOLD BOTOR (No. 1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
### ### ### ### ### ### ### ### ### ##	### Parish   Fall No.   Fall No.	Date Time  Date Date Date Date Date Date Date Date
100- -005 -005 -007 × × × × -005 -005 -005 -005	-001 X X -023 X -024 X X -025 X X -0265 -0265 X X -0265 X X -0265 X X -0265 X X X X X X X X X X X X X X X X X X X	-001 X
× × × × × × × × × × × × × × × × × × ×	202 X X 202	-002 X X -003 X -005 X X -005 X X Date Time 145 Remarks:
X X X X X X X X X X X X X X X X X X X	Date 1:21 Type 145 Remarks:	Date Time
X X S S S S S S S S S S S S S S S S S S	Date 1:21 Time 145 Remarks:	Date Time  Date Time  Date Time
× Sw-	Date 1:21 Time 145 Remarks:	Date Time Date Time Date Time
× Sw-	Daile 1721. Type 145 Remarks:	Date Time Date Time Date Time
	1.21/1due 145	3/1 1/45.1 145.1 145.1
	1.21. Tyle 145	3/1 1/45
	3/1 due 145	3/1 1/45:1
	\$h1 abj12:1	7 1 145
	मार्थिक १५६	145 INS
	17.1 Mg 145.1	3/1 - 145



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

December 03, 2014

Bernie Bockish CRA 6121 Indian School Road, NE #200

Albuquerque, NM 87110 TEL: (505) 884-0672

FAX

RE: Energy Transfer Thoreau Compressor Station OrderNo.: 1411994

### Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 4 sample(s) on 11/24/2014 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. 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. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. 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.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/3/2014

**CLIENT:** CRA **Client Sample ID:** S-086242-112114-CB-B-2-54-55

Project:Energy Transfer Thoreau Compressor StaCollection Date: 11/21/2014 11:16:00 AMLab ID:1411994-001Matrix: SOILReceived Date: 11/24/2014 8:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	SE ORGANICS				Analyst	JME
Diesel Range Organics (DRO)	ND	11	mg/Kg-dry	1	11/25/2014 5:32:31 PM	16541
Motor Oil Range Organics (MRO)	ND	54	mg/Kg-dry	1	11/25/2014 5:32:31 PM	16541
Surr: DNOP	85.6	63.5-128	%REC	1	11/25/2014 5:32:31 PM	16541
EPA METHOD 8015D: GASOLINE R.	ANGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg-dry	1	11/26/2014 2:35:48 AM	16538
Surr: BFB	90.6	80-120	%REC	1	11/26/2014 2:35:48 AM	16538
PERCENT MOISTURE					Analyst	: KJH
Percent Moisture	7.5	1.0	wt%	1	11/26/2014 11:15:00 AM	M R22847
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst	cadg
Benzene	ND	0.050	mg/Kg-dry	1	11/26/2014 1:44:12 AM	16538
Toluene	ND	0.050	mg/Kg-dry	1	11/26/2014 1:44:12 AM	16538
Ethylbenzene	ND	0.050	mg/Kg-dry	1	11/26/2014 1:44:12 AM	16538
Xylenes, Total	ND	0.10	mg/Kg-dry	1	11/26/2014 1:44:12 AM	16538
Surr: 1,2-Dichloroethane-d4	96.4	70-130	%REC	1	11/26/2014 1:44:12 AM	16538
Surr: 4-Bromofluorobenzene	97.5	70-130	%REC	1	11/26/2014 1:44:12 AM	16538
Surr: Dibromofluoromethane	97.5	70-130	%REC	1	11/26/2014 1:44:12 AM	16538
Surr: Toluene-d8	96.5	70-130	%REC	1	11/26/2014 1:44:12 AM	16538

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

Page 1 of 7

- P Sample pH greater than 2.
- RL Reporting Detection Limit

## Date Reported: 12/3/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** CRA **Client Sample ID:** S-086242-112114-CB-B-2-55.5-

Project:Energy Transfer Thoreau Compressor StaCollection Date: 11/21/2014 11:30:00 AMLab ID:1411994-002Matrix: SOILReceived Date: 11/24/2014 8:30:00 AM

Analyses	Result	RL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS					Analysi	: JME
Diesel Range Organics (DRO)	28	12		mg/Kg-dry	1	11/25/2014 5:54:16 PM	l 16541
Motor Oil Range Organics (MRO)	ND	58		mg/Kg-dry	1	11/25/2014 5:54:16 PM	l 16541
Surr: DNOP	86.5	63.5-128		%REC	1	11/25/2014 5:54:16 PM	l 16541
EPA METHOD 8015D: GASOLINE R	ANGE					Analyst	:: NSB
Gasoline Range Organics (GRO)	36	5.6		mg/Kg-dry	1	11/26/2014 3:04:23 AM	16538
Surr: BFB	281	80-120	S	%REC	1	11/26/2014 3:04:23 AM	l 16538
PERCENT MOISTURE						Analyst	: KJH
Percent Moisture	13	1.0		wt%	1	11/26/2014 11:15:00 A	M R22847
EPA METHOD 8260B: VOLATILES S	SHORT LIST					Analyst	: cadg
Benzene	ND	0.056		mg/Kg-dry	1	11/26/2014 2:10:57 AM	16538
Toluene	ND	0.056		mg/Kg-dry	1	11/26/2014 2:10:57 AM	l 16538
Ethylbenzene	ND	0.056		mg/Kg-dry	1	11/26/2014 2:10:57 AM	l 16538
Xylenes, Total	ND	0.11		mg/Kg-dry	1	11/26/2014 2:10:57 AM	l 16538
Surr: 1,2-Dichloroethane-d4	94.5	70-130		%REC	1	11/26/2014 2:10:57 AM	l 16538
Surr: 4-Bromofluorobenzene	130	70-130	S	%REC	1	11/26/2014 2:10:57 AM	l 16538
Surr: Dibromofluoromethane	95.1	70-130		%REC	1	11/26/2014 2:10:57 AM	l 16538
Surr: Toluene-d8	92.0	70-130		%REC	1	11/26/2014 2:10:57 AM	l 16538

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 2 of 7

- P Sample pH greater than 2.
- RL Reporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/3/2014

**CLIENT:** CRA **Client Sample ID:** S-086242-111214-CB-B-2-57-58

Project:Energy Transfer Thoreau Compressor StaCollection Date: 11/21/2014 11:38:00 AMLab ID:1411994-003Matrix: SOILReceived Date: 11/24/2014 8:30:00 AM

Analyses	Result	RL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS					Analyst	: JME
Diesel Range Organics (DRO)	840	12		mg/Kg-dry	1	11/25/2014 6:15:47 PM	16541
Motor Oil Range Organics (MRO)	ND	59		mg/Kg-dry	1	11/25/2014 6:15:47 PM	16541
Surr: DNOP	88.2	63.5-128		%REC	1	11/25/2014 6:15:47 PM	16541
EPA METHOD 8015D: GASOLINE R	ANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	2700	110		mg/Kg-dry	20	11/26/2014 3:32:57 AM	16538
Surr: BFB	350	80-120	S	%REC	20	11/26/2014 3:32:57 AM	16538
PERCENT MOISTURE						Analyst	: KJH
Percent Moisture	15	1.0		wt%	1	11/26/2014 11:15:00 Al	M R22847
EPA METHOD 8260B: VOLATILES \$	SHORT LIST					Analyst	cadg
Benzene	2.2	1.1		mg/Kg-dry	20	11/26/2014 2:37:46 AM	16538
Toluene	49	1.1		mg/Kg-dry	20	11/26/2014 2:37:46 AM	16538
Ethylbenzene	11	1.1		mg/Kg-dry	20	11/26/2014 2:37:46 AM	16538
Xylenes, Total	100	2.3		mg/Kg-dry	20	11/26/2014 2:37:46 AM	16538
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%REC	20	11/26/2014 2:37:46 AM	16538
Surr: 4-Bromofluorobenzene	76.3	70-130		%REC	20	11/26/2014 2:37:46 AM	16538
Surr: Dibromofluoromethane	82.6	70-130		%REC	20	11/26/2014 2:37:46 AM	16538
Surr: Toluene-d8	105	70-130		%REC	20	11/26/2014 2:37:46 AM	16538

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

RL

Reporting Detection Limit

Page 3 of 7

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/3/2014

**CLIENT:** CRA **Client Sample ID:** S-086242-112114-CB-B-2-60-62

Project:Energy Transfer Thoreau Compressor StaCollection Date: 11/21/2014 12:19:00 PMLab ID:1411994-004Matrix: SOILReceived Date: 11/24/2014 8:30:00 AM

Analyses	Result	RL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS					Analyst	: JME
Diesel Range Organics (DRO)	21	12		mg/Kg-dry	1	11/25/2014 6:37:24 PM	l 16541
Motor Oil Range Organics (MRO)	ND	60		mg/Kg-dry	1	11/25/2014 6:37:24 PM	l 16541
Surr: DNOP	85.4	63.5-128		%REC	1	11/25/2014 6:37:24 PM	l 16541
EPA METHOD 8015D: GASOLINE R.	ANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	32	11		mg/Kg-dry	2	11/26/2014 11:28:06 P	M 16538
Surr: BFB	152	80-120	S	%REC	2	11/26/2014 11:28:06 P	M 16538
PERCENT MOISTURE						Analyst	:: KJH
Percent Moisture	17	1.0		wt%	1	11/26/2014 11:15:00 A	M R22847
EPA METHOD 8260B: VOLATILES S	SHORT LIST					Analyst	: cadg
Benzene	ND	0.057		mg/Kg-dry	1	12/1/2014 10:51:29 AM	16538
Toluene	0.058	0.057		mg/Kg-dry	1	12/1/2014 10:51:29 AM	16538
Ethylbenzene	ND	0.057		mg/Kg-dry	1	12/1/2014 10:51:29 AM	l 16538
Xylenes, Total	0.70	0.11		mg/Kg-dry	1	12/1/2014 10:51:29 AM	l 16538
Surr: 1,2-Dichloroethane-d4	107	70-130		%REC	1	12/1/2014 10:51:29 AM	l 16538
Surr: 4-Bromofluorobenzene	87.4	70-130		%REC	1	12/1/2014 10:51:29 AM	l 16538
Surr: Dibromofluoromethane	106	70-130		%REC	1	12/1/2014 10:51:29 AM	16538
Surr: Toluene-d8	93.0	70-130		%REC	1	12/1/2014 10:51:29 AM	l 16538

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

Page 4 of 7

- P Sample pH greater than 2.
- RL Reporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1411994** 

03-Dec-14

Client: CRA

**Project:** Energy Transfer Thoreau Compressor Station

Sample ID MB-16541	SampT	SampType: MBLK TestCode: EPA Method 8015D: Diesel Range Organics								
Client ID: PBS	Batch	h ID: 16	541	F	RunNo: 2	2764				
Prep Date: 11/24/2014	Analysis D	Date: 11	1/25/2014	S	SeqNo: 6	72638	Units: mg/h	<b>(</b> g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	7.5		10.00		74.9	63.5	128			
Sample ID LCS-16541 SampType: LCS TestCode: EPA Method 8015D: Diesel Range Organics										
Client ID: LCSS	Batch	h ID: 16	541	F	RunNo: 2:	2764				
Prep Date: 11/24/2014	Analysis D	Date: <b>1</b> 1	1/25/2014	S	SeqNo: 6	72743	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	87.9	68.6	130			
Surr: DNOP	3.5		5.000		69.6	63.5	128			
Sample ID 1411994-004AM	<b>S</b> SampT	Гуре: М\$	3	Tes	tCode: El	PA Method	8015D: Dies	el Range (	Organics	
Client ID: <b>\$-086242-11211</b>	4-C Batch	h ID: <b>16</b>	541	F	RunNo: <b>2</b> :	2764				
Dran Data: 44/04/2044	Analysis F	)oto: 44	1/05/0044		'aabla. C	70750	Linita	( a l		

Client ID: S-086242-112114-	C Batch	ID: <b>16</b>	541	RunNo: 22764						
Prep Date: 11/24/2014	Analysis D	ate: 11	/25/2014	S	SeqNo: 6	72752	Units: mg/K	g-dry		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	81	12	60.64	21.12	98.6	29.2	176			
Surr: DNOP	5.6		6.064		92.4	63.5	128			

Sample ID 1411994-004AM	<b>SD</b> SampT	ype: <b>MS</b>	SD .	Test	tCode: El	PA Method	8015D: Diese	el Range C	Organics	
Client ID: S-086242-112114	Client ID: S-086242-112114-C Batch ID: 16541 RunNo: 22764									
Prep Date: 11/24/2014 Analysis Date: 11/25/2014 SeqNo: 672753 Units: mg/Kg-dry										
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	91	12	59.62	21.12	117	29.2	176	11.8	23	
Surr: DMOP	5.7		5 962		96.1	63.5	128	0	Λ	

### Qualifiers:

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

Page 5 of 7

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1411994** 

03-Dec-14

Client: CRA

**Project:** Energy Transfer Thoreau Compressor Station

Sample ID MB-16538 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 16538 RunNo: 22780

Prep Date: 11/24/2014 Analysis Date: 11/25/2014 SeqNo: 672974 Units: mg/Kg

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

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 910 1000 91.3 80 120

Sample ID LCS-16538 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 16538 RunNo: 22780

Prep Date: 11/24/2014 Analysis Date: 11/25/2014 SeqNo: 672975 Units: mg/Kg

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

 Gasoline Range Organics (GRO)
 23
 5.0
 25.00
 0
 92.4
 65.8
 139

 Surr: BFB
 1000
 1000
 102
 80
 120

#### Qualifiers:

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

Page 6 of 7

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1411994** 

03-Dec-14

Client: CRA

**Project:** Energy Transfer Thoreau Compressor Station

Sample ID mb-16538	Sample ID mb-16538 SampType: MBLK						TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: PBS	Batch ID: 16538				RunNo: <b>22801</b>									
Prep Date: 11/24/2014	Analysis D	Date: 11	1/25/2014	S	SeqNo: 6	72834	Units: mg/k	(g						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Benzene	ND	0.050												
Toluene	ND	0.050												
Ethylbenzene	ND	0.050												
Xylenes, Total	ND	0.10												
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		104	70	130							
Surr: 4-Bromofluorobenzene	0.46		0.5000		91.6	70	130							
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130							
Surr: Toluene-d8	0.45		0.5000		89.9	70	130							

Sample ID Ics-16538	SampT	ype: <b>LC</b>	s	TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: LCSS	Batch	n ID: <b>16</b>	538	F	RunNo: 2	2801					
Prep Date: 11/24/2014	Analysis D	Date: 11	1/25/2014	S	SeqNo: 6	72835	Units: mg/k	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	1.1	0.050	1.000	0	110	70	130				
Toluene	0.87	0.050	1.000	0	87.2	70	130				
Surr: 1,2-Dichloroethane-d4	0.54		0.5000		108	70	130				
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.6	70	130				
Surr: Dibromofluoromethane	0.54		0.5000		108	70	130				
Surr: Toluene-d8	0.46		0.5000		91.5	70	130				

### Qualifiers:

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

Page 7 of 7



### 4901 Hawkins NE Albuquerque, NM 87105 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: CRA Albuquerque	Work Order Numbe	er: 1411994		RcptNo:	1
Received by/date:	112411	<b>H</b>			
Logged By: Ashley Gallegos	11/24/2014 8:30:00 A	ΔM	A		
Completed By: Ashley Gallegos	11/24/2014 8:50:17 A	ΔM	A		
Reviewed By:	1124/14		V		
Chain of Custody					
1. Custody seals intact on sample bottles?		Yes 🗌	No 🗆	Not Present 🗹	
2. Is Chain of Custody complete?		Yes 🔽	No 🗌	Not Present	
3. How was the sample delivered?		Client			
<u>Log In</u>					
4. Was an attempt made to cool the sample	es?	Yes 🗹	No 🗆	na 🗌	
5. Were all samples received at a temperat	ture of >0° C to 6.0°C	Yes 🗹	No 🗆	na 🗆	
6. Sample(s) in proper container(s)?		Yes 🗹	No $\square$		
7. Sufficient sample volume for indicated to	est(s)?	Yes 🗹	No 🗆		
8. Are samples (except VOA and ONG) pro	perly preserved?	Yes 🗹	No 🗌	_	
9. Was preservative added to bottles?		Yes	No 🗹	NA 🗌	
10.VOA vials have zero headspace?		Yes 🗌	No 🗆	No VOA Vials 🗹	
11. Were any sample containers received b	roken?	Yes	No 🗹	# of preserved	
		🖪	N- 🗆	bottles checked for pH:	
12.Does paperwork match bottle labels? (Note discrepancies on chain of custody	)	Yes 🗹	No □		r >12 unless noted)
13. Are matrices correctly identified on Chai		Yes 🗸	No 🗆	Adjusted? _	
14. Is it clear what analyses were requested	?	Yes 🗸	No 🗆		
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗌	Checked by:	
Special Handling (if applicable)					
16. Was client notified of all discrepancies v	vith this order?	Yes 🗌	No 🗹	na 🗆	
Person Notified:	Date:				]
By Whom:	Via:	l eMail	Phone ☐ Fax	☐ In Person	1
Regarding:	710.		,		
Client Instructions:					
17. Additional remarks:					
18. Cooler Information					
Cooler No Temp °C Condition	Seal Intact   Seal No	Seal Date	Signed By		
1 3.8 Good	Not Present		 		

of-Custody Record	Turn-Around Time:	HALL ENVIRONMENTAL
Client: (ig A	□-Standard □ Rush	ANALYSIS LABORATORY
COLL IN LICE GROOF RCI LANGE TO MANON	Project Name:	www.hallenvironmental.com
dress:	Commercer Saston	4901 Hawkins NE - Albuquerque, NM 87109
, , , ,	Project #:	Tel. 505-345-3975 Fax 505-345-4107
Phone # 636-994-111	032242	Analysis Request
email or Fax#: BBX List LO Walund Controlect Manager	۱۱	eO⁴)
QA/QC Package:	Benje Gothal	O (SMIS
	Sampler: (1914) Bown	10/(F)
□ NELAP □ Other	On Ice: Tres □ No	58 \ 103 s 103 s 103 s 103 s 103 s 103 s
□ EDD (Type)	Sample Temperature: 3.8	TBE (CO)
Date Time Matrix Sample Request ID	Container Preservative HEAL No. Type and # 1411994	BTEX + M TPH 8015I TPH 8015I TPH (Meth PAH's (83 RCRA 8 M Anions (F, 8081 Pesti 8081 Pesti 8081 Pesti 8081 Pesti
11. 11-14 11110 But Day 141 111111111 12.12.14 5	100- 100/	×
7	57 Jan	X,
]	3	× × ×
	Tex NAC	X
711201		
7		
Date: Time: Relinquisperox (	Received by: Date Time	Remarks:
4408	0 11 24 14 0	<u>2</u> 20
Date: Time: Relinquished by:	Received by:	
If necessary, samples submitted to Hall Environmental may be subc	scontracted to other accredited laboratories. This serves as notice of this	Increasant, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



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

December 05, 2014

Bernie Bockisch Conestoga-Rovers & Associates 6121 Indian School Rd. NE Suite 200 Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: Thoreau Compressor Station OrderNo.: 1411B17

#### Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 8 sample(s) on 11/26/2014 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. 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. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. 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.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

anded

4901 Hawkins NE

Albuquerque, NM 87109

## Date Reported: 12/5/2014

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Conestoga-Rovers & Associates Client Sample ID: S.086242.112414.CB.B3-54-55.

**Project:** Thoreau Compressor Station
 **Collection Date:** 11/24/2014 2:07:00 PM

 **Lab ID:** 1411B17-001
 **Matrix:** SOIL
 **Received Date:** 11/26/2014 10:03:00 AM

Analyses	Result	sult RL Qual Units		DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	12	mg/Kg-dry	1	12/2/2014 2:57:47 PM	16598
Motor Oil Range Organics (MRO)	ND	62	mg/Kg-dry	1	12/2/2014 2:57:47 PM	16598
Surr: DNOP	88.1	63.5-128	%REC	1	12/2/2014 2:57:47 PM	16598
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.8	mg/Kg-dry	1	12/1/2014 2:34:01 PM	16599
Surr: BFB	95.4	80-120	%REC	1	12/1/2014 2:34:01 PM	16599
PERCENT MOISTURE					Analyst	: KJH
Percent Moisture	19	1.0	wt%	1	12/1/2014 11:00:00 AM	R22872
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst	cadg
Benzene	ND	0.058	mg/Kg-dry	1	12/1/2014 1:59:21 PM	16599
Toluene	ND	0.058	mg/Kg-dry	1	12/1/2014 1:59:21 PM	16599
Ethylbenzene	ND	0.058	mg/Kg-dry	1	12/1/2014 1:59:21 PM	16599
Xylenes, Total	ND	0.12	mg/Kg-dry	1	12/1/2014 1:59:21 PM	16599
Surr: 1,2-Dichloroethane-d4	93.5	70-130	%REC	1	12/1/2014 1:59:21 PM	16599
Surr: 4-Bromofluorobenzene	94.3	70-130	%REC	1	12/1/2014 1:59:21 PM	16599
Surr: Dibromofluoromethane	94.6	70-130	%REC	1	12/1/2014 1:59:21 PM	16599
Surr: Toluene-d8	90.8	70-130	%REC	1	12/1/2014 1:59:21 PM	16599

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

Page 1 of 11

Date Reported: 12/5/2014

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Conestoga-Rovers & Associates Client Sample ID: S.086242.112414.CB.B3-58-60

Project: Thoreau Compressor Station Collection Date: 11/24/2014 2:50:00 PM

Lab ID: 1411B17-002 Matrix: SOIL Received Date: 11/26/2014 10:03:00 AM

Analyses	Result	Result RL Qual Units		DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst	JME
Diesel Range Organics (DRO)	ND	12	mg/Kg-dry	1	12/2/2014 3:19:24 PM	16598
Motor Oil Range Organics (MRO)	ND	59	mg/Kg-dry	1	12/2/2014 3:19:24 PM	16598
Surr: DNOP	89.7	63.5-128	%REC	1	12/2/2014 3:19:24 PM	16598
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.6	mg/Kg-dry	1	12/1/2014 3:02:34 PM	16599
Surr: BFB	96.4	80-120	%REC	1	12/1/2014 3:02:34 PM	16599
PERCENT MOISTURE					Analyst	: KJH
Percent Moisture	15	1.0	wt%	1	12/1/2014 11:00:00 AM	R22872
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst	cadg
Benzene	ND	0.056	mg/Kg-dry	1	12/1/2014 2:26:08 PM	16599
Toluene	ND	0.056	mg/Kg-dry	1	12/1/2014 2:26:08 PM	16599
Ethylbenzene	ND	0.056	mg/Kg-dry	1	12/1/2014 2:26:08 PM	16599
Xylenes, Total	ND	0.11	mg/Kg-dry	1	12/1/2014 2:26:08 PM	16599
Surr: 1,2-Dichloroethane-d4	94.6	70-130	%REC	1	12/1/2014 2:26:08 PM	16599
Surr: 4-Bromofluorobenzene	92.2	70-130	%REC	1	12/1/2014 2:26:08 PM	16599
Surr: Dibromofluoromethane	94.7	70-130	%REC	1	12/1/2014 2:26:08 PM	16599
Surr: Toluene-d8	93.3	70-130	%REC	1	12/1/2014 2:26:08 PM	16599

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

Page 2 of 11

- P Sample pH greater than 2.
- RL Reporting Detection Limit

## Date Reported: 12/5/2014

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Conestoga-Rovers & Associates Client Sample ID: S.086242.112514.CB.B4-56-58

Project: Thoreau Compressor Station Collection Date: 11/25/2014 11:34:00 AM

Lab ID: 1411B17-003 Matrix: SOIL Received Date: 11/26/2014 10:03:00 AM

Analyses	Result	esult RL Qual Units		DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst	JME
Diesel Range Organics (DRO)	ND	12	mg/Kg-dry	1	12/2/2014 3:40:56 PM	16598
Motor Oil Range Organics (MRO)	ND	58	mg/Kg-dry	1	12/2/2014 3:40:56 PM	16598
Surr: DNOP	96.0	63.5-128	%REC	1	12/2/2014 3:40:56 PM	16598
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.4	mg/Kg-dry	1	12/1/2014 3:31:05 PM	16599
Surr: BFB	95.9	80-120	%REC	1	12/1/2014 3:31:05 PM	16599
PERCENT MOISTURE					Analyst	: KJH
Percent Moisture	14	1.0	wt%	1	12/1/2014 11:00:00 AM	R22872
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst	cadg
Benzene	ND	0.054	mg/Kg-dry	1	12/1/2014 2:52:51 PM	16599
Toluene	ND	0.054	mg/Kg-dry	1	12/1/2014 2:52:51 PM	16599
Ethylbenzene	ND	0.054	mg/Kg-dry	1	12/1/2014 2:52:51 PM	16599
Xylenes, Total	ND	0.11	mg/Kg-dry	1	12/1/2014 2:52:51 PM	16599
Surr: 1,2-Dichloroethane-d4	104	70-130	%REC	1	12/1/2014 2:52:51 PM	16599
Surr: 4-Bromofluorobenzene	96.7	70-130	%REC	1	12/1/2014 2:52:51 PM	16599
Surr: Dibromofluoromethane	104	70-130	%REC	1	12/1/2014 2:52:51 PM	16599
Surr: Toluene-d8	99.8	70-130	%REC	1	12/1/2014 2:52:51 PM	16599

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - D. Samuela all amenda than 2

Page 3 of 11

- P Sample pH greater than 2.
- RL Reporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/5/2014

CLIENT: Conestoga-Rovers & Associates Client Sample ID: S.086242.112514.CB.B4-58-60

Project: Thoreau Compressor Station Collection Date: 11/25/2014 11:50:00 AM

Lab ID: 1411B17-004 Matrix: SOIL Received Date: 11/26/2014 10:03:00 AM

Analyses	Result	RL Qual Units		DF	Date Analyzed	Batch	
EPA METHOD 8015D: DIESEL RANGE	ORGANICS					Analyst	JME
Diesel Range Organics (DRO)	ND	11		mg/Kg-dry	1	12/2/2014 4:02:34 PM	16598
Motor Oil Range Organics (MRO)	ND	53		mg/Kg-dry	1	12/2/2014 4:02:34 PM	16598
Surr: DNOP	89.6	63.5-128		%REC	1	12/2/2014 4:02:34 PM	16598
EPA METHOD 8015D: GASOLINE RAN	GE					Analyst	NSB
Gasoline Range Organics (GRO)	19	5.2		mg/Kg-dry	1	12/1/2014 3:59:48 PM	16599
Surr: BFB	182	80-120	S	%REC	1	12/1/2014 3:59:48 PM	16599
PERCENT MOISTURE						Analyst	: KJH
Percent Moisture	6.5	1.0		wt%	1	12/1/2014 11:00:00 AM	R22872
EPA METHOD 8260B: VOLATILES SHO	ORT LIST					Analyst	cadg
Benzene	ND	0.052		mg/Kg-dry	1	12/1/2014 3:19:37 PM	16599
Toluene	ND	0.052		mg/Kg-dry	1	12/1/2014 3:19:37 PM	16599
Ethylbenzene	ND	0.052		mg/Kg-dry	1	12/1/2014 3:19:37 PM	16599
Xylenes, Total	ND	0.10		mg/Kg-dry	1	12/1/2014 3:19:37 PM	16599
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	1	12/1/2014 3:19:37 PM	16599
Surr: 4-Bromofluorobenzene	84.5	70-130		%REC	1	12/1/2014 3:19:37 PM	16599
Surr: Dibromofluoromethane	97.7	70-130		%REC	1	12/1/2014 3:19:37 PM	16599
Surr: Toluene-d8	90.3	70-130		%REC	1	12/1/2014 3:19:37 PM	16599

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

Page 4 of 11

## Date Reported: 12/5/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Conestoga-Rovers & Associates Client Sample ID: S.086242.112514.CB.B5-14-15.

**Project: Thoreau Compressor Station Collection Date:** 11/25/2014 2:13:00 PM 1411B17-005 Lab ID: Matrix: SOIL Received Date: 11/26/2014 10:03:00 AM

Analyses	ses Result RL Qual Units			DF	Batch	
EPA METHOD 8015D: DIESEL RAN	GE ORGANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	11	mg/Kg-dry	1	12/2/2014 6:33:39 PM	16598
Motor Oil Range Organics (MRO)	ND	53	mg/Kg-dry	1	12/2/2014 6:33:39 PM	16598
Surr: DNOP	83.6	63.5-128	%REC	1	12/2/2014 6:33:39 PM	16598
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.2	mg/Kg-dry	1	12/1/2014 4:28:33 PM	16599
Surr: BFB	99.0	80-120	%REC	1	12/1/2014 4:28:33 PM	16599
PERCENT MOISTURE					Analyst	: KJH
Percent Moisture	6.0	1.0	wt%	1	12/1/2014 11:00:00 AM	R22872
EPA METHOD 8260B: VOLATILES S	SHORT LIST				Analyst	cadg
Benzene	ND	0.052	mg/Kg-dry	1	12/1/2014 3:46:20 PM	16599
Toluene	ND	0.052	mg/Kg-dry	1	12/1/2014 3:46:20 PM	16599
Ethylbenzene	ND	0.052	mg/Kg-dry	1	12/1/2014 3:46:20 PM	16599
Xylenes, Total	ND	0.10	mg/Kg-dry	1	12/1/2014 3:46:20 PM	16599
Surr: 1,2-Dichloroethane-d4	94.3	70-130	%REC	1	12/1/2014 3:46:20 PM	16599
Surr: 4-Bromofluorobenzene	93.7	70-130	%REC	1	12/1/2014 3:46:20 PM	16599
Surr: Dibromofluoromethane	98.4	70-130	%REC	1	12/1/2014 3:46:20 PM	16599
Surr: Toluene-d8	96.2	70-130	%REC	1	12/1/2014 3:46:20 PM	16599

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### **Qualifiers:**

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 5 of 11

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Date Reported: 12/5/2014

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Conestoga-Rovers & Associates Client Sample ID: S.086242.112514.CB.B5-56-58.

Project: Thoreau Compressor Station Collection Date: 11/25/2014 4:13:00 PM

Lab ID: 1411B17-006 Matrix: SOIL Received Date: 11/26/2014 10:03:00 AM

Analyses	RL Qu	al Units	DF	Batch		
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	12	mg/Kg-dry	1	12/2/2014 6:55:13 PM	16598
Motor Oil Range Organics (MRO)	ND	58	mg/Kg-dry	1	12/2/2014 6:55:13 PM	16598
Surr: DNOP	92.8	63.5-128	%REC	1	12/2/2014 6:55:13 PM	16598
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.7	mg/Kg-dry	1	12/1/2014 4:57:15 PM	16599
Surr: BFB	98.6	80-120	%REC	1	12/1/2014 4:57:15 PM	16599
PERCENT MOISTURE					Analyst	: KJH
Percent Moisture	16	1.0	wt%	1	12/1/2014 11:00:00 AM	R22872
EPA METHOD 8260B: VOLATILES \$	SHORT LIST				Analyst	cadg
Benzene	ND	0.057	mg/Kg-dry	1	12/1/2014 4:13:05 PM	16599
Toluene	ND	0.057	mg/Kg-dry	1	12/1/2014 4:13:05 PM	16599
Ethylbenzene	ND	0.057	mg/Kg-dry	1	12/1/2014 4:13:05 PM	16599
Xylenes, Total	ND	0.11	mg/Kg-dry	1	12/1/2014 4:13:05 PM	16599
Surr: 1,2-Dichloroethane-d4	98.9	70-130	%REC	1	12/1/2014 4:13:05 PM	16599
Surr: 4-Bromofluorobenzene	95.4	70-130	%REC	1	12/1/2014 4:13:05 PM	16599
Surr: Dibromofluoromethane	101	70-130	%REC	1	12/1/2014 4:13:05 PM	16599
Surr: Toluene-d8	96.0	70-130	%REC	1	12/1/2014 4:13:05 PM	16599

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - Page 6 of 11
- P Sample pH greater than 2.
- RL Reporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/5/2014

CLIENT: Conestoga-Rovers & Associates Client Sample ID: S.086242.112514.CB.B5-60-62

Project: Thoreau Compressor Station Collection Date: 11/25/2014 4:30:00 PM

Lab ID: 1411B17-007 Matrix: SOIL Received Date: 11/26/2014 10:03:00 AM

Analyses	Result	RL Qual Units			DF	Batch	
EPA METHOD 8015D: DIESEL RANG	SE ORGANICS					Analyst	BCN
Diesel Range Organics (DRO)	7100	110		mg/Kg-dry	10	12/3/2014 9:16:19 AM	16598
Motor Oil Range Organics (MRO)	ND	570		mg/Kg-dry	10	12/3/2014 9:16:19 AM	16598
Surr: DNOP	0	63.5-128	S	%REC	10	12/3/2014 9:16:19 AM	16598
EPA METHOD 8015D: GASOLINE RA	ANGE					Analyst	NSB
Gasoline Range Organics (GRO)	7500	560		mg/Kg-dry	100	12/1/2014 5:25:58 PM	16599
Surr: BFB	192	80-120	S	%REC	100	12/1/2014 5:25:58 PM	16599
PERCENT MOISTURE						Analyst	KJH
Percent Moisture	12	1.0		wt%	1	12/1/2014 11:00:00 AM	R22872
EPA METHOD 8260B: VOLATILES S	HORT LIST					Analyst	cadg
Benzene	18	5.6		mg/Kg-dry	100	12/1/2014 4:39:58 PM	16599
Toluene	180	5.6		mg/Kg-dry	100	12/1/2014 4:39:58 PM	16599
Ethylbenzene	39	5.6		mg/Kg-dry	100	12/1/2014 4:39:58 PM	16599
Xylenes, Total	390	11		mg/Kg-dry	100	12/1/2014 4:39:58 PM	16599
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	100	12/1/2014 4:39:58 PM	16599
Surr: 4-Bromofluorobenzene	72.0	70-130		%REC	100	12/1/2014 4:39:58 PM	16599
Surr: Dibromofluoromethane	82.6	70-130		%REC	100	12/1/2014 4:39:58 PM	16599
Surr: Toluene-d8	103	70-130		%REC	100	12/1/2014 4:39:58 PM	16599

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

Page 7 of 11

Date Reported: 12/5/2014

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Conestoga-Rovers & Associates Client Sample ID: S.086242.112514.CB.B5-62-63

Project: Thoreau Compressor Station Collection Date: 11/25/2014 4:40:00 PM

Lab ID: 1411B17-008 Matrix: SOIL Received Date: 11/26/2014 10:03:00 AM

Analyses	Result	RL Qual Units			DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS					Analyst	JME
Diesel Range Organics (DRO)	370	12		mg/Kg-dry	1	12/2/2014 7:38:28 PM	16598
Motor Oil Range Organics (MRO)	ND	61		mg/Kg-dry	1	12/2/2014 7:38:28 PM	16598
Surr: DNOP	101	63.5-128		%REC	1	12/2/2014 7:38:28 PM	16598
EPA METHOD 8015D: GASOLINE RAM	IGE					Analyst	NSB
Gasoline Range Organics (GRO)	240	59		mg/Kg-dry	10	12/1/2014 5:54:41 PM	16599
Surr: BFB	133	80-120	S	%REC	10	12/1/2014 5:54:41 PM	16599
PERCENT MOISTURE						Analyst	: KJH
Percent Moisture	18	1.0		wt%	1	12/1/2014 11:00:00 AM	R22872
EPA METHOD 8260B: VOLATILES SH	ORT LIST					Analyst	cadg
Benzene	ND	0.59		mg/Kg-dry	10	12/1/2014 5:06:53 PM	16599
Toluene	6.5	0.59		mg/Kg-dry	10	12/1/2014 5:06:53 PM	16599
Ethylbenzene	1.2	0.59		mg/Kg-dry	10	12/1/2014 5:06:53 PM	16599
Xylenes, Total	14	1.2		mg/Kg-dry	10	12/1/2014 5:06:53 PM	16599
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	10	12/1/2014 5:06:53 PM	16599
Surr: 4-Bromofluorobenzene	86.6	70-130		%REC	10	12/1/2014 5:06:53 PM	16599
Surr: Dibromofluoromethane	89.8	70-130		%REC	10	12/1/2014 5:06:53 PM	16599
Surr: Toluene-d8	97.8	70-130		%REC	10	12/1/2014 5:06:53 PM	16599

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

Page 8 of 11

**Client:** 

## Hall Environmental Analysis Laboratory, Inc.

Conestoga-Rovers & Associates

WO#: **1411B17** 

05-Dec-14

	Compressor Station	
Sample ID MB-16598	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: PBS	Batch ID: 16598	RunNo: <b>22870</b>
Prep Date: 11/26/2014	Analysis Date: 12/2/2014	SeqNo: 675060 Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 10	
Motor Oil Range Organics (MRO)	ND 50	
Surr: DNOP	8.7 10.00	86.8 63.5 128
Sample ID MB-16622	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: PBS	Batch ID: 16622	RunNo: 22870
Prep Date: 12/2/2014	Analysis Date: 12/2/2014	SeqNo: 675142 Units: %REC
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	6.9 10.00	69.4 63.5 128
Sample ID LCS-16622	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: LCSS	Batch ID: 16622	RunNo: 22870
Prep Date: 12/2/2014	Analysis Date: 12/2/2014	SeqNo: 675163 Units: %REC
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	3.6 5.000	71.0 63.5 128
Sample ID LCS-16598	SampType: <b>LCS</b>	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: LCSS	Batch ID: 16598	RunNo: <b>22870</b>
Prep Date: 11/26/2014	Analysis Date: 12/2/2014	SeqNo: 675175 Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	51 10 50.00	0 102 68.6 130
Surr: DNOP	4.8 5.000	95.6 63.5 128

### Qualifiers:

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

Page 9 of 11

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1411B17** 

05-Dec-14

Client: Conestoga-Rovers & Associates

Project: Thoreau Compressor Station

Sample ID MB-16599 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 16599 RunNo: 22863

Prep Date: 11/26/2014 Analysis Date: 12/1/2014 SeqNo: 674728 Units: mg/Kg

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

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 950 1000 95.1 80 120

Sample ID LCS-16599 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 16599 RunNo: 22863

Prep Date: 11/26/2014 Analysis Date: 12/1/2014 SeqNo: 674729 Units: mg/Kg

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

 Gasoline Range Organics (GRO)
 25
 5.0
 25.00
 0
 99.1
 65.8
 139

 Surr: BFB
 1000
 1000
 104
 80
 120

#### Qualifiers:

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

Page 10 of 11

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1411B17** 

05-Dec-14

Client: Conestoga-Rovers & Associates

Project: Thoreau Compressor Station

Sample ID mb-16599	Samp1	SampType: MBLK TestCode: EPA Method				8260B: Vola	iles Short	List		
Client ID: PBS	Batch ID: 16599			F	RunNo: 22864					
Prep Date: 11/26/2014	Analysis Date: 12/1/2014		S	SeqNo: 674748 Units			mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.46		0.5000		91.7	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.5	70	130			
Surr: Dibromofluoromethane	0.47		0.5000		94.3	70	130			
Surr: Toluene-d8	0.49		0.5000		97.9	70	130			

Sample ID Ics-16599	SampT	ype: <b>LC</b>	s	Tes	tCode: El	PA Method	8260B: Vola	60B: Volatiles Short List			
Client ID: LCSS	Batch	n ID: <b>16</b>	599	R	RunNo: 2	2864					
Prep Date: 11/26/2014	Analysis D	ate: 12	2/1/2014	SeqNo: <b>674765</b>			SeqNo: 674765 Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.91	0.050	1.000	0	91.2	70	130				
Toluene	0.79	0.050	1.000	0	78.7	70	130				
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		103	70	130				
Surr: 4-Bromofluorobenzene	0.46		0.5000		92.7	70	130				
Surr: Dibromofluoromethane	0.52		0.5000		105	70	130				
Surr: Toluene-d8	0.45		0.5000		90.0	70	130				

### Qualifiers:

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

Page 11 of 11



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107

# Sample Log-In Check List

Website: www.hallenvironmental.com

Client Name:	CONESTOGA-ROVERS	Work Order Number	r: 1411B17		RcptNo:	I
Received by/dat	e: AT 11/26,	1/4		_		
Logged By:	ged By: Anne Thorne 11/26/2014 10:03:00		AM	ame A.	_	
Completed By:	Anne Thorne	11/26/2014		Ame Sh.		
Reviewed By:	10	11/26/14				
Chain of Cus	tody					
1. Custody seals intact on sample bottles?			Yes 🗌	No □	Not Present	
2. Is Chain of Custody complete?			Yes 🗹	No 🗌	Not Present	
3. How was the sample delivered?			Courier			
Log In						
4. Was an attempt made to cool the samples?			Yes 🗸	No 🗆	na 🗆	
5. Were all samples received at a temperature of >0° C to 6.0°C			Yes 🗹	No 🗆	NA $\square$	
6. Sample(s) in proper container(s)?			Yes 🗹	No 🗌		
7. Sufficient sample volume for indicated test(s)?			Yes 🔽	No 🗌		
8. Are samples (except VOA and ONG) properly preserved?			Yes 🗸	No 🗆		
9. Was preservative added to bottles?			Yes	No 🗹	NA 🗆	
10. VOA vials have zero headspace?			Yes 🗌	No 🗆	No VOA Vials 🗹	
11. Were any sample containers received broken?			Yes 🗆	No ✔	# of preserved bottles checked	
12. Does paperwork match bottle labels?			Yes 🗹	No 🗆	for pH:	
(Note discrepancies on chain of custody)				. N-	(<2 or Adjusted?	>12 unless noted)
13. Are matrices correctly identified on Chain of Custody?			Yes ✓ Yes ✓	No □ No □		
<ul><li>14. Is it clear what analyses were requested?</li><li>15. Were all holding times able to be met?</li></ul>			Yes 🗹	No 🗆	Checked by:	
	customer for authorization		703 🖭			
Special Hand	iling (if applicable)		_			
16. Was client notified of all discrepancies with this order?			Yes 🗌	No L	NA 🗹	1
Perso	n Notified:	Date		·		
-	By Whom: Via:			Phone 🗌 Fax	☐ In Person	
Regarding:						
Client	Instructions:		Ed al Michaela republicamento men-specializações		AND AND ALL PROPERTY.	
17. Additional r	remarks:					
18. Cooler Info		on made of the strong of the s		green engage gaps, dien Gerhalm Neb Art in 1888		
Cooler N		to the manage property of the control of the contro	Seal Date	Signed By		
1	1.0 Good	Yes				

NMENTAL	SORATORY	шо	M 87109	-4107			e	יף	<b>7</b> 8	<b>人</b>	7	NS (Sen	× /	X	<b>X</b>	<b>×</b>	×	×	×	×					
LAII ENVIDO	ANALYSIS LABORATOR	www.hallenvironmental.com	kins NE - Albuquerque, NM 87109	45-3975 Fax 505-345-4107	Analysis Request		S' <sup>†</sup> O	NIS (	(1.4.1) 3270 3,NC	or 8 als NO Aes	hoc 10, CI,	EDB (Metl PAH's (83 RCRA 8 M Anions (F, 8081 Pest													
			4901 Hawkins NE	Tel. 505-345-3975		(ʎjud	988 0	э) і ЭВС	IЧТ .	ев ЗЕ +	9TI	BTEX + M BTEX + M TPH 8015	×	<b>×</b>	X	*	×	<b>~</b>	<b>&gt;</b>	<b>&gt;&lt;</b>				Remarks:	
			Section					7	SIBUN .			HEAL NO.	132	702	505	-Co4	500-	-0110	-667	-008				Date Time 1/201/19	Date Time
ı Ime:	d □ Rush	ie:	Congregar Station		242	ager:	Broti.	3	0556 DE	neralure		Preservative Type	N/AC	-		]				NOR			(		
I urn-Around 11me:	□ Standard	Project Name:	Thorau	Project #:		Project Manager:	6	N N	Sampler: (	Sample Temperature:		Container Type and #	8.5 (Tar	Star (Tag	80.54 True		-		l V.	2-63 /Jar				Received by:	Received by:
Chain-of-Custody Record	Meton Prins Bloods		Mailing Address: (0/21 (notice of both 2)	OILLS MN CAPO	Phone #: 675-894-00-12	email or Fax#: BBakshol Urauxord-Com	: : : : :	☐ Level 4 (Full Validation)				Sample Request ID	500000111244.18.83-64-66.5 (Tar	Corps - 58, 84, 11.240, 18, 83 - 50,000	6.08.241.12414.18.84-80-50	5.09.02 42.112414 LB:84-58-201	5. 081.2421[15]A.CB.85-14-14.5	5.00011. 115.4 (B. 95.95)	5.02412.1129.4.CB.BB-10-12	5:00,012-11154.08:196-12-103 /Jan			į	odby.	ed by:
n-ot-Cu	Arm D.		16/0/ See	Hann	5-824	# 1880 kz	ge:		ו ⊓ Other	1_	5	ne Matrix	18		1 2	1.5%	- 26		T. T.	129		-		Remanished by	Refinitulished by:
Chai	Client: $\  \mathcal{M} \mathcal{C} \ $		Mailing Addre		Phone #: 5	email or Fax	QA/QC Package:	© Standard	Accreditation ☐ NFI AP	EDD (Type)	7	Date Time	11.24.4 1607	11.24H 1450 4	1.25,14 1134	11.25.11 1150	11.25 14 1413	11.25 M 148 20	16 16 M 1025	11.25 W 1240				Date: Time: 1/6 1/10	Date: Time:



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

December 09, 2014

Bernie Bockish CRA 6121 Indian School Road, NE #200 Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: Thoreau Compressor Station OrderNo.: 1412002

#### Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/1/2014 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. 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. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. 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.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

## **Analytical Report**

# Lab Order **1412002**Date Reported: **12/9/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CRA Client Sample ID: S-086242-112614-CB-Waste

Project: Thoreau Compressor Station Collection Date: 11/26/2014 11:50:00 AM

Lab ID: 1412002-001 Matrix: SOIL Received Date: 12/1/2014 8:05:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8082: PCB'S					Analyst	: SCC
Aroclor 1016	ND	0.022	mg/Kg-dry	1	12/5/2014 3:23:09 AM	16608
Aroclor 1221	ND	0.022	mg/Kg-dry	1	12/5/2014 3:23:09 AM	16608
Aroclor 1232	ND	0.022	mg/Kg-dry	1	12/5/2014 3:23:09 AM	16608
Aroclor 1242	ND	0.022	mg/Kg-dry	1	12/5/2014 3:23:09 AM	16608
Aroclor 1248	ND	0.022	mg/Kg-dry	1	12/5/2014 3:23:09 AM	16608
Aroclor 1254	ND	0.022	mg/Kg-dry	1	12/5/2014 3:23:09 AM	16608
Aroclor 1260	ND	0.022	mg/Kg-dry	1	12/5/2014 3:23:09 AM	16608
Surr: Decachlorobiphenyl	82.8	37.5-161	%REC	1	12/5/2014 3:23:09 AM	16608
Surr: Tetrachloro-m-xylene	56.8	28.1-149	%REC	1	12/5/2014 3:23:09 AM	16608
PERCENT MOISTURE					Analyst	: KJH
Percent Moisture	9.2	1.0	wt%	1	12/1/2014 12:30:00 PM	R22872
EPA METHOD 7471: MERCURY					Analyst	: MMD
Mercury	ND	0.037	mg/Kg-dry	1	12/3/2014 3:14:59 PM	16650
EPA METHOD 6010B: SOIL METALS					Analyst	: ELS
Arsenic	ND	2.8	mg/Kg-dry	1	12/7/2014 1:52:48 PM	16687
Barium	93	0.11	mg/Kg-dry	1	12/7/2014 1:52:48 PM	16687
Cadmium	ND	0.11	mg/Kg-dry	1	12/7/2014 1:52:48 PM	16687
Chromium	6.4	0.33	mg/Kg-dry	1	12/7/2014 1:52:48 PM	16687
Lead	1.6	0.28	mg/Kg-dry	1	12/7/2014 1:52:48 PM	16687
Selenium	ND	2.8	mg/Kg-dry	1	12/7/2014 1:52:48 PM	16687
Silver	ND	0.28	mg/Kg-dry	1	12/7/2014 1:52:48 PM	16687
EPA METHOD 8260B: TCLP COMPOUND	os				Analyst	cadg
Benzene	ND	0.50	ppm	10	12/2/2014 1:00:23 PM	R22887
Surr: 1,2-Dichloroethane-d4	92.7	70-130	%REC	10	12/2/2014 1:00:23 PM	R22887
Surr: 4-Bromofluorobenzene	109	70-130	%REC	10	12/2/2014 1:00:23 PM	R22887
Surr: Dibromofluoromethane	91.5	70-130	%REC	10	12/2/2014 1:00:23 PM	R22887
Surr: Toluene-d8	107	70-130	%REC	10	12/2/2014 1:00:23 PM	R22887
EPA METHOD 418.1: TPH					Analyst	: JME
Petroleum Hydrocarbons, TR	ND	20	mg/Kg	1	12/4/2014 12:00:00 PM	16604

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

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

Page 1 of 6

- P Sample pH greater than 2.
- RL Reporting Detection Limit



#### YOUR LAB OF CHOICE

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

December 05, 2014

Hall Environmental Analysis Laborat 4901 Hawkins NE

Albuquerque, NM 87109

ESC Sample # : L736460-01

Date Received Description

December 02, 2014

Site ID :

Sample ID

1412002-001B S-086242-112614-CB-WASTE

Project # :

Collected By : Collection Date : 11/26/14 11:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Corrosivity	Non-Corrosive			9045D	12/05/14	1
Ignitability	See Footnote		Deg. F	D93/1010A	12/05/14	1
Reactive CN (SW846 7.3.3.2)	BDL	0.125	mg/kg	9012B	12/05/14	1
Reactive Sulf.(SW846 7.3.4.1)	BDL	25.	mg/kg	9034/9030B	12/03/14	1
Total Solids	84.6	0.100	8	2540 G-2011	12/04/14	1

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/05/14 11:00 Printed: 12/05/14 11:00 L736460-01 (IGNITABILITY) - Did Not Ignite @ 170 F



YOUR LAB OF CHOICE

Reactive Sulf.(SW846 7.3.4.1)

Ignitability

Corrosivity

Hall Environmental Analysis Laboratory

4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report Level II

L736460

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

L736376-01

93-107

98.3-101.7

WG757735

WG758131

WG758203

December 05, 2014

Est. 1970

20

101.

99.5

0.0

		•				<del></del>
Analyte	Result	Laboratory Units	Blank Rec	Limit	Batch	Date Analyzed
Reactive Sulf.(SW846 7.3.4.1)	< 25	mg/kg			WG757735	12/03/14 08:20
Total Solids	< .1	%			WG757906	12/04/14 07:34
Reactive CN (SW846 7.3.3.2)	< .125	mg/kg			WG757736	12/05/14 06:24
Analyte	Units	Duplic Result Dup	ate licate RPD	Limit	Ref Sam	p Batch

0.0

mg/kg

Deg. F

0.0

Total Solids	8	83.9	84.6	0.790	5	L736460-01	WG757906
Reactive CN (SW846 7.3.3.2)	mg/kg	0.0	0.0	0.0	20	L736376-01	WG757736
Ignitability	Deg. F	0.00	0.00	0.00	10	L736660-01	WG758131
Corrosivity		0.0	0.0	0.0	10	L736252-02	WG758203
		Laborato	ry Control	Sample			
Analyte	Units	Known V	-	Result	% Rec	Limit	Batch
Reactive Sulf.(SW846 7.3.4.1)	mg/kg	100	1	.03.	103.	70-130	WG757735
Total Solids	8	50	5	0.0	100.	85-115	WG757906
Reactive CN (SW846 7.3.3.2)	mg/kg	.1	0	.0955	95.5	50-150	WG757736

Analyte		-	Ref	Rec	Limit	RPD	L <u>i</u> mit	Batch
Reactive Sulf.(SW846 7.3.4.1)	mg/kg	98.4	103.	98.0	70-130	4.57	20	WG757735
Reactive CN (SW846 7.3.3.2)	mg/kg	0.0967	0.0955	97.0	50-150	1.25	20	WG757736
Ignitability	Deg. F	81.5	82.5	99.0	93-107	1.22	20	WG758131
Corrosivity		5.91	5.87	100.	98.3-101.7	0.679	10	WG758203

82.5

Batch number /Run number / Sample number cross reference

82

<sup>\*</sup> Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

### Hall Environmental Analysis Laboratory, Inc.

WO#: **1412002** 

09-Dec-14

Client: CRA

**Project:** Thoreau Compressor Station

Sample ID MB-16604 SampType: MBLK TestCode: EPA Method 418.1: TPH

Client ID: **PBS** Batch ID: **16604** RunNo: **22891** 

Prep Date: 12/1/2014 Analysis Date: 12/3/2014 SeqNo: 676317 Units: mg/Kg

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

Petroleum Hydrocarbons, TR ND 20

Sample ID LCS-16604 SampType: LCS TestCode: EPA Method 418.1: TPH

Client ID: LCSS Batch ID: 16604 RunNo: 22891

Prep Date: 12/1/2014 Analysis Date: 12/3/2014 SeqNo: 676318 Units: mg/Kg

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

Petroleum Hydrocarbons, TR 110 20 100.0 0 106 80 120

Sample ID LCSD-16604 SampType: LCSD TestCode: EPA Method 418.1: TPH

Client ID: LCSS02 Batch ID: 16604 RunNo: 22891

Prep Date: 12/1/2014 Analysis Date: 12/3/2014 SeqNo: 676319 Units: mg/Kg

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

Petroleum Hydrocarbons, TR 100 20 100.0 0 99.8 80 120 5.79 20

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Reporting Detection Limit

P Sample pH greater than 2.

Page 2 of 6

### Hall Environmental Analysis Laboratory, Inc.

PQL

0.020

0.020

Result

0.056

0.070

0.042

0.032

WO#: **1412002** 

09-Dec-14

Client: CRA

**Project:** Thoreau Compressor Station

Sample ID MB-16608	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8082: PCB's			
Client ID: PBS	Batch	ID: <b>16</b>	608	F	RunNo: 2	2924				
Prep Date: 12/1/2014	Analysis D	ate: 12	2/4/2014	8	SeqNo: 6	76874	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.020								
Aroclor 1221	ND	0.020								
Aroclor 1232	ND	0.020								
Aroclor 1242	ND	0.020								
Aroclor 1248	ND	0.020								
Aroclor 1254	ND	0.020								
Aroclor 1260	ND	0.020								
Surr: Decachlorobiphenyl	0.040		0.06250		64.4	37.5	161			
Surr: Tetrachloro-m-xylene	0.032		0.06250		50.4	28.1	149			
Sample ID LCS-16608	SampT	ype: <b>LC</b>	s	Tes	tCode: El	PA Method	8082: PCB's			
Client ID: LCSS	Batch	ID: <b>16</b>	608	F	RunNo: 2	2924				
Prep Date: 12/1/2014	Analysis D	ate: 12	2/4/2014	5	SeqNo: 6	76875	Units: mg/K	g		

Surr: Decachlorobiphenyl	0.044		0.06250		70.8	37.5	161			
Surr: Tetrachloro-m-xylene	0.040		0.06250		64.8	28.1	149			
Sample ID LCSD-16608	Samp	ype: <b>LC</b>	SD	Tes	tCode: El	PA Method	8082: PCB's			
Client ID: LCSS02	Batc	n ID: <b>16</b>	608	F	RunNo: 2	2924				
Prep Date: 12/1/2014	Analysis [	Date: 12	2/4/2014	8	SeqNo: 6	76876	Units: mg/k	<b>(</b> g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	0.052	0.020	0.1250	0	41.7	26.2	127	7.93	22.6	
Aroclor 1260	0.069	0.020	0.1250	0	55.4	36.6	122	1.50	24	

0

0

%REC

45.1

56.3

66.8

51.6

LowLimit

26.2

36.6

37.5

28.1

HighLimit

127

122

161

149

%RPD

0

0

**RPDLimit** 

0

Qual

SPK value SPK Ref Val

0.1250

0.1250

0.06250

0.06250

#### Qualifiers:

Analyte

Aroclor 1016

Aroclor 1260

Surr: Decachlorobiphenyl

Surr: Tetrachloro-m-xylene

\* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

O RSD is greater than RSDlimit

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

P Sample pH greater than 2.

RL Reporting Detection Limit

Page 3 of 6

### Hall Environmental Analysis Laboratory, Inc.

WO#: **1412002** 

09-Dec-14

Client: CRA

**Project:** Thoreau Compressor Station

Sample ID mb-16613	SampT	уре: МЕ	BLK	Tes	TestCode: EPA Method 8260B: TCLP Compounds						
Client ID: PBS	Batch	n ID: <b>R2</b>	2887	F	RunNo: 2	2887					
Prep Date:	Analysis D	Date: 12	2/2/2014	S	SeqNo: <b>675873</b>		Units: ppm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	0.050									
Surr: 1,2-Dichloroethane-d4	0.54		0.5000		108	70	130				
Surr: 4-Bromofluorobenzene	0.46		0.5000		91.6	70	130				
Surr: Dibromofluoromethane	0.55		0.5000		110	70	130				
Surr: Toluene-d8	0.47		0.5000		93.4	70	130				
Comple ID 1 - 40040	Comma			Т	10 - d-		ACCORD TOLD				

Sample ID Ics-16613	Samp1	Гуре: <b>LC</b>	S	Tes	tCode: E	PA Method	8260B: TCLF	Compou	nds	
Client ID: LCSS	Batcl	h ID: <b>R2</b>	2887	F	RunNo: 2	2887				
Prep Date:	Analysis D	Date: 12	2/2/2014	8	SeqNo: 6	75874	Units: ppm			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.050	1.000	0	94.0	70	130			
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		101	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		94.5	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130			
Surr: Toluene-d8	0.45		0.5000		90.4	70	130			

Sample ID 1412002-001ams	SampT	ype: <b>MS</b>	3	Tes	tCode: El	PA Method	8260B: TCLP	Compou	nds	
Client ID: S-086242-112614	-C Batch	ID: <b>R2</b>	2887	R	RunNo: 2	2887				
Prep Date:	Analysis Da	ate: 12	2/2/2014	S	SeqNo: 6	75876	Units: ppm			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.50	1.000	0	89.8	32.2	145			
Surr: 1,2-Dichloroethane-d4	4.5		5.000		90.8	70	130			
Surr: 4-Bromofluorobenzene	5.4		5.000		107	70	130			
Surr: Dibromofluoromethane	4.1		5.000		82.6	70	130			
Surr: Toluene-d8	5.1		5.000		102	70	130			

Sample ID 1412002-001amsd	I SampT	ype: <b>MS</b>	SD	Tes	tCode: E	PA Method	8260B: TCLP	Compou	nds	
Client ID: S-086242-112614-	C Batch	n ID: <b>R2</b>	2887	R	RunNo: 2	2887				
Prep Date:	Analysis D	ate: 12	2/2/2014	S	SeqNo: 6	75877	Units: ppm			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.50	1.000	0	94.5	32.2	145	5.18	20	
Surr: 1,2-Dichloroethane-d4	4.4		5.000		87.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	5.2		5.000		104	70	130	0	0	
Surr: Dibromofluoromethane	4.2		5.000		83.5	70	130	0	0	
Surr: Toluene-d8	5.1		5.000		102	70	130	0	0	

#### Qualifiers:

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

Page 4 of 6

### Hall Environmental Analysis Laboratory, Inc.

WO#: **1412002** 

09-Dec-14

Client: CRA

**Project:** Thoreau Compressor Station

Sample ID MB-16650 SampType: MBLK TestCode: EPA Method 7471: Mercury

Client ID: PBS Batch ID: 16650 RunNo: 22905

Prep Date: 12/3/2014 Analysis Date: 12/3/2014 SeqNo: 676465 Units: mg/Kg

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

Mercury ND 0.033

Sample ID LCS-16650 SampType: LCS TestCode: EPA Method 7471: Mercury

Client ID: LCSS Batch ID: 16650 RunNo: 22905

Prep Date: 12/3/2014 Analysis Date: 12/3/2014 SeqNo: 676466 Units: mg/Kg

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

Mercury 0.17 0.033 0.1667 0 99.3 80 120

Sample ID 1412002-001AMS SampType: MS TestCode: EPA Method 7471: Mercury

Client ID: S-086242-112614-C Batch ID: 16650 RunNo: 22905

Prep Date: 12/3/2014 Analysis Date: 12/3/2014 SeqNo: 676471 Units: mg/Kg-dry

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

Mercury 0.17 0.034 0.1703 0 98.5 75 129

Sample ID 1412002-001AMSD SampType: MSD TestCode: EPA Method 7471: Mercury

Client ID: S-086242-112614-C Batch ID: 16650 RunNo: 22905

Prep Date: 12/3/2014 Analysis Date: 12/3/2014 SeqNo: 676472 Units: mg/Kg-dry

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

Mercury 0.17 0.035 0.1791 0 96.4 75 125 2.91 20

#### Qualifiers:

\* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

O RSD is greater than RSDlimit

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

P Sample pH greater than 2.

RL Reporting Detection Limit

Page 5 of 6

### Hall Environmental Analysis Laboratory, Inc.

WO#: **1412002** 

09-Dec-14

Client: CRA

**Project:** Thoreau Compressor Station

Sample ID MB-16687 SampType: MBLK TestCode: EPA Method 6010B: Soil Metals **PBS** Client ID: Batch ID: 16687 RunNo: 22965 Prep Date: 12/5/2014 Analysis Date: 12/7/2014 SeqNo: 678157 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual ND 2.5 Arsenic ND 0.10 Barium ND Cadmium 0.10 Chromium ND 0.30 Lead ND 0.25 Selenium ND 2.5 Silver ND 0.25

Sample ID LCS-16687	SampT	ype: <b>LC</b>	s	TestCode: EPA Method 6010B: Soil Metals						
Client ID: LCSS	Batch	n ID: <b>16</b>	687	F	RunNo: 2:	2965				
Prep Date: 12/5/2014	Analysis D	ate: 12	2/7/2014	S	SeqNo: 6	78160	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	2.5	25.00	0	102	80	120			
Barium	25	0.10	25.00	0	100	80	120			
Cadmium	25	0.10	25.00	0	99.6	80	120			
Chromium	25	0.30	25.00	0	100	80	120			
Lead	24	0.25	25.00	0	96.7	80	120			
Selenium	25	2.5	25.00	0	100	80	120			
Silver	5.3	0.25	5.000	0	106	80	120			

#### Qualifiers:

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

Page 6 of 6



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name:	CRA Albuque	erque	Work Order Number	r: 14120	002				RcptNo:	1
Received by/dat	te:	16	12/1/14							
Logged By:	Celina Sess	sa	12/1/2014 8:05:00 AN	1		Celin	u S	ma		
Completed By:	Celina Seşs	sa	12/1/2014 8:58: <b>0</b> 9 AN	1		Celi	er S	m		
Reviewed By:	The state of the s	)	12/01/14			90 11				
Chain of Cus	tody									
1. Custody sea	als intact on sa	mple bottles?		Yes		No		Not P	resent 🗹	
2. Is Chain of 0	Custody compl	ete?		Yes	V	No		Not P	resent 🗌	
3. How was the	e sample delive	ered?		Clier	<u>ıt</u>					
Log In										
4. Was an atte	empt made to	cool the sampl	es?	Yes	$\checkmark$	No			NA 🗆	
5. Were all sar	mples received	l at a temperat	ure of >0° C to 6.0°C	Yes	<b>✓</b>	No			NA 🗌	
6. Sample(s) i	n proper conta	iner(s)?		Yes	✓	No				
7. Sufficient sa	ample volume f	or indicated te	st(s)?	Yes	<b>Y</b>	No				
8. Are samples	s (except VOA	and ONG) pro	perly preserved?	Yes	<b>✓</b>	No				
9. Was preser	vative added to	bottles?		Yes		No	✓		NA 🗆	
10.VOA vials h	ave zero head:	space?		Yes		No		No VOA	∖ Vials <b>✓</b>	
11. Were any s	ample contain	ers received b	roken?	Yes		No		# of pre	served	
40 -						Na		bottles of		
12.Does paper (Note discre	work match bo epancies on ch		)	Yes	V	No		ioi pri.	(<2	or >12 unless noted)
13. Are matrices	-			Yes	<b>Y</b>	No		A	djusted?	
14. Is it clear wh	hat analyses w	ere requested	?	Yes	✓	No				
15. Were all hol (If no, notify	lding times able customer for a			Yes	✓	No		Cł	necked by:	
Special Hand	dling (if app	olicable)								
16.Was client	notified of all di	iscrepancies w	rith this order?	Yes		No			NA 🗹	
Perso	n Notified:		Date:				4-14-14-14-1		<b>_</b>	
By W	hom:		Via:	□ eM	ail 🔲 I	Phone [	] Fax	☐ In Pe	rson	
Rega	rding:	<u> </u>								
Client	Instructions:					<b>-</b>				
17. Additional	remarks:		- ,							
18. <u>Cooler Infe</u>	ormation									
Cooler	No Temp ℃		Seal Intact   Seal No	Seal D	ate	Signed	Ву			
р	1.6	Good	Not Present					ļ		

HALL ENVIRONMENTAL	ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis Request	SO <sup>†</sup> )	0 889) M \ 09 (SMIS) (SMIS)	HqT (1. (1. (1. (2.270 S 80822 80822 (2.0822 (	(VC) (VC) (VC) (VC) (VC) (VC) (VC) (VC)	TBE	BTEX + M BTEX + M TPH 80158 TPH (Meth PAH's (83 RCRA 8 M RCRA 8 M RCRA 8 M RCRA 8 M RCRA 8 M RCRA 8 M	XXX					nne Remarks:	Time: Relinduished by: Recaived
ישוויסוסיוים וווופי	Costandard C Rush	Project Name:	Morrau Conorssor Startion	Project #:	86147	Project Manager:	Benie Bekirk	Sampler Cassie Boun	On Ice: Types DNo	Sample Temperature:	Container Preservative HEAL No. Type and # Type   14   2002	to santa) wave -001					T Date T	Received by:   Date: Time   Dat
Chain-of-Custody Record	:lient: / Macha Roves & Hose !		Tailing Address: Col21 In Law Payor Rd	NA BZID	917	mail or Fax#. BROZ Kisch & Law Jorks . Com Project Manag	NAOC Package:		1 NELAP   Other	1 EDD (Type)	Date Time Matrix Sample Request ID	26.4 112 Azil B. ORLARZ-1124A C. WORK	3				Date: Relinquished by: Anne	Date: Time: Relinquished by:

# **Appendix C**

**Boring Logs** 



LOCATION FIELD LOSURFAC GROUNI REMARI	ON: The OGGED SEE ELEV DWATE SEE SEE SEE SEE SEE SEE SEE SEE SEE S	oreau, N BY: <u>Cas</u> 'ATION ( R ELEV : 32°25'2	Thoreau Compress lew Mexico ssie Brown [msl): No Survey Da ATION (msl): N/A	ata Available	SOIL BORING NO: B-1  DRILL TYPE: CME-75  Hollow Stem Auger  BORE HOLE DIAMETER: 7 7/8"  DRILLED BY: Enviro-Drill, Inc.  DATE/TIME HOLE STARTED: 11/19/2014  DATE/TIME HOLE COMPLETED: 11/20/2014						
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	(mdd)	Benzene (mg/kg)	Total TPH (mg/kg)			
0					SP: Poorly graded sand- red, fine grained, some silt, dry  Fine to medium grained						
-5— -10—					Some reddish brown clay  Reddish brown, fine to medium grained, some silt and clay, moist, slight staining	0.8					
_					Staining						

LOCATION FIELD LOSURFACE GROUN REMARI	ON: _Th OGGED EE ELEV DWATE KS:	oreau, N BY: <u>Cas</u> ATION ( R ELEV	Thoreau Compressive Mexico Sie Brown  (msl): No Survey Da  ATION (msl): N/A  27.86", -108°14'04.  STRATAGRAPHIC SEQUENCE	ata Available	DRILL TYPE: CME-75 Hollow Stem Auger BORE HOLE DIAMETER: 7 7/8" DRILLED BY: Enviro-Drill, Inc. DATE/TIME HOLE STARTED: 11/19/2014  DATE/TIME HOLE COMPLETED:11/20/2014  CLASSIFICATION AND DESCRIPTION  CLASSIFICATION AND DESCRIPTION  AND DESCRIPTION  DRILLED BY: Enviro-Drill, Inc.  DATE/TIME HOLE COMPLETED: 11/19/2014  CLASSIFICATION AND DESCRIPTION  DRILLED BY: Enviro-Drill, Inc.  DATE/TIME HOLE COMPLETED: 11/19/2014  CLASSIFICATION AND DESCRIPTION  DRILLED BY: Enviro-Drill, Inc.  DATE/TIME HOLE STARTED: 11/19/2014  CLASSIFICATION AND DESCRIPTION					
-15 —	SA				SW: Well graded sand- reddish brown, coarse to fine grain, some gravel  SM: Silty sand- reddish brown, fine grain, some clay, damp	1.7				
-25 —					SP: Poorly graded sand- reddish brown, fine grained, with silt and clay, trace medium to coarse sand, dry	0.3				

LOCATIO FIELD LO SURFACE GROUND REMARK COORDIN	N: The GGED E ELEV WATER S: NATES:	oreau, N BY: <u>Cas</u> ATION ( R ELEV	Thoreau Compressew Mexico esie Brown msl): No Survey Da ATION (msl): N/A	ata Available	SOIL BORING NO: B-1  DRILL TYPE: CME-75  Hollow Stem Auger  BORE HOLE DIAMETER: 7 7/8"  DRILLED BY: Enviro-Drill, Inc.  DATE/TIME HOLE STARTED: 11/19/2014  DATE/TIME HOLE COMPLETED: 11/20/2014							
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	(mdd)	Benzene (mg/kg)	Total TPH (mg/kg)				
-30 —					Gray staining  Alternating 3" intervals of silt and clay  Trace gravel  Brownish gray, fine to medium grained, damp	4.3						

LOCATION FIELD LOG SURFACE E GROUNDW REMARKS: COORDINA	: The	oreau, N BY: <u>Cas</u> ATION ( R ELEV		ata Available	SOIL BORING NO: B-1 DRILL TYPE: CME-75 Hollow Stem Auger BORE HOLE DIAMETER: 7 7/8" DRILLED BY: Enviro-Drill, Inc. DATE/TIME HOLE STARTED: 11/19/2 DATE/TIME HOLE COMPLETED:11/20			
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (mdd)	Benzene (mg/kg)	Total TPH (mg/kg)
-40 — -45 — -50 —	X	B-1-44- 45.5			CL: Lean clay- reddish gray, some silt and fine sand, wet  SW: Moderately well graded sand- fine to medium grained, some gravel and cobble  *Encountered hard drilling and intermittent grinding- potential caliche*  CL: Lean clay with silt, trace sand  GM: Gravel with sand and silt  SP: Poorly graded sand- reddish brown, fine grained, sub-angular, trace fine gravel and clay	9.0	< 0.51	850.2

LOCATI FIELD L SURFAC GROUN REMAR	ON: Th OGGED CE ELEV IDWATE KS:	oreau, N BY: <u>Cas</u> 'ATION ( R ELEV	Thoreau Compres lew Mexico ssie Brown (msl): No Survey Da ATION (msl): N/A	ata Available	SOIL BORING NO: B-1 DRILL TYPE: CME-75 Hollow Stem Auger BORE HOLE DIAMETER: 7 7/8" DRILLED BY: Enviro-Drill, Inc. DATE/TIME HOLE STARTED: 11/19/2014 DATE/TIME HOLE COMPLETED:11/20/2014					
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	Old (mdd)	Benzene (mg/kg)	Total TPH (mg/kg)		
-55	X X	B-1-54- 55.5 B-1-56- 58			Increase in clay content  Increase in coarse gravel content  3" thick black staining	0.6	< 0.052	< 70.2 2400		
-60 —	х	B-1-60- 61.5			CL: Clay- red, very hard, dessicated, black staining  Red with blue mottling, hard, with clayey sand nodules, black staining	1715	< 1.2	1910		

LOCATION FIELD LOSURFAC GROUNI REMARI	ON: _The OGGED EE ELEV DWATE KS:	oreau, N BY: <u>Cas</u> ATION ( R ELEV	Thoreau Compress ew Mexico ssie Brown msl): No Survey Da ATION (msl): N/A 27.78", -108°14'05.4 STRATAGRAPHIC SEQUENCE	ata Available	DRILL TYPE: CME-75 Hollow Stem Auger  BORE HOLE DIAMETER: 7 7/8"  DRILLED BY: Enviro-Drill, Inc.  DATE/TIME HOLE STARTED: 11/21/2014  DATE/TIME HOLE COMPLETED: 11/21/2014  CLASSIFICATION AND DESCRIPTION  Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q						
	SAMP	SA					m -	Total TF (mg/kg)			
-10 —					SP: Poorly graded sand- reddish brown, with silt, dry  SM: Silty sand- reddish brown, poorly graded, some fine gravel, dry  With clay	0.1					

FIELD LO SURFAC GROUN REMAR	OGGED E ELEV DWATE KS:	BY: <u>Cas</u> ATION ( R ELEV	ew Mexico ssie Brown (msl): No Survey Da ATION (msl): N/A 27.78", -108°14'05.0	SOIL BORING NO: B-2 DRILL TYPE: CME-75 Hollow Stem Auger BORE HOLE DIAMETER: 7 7/8" DRILLED BY: Enviro-Drill, Inc. DATE/TIME HOLE STARTED: 11/21/20 DATE/TIME HOLE COMPLETED:11/2*  CLASSIFICATION AND DESCRIPTION		Benzene (mg/kg)	Total TPH (mg/kg)
-15	85			SC: Sandy clay- reddish brown, damp  SM: Silty sand- reddish brown, poorly graded, with clay and 2" gravel layer with medium to coarse sand, damp	0.0		
-25 —				SC: Sandy clay- fine grained, with silt  ML: Silt- reddish brown, with clay, trace fine sand, damp	0.1		

PROJECT NAME: TWF LOCATION: Thoreau, I FIELD LOGGED BY: Ca SURFACE ELEVATION GROUNDWATER ELEV REMARKS: COORDINATES: 32°25	New Mexico assie Brown (msl): No Survey Da /ATION (msl): N/A	ata Available	DRILL TYPE: CME-75 Hollow Stem Auger BORE HOLE DIAMETER: 7 7/8" DRILLED BY: Enviro-Drill, Inc. DATE/TIME HOLE STARTED: 11/21/2014 DATE/TIME HOLE COMPLETED: 11/21/2014						
DEPTH (bgs) - ft SAMPLE TO LAB SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	(mdd)	Benzene (mg/kg)	Total TPH (mg/kg)			
-30 —			Clay content increases  CL: Clay- red, hard, some silt, damp  SP: Poorly graded sand- reddish brown, fine grained, poorly graded, with clay  Gravel noted in cuttings	0.1					

LOCATION FIELD LOSURFACE GROUN REMARI	ON: Th OGGED EE ELEV DWATE KS:	oreau, N BY: <u>Cas</u> ATION ( R ELEV	Thoreau Compress lew Mexico ssie Brown (msl): No Survey Da ATION (msl): N/A	ata Available	DRILL TYPE: CME-75 Hollow Stem Auger BORE HOLE DIAMETER: 7 7/8" DRILLED BY: Enviro-Drill, Inc. DATE/TIME HOLE STARTED: 11/21/2014 DATE/TIME HOLE COMPLETED:11/21/2014							
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	(mdd)	Benzene (mg/kg)	Total TPH (mg/kg)				
-40 — - - -45 —					SW: Well graded sand- medium to coarse grained, sub-angular, with gravel, trace cobble, dry, some odor *Encountered hard drilling- potential caliche*	1090						
-50 —					SC: Sandy clay- fine to medium grained, moderately graded  SP: Poorly graded sand- reddish brown, fine grained, some clay	63						

LOCATION: _ FIELD LOGGI SURFACE EL GROUNDWA REMARKS: COORDINAT	Thoreau, N ED BY: <u>Ca</u> EVATION TER ELEV		ata Available	SOIL BORING NO: B-2 DRILL TYPE: CME-75 Hollow Stem Auger BORE HOLE DIAMETER: 7 7/8" DRILLED BY: Enviro-Drill, Inc. DATE/TIME HOLE STARTED: 11/21/2 DATE/TIME HOLE COMPLETED: 11/2			
DEPTH (bgs) - ft SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	OIA (mdd)	Benzene (mg/kg)	Total TPH (mg/kg)
-55 — X -56 — X -60 — X	B-2-54- 55.5 B-2-55.5- 57 B-2-57- 58.5			ML: Silt- reddish brown, poorly graded, with fine sand, odor, moist  Trace gravel  CL: Clay- red with blue mottling, hard, trace limestone cobble, odor, top 3" moist Dry	2.3 211.9 1470 1047	< 0.056 < 0.056  2.2	< 70 64 3540

PROJECT NAME	: IWP	Thoreau Compress	sor Station #5	SOIL BORING NO: B-3				
LOCATION: The	oreau, N	ew Mexico		DRILL TYPE: CME-75 Hollow Stem Auger				
FIELD LOGGED	RA: Cas	msl): No Survey Da	ıta Availahle	-				
		ATION (msl): N/A	ita Avallabic	BORE HOLE DIAMETER: 7 7/8"  DRILLED BY: Enviro-Drill, Inc.				
REMARKS:	K ELEVA	ATION (IIISI <u>). WA</u>		-	)1 <i>1</i>			
KEWAKKS				DATE/TIME HOLE STARTED: 11/24/20				
COORDINATES	: 32°25'2	28.13", -108°14'01.2	21"	DATE/TIME HOLE COMPLETED:11/24	+/2014			
DEPTH (bgs) - ft SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (mdd)	Benzene (mg/kg)	Total TPH (mg/kg)	
-5				SM: Silty sand- reddish brown, fine grained, poorly graded, dry  CL: Clay- reddish brown, with silt, trace fine sand, damp	0.0			

FIELD LO SURFAC GROUNI REMARI COORD	OGGED E ELEV DWATE  KS:	BY: <u>Cas</u> ATION ( R ELEV	lew Mexico ssie Brown (msl): No Survey Da ATION (msl): N/A 28.13", -108°14'01.2		DRILL TYPE: CME-75 Hollow Stem Auger BORE HOLE DIAMETER: 7 7/8" DRILLED BY: Enviro-Drill, Inc. DATE/TIME HOLE STARTED: 11/24/20 DATE/TIME HOLE COMPLETED:11/24	1/2014		H <sub>0</sub>
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	(mdd)	Benzene (mg/kg)	Total TPH (mg/kg)
-15 —					SM: Silty sand- reddish brown, fine grained, poorly graded, some clay	0.0		
-20 —					SW: Well graded sand- reddish brown, fine to coarse grained, subangular, with gravel	0.0		
-25 —					SM: Silty sand- reddish brown, fine grained, poorly graded, damp	0.0		

LOCATION FIELD LOCATION SURFACTION GROUN REMAR	ON: The OGGED CE ELEV DWATE KS: INATES	oreau, N BY: <u>Cas</u> ATION ( R ELEV	Thoreau Compress ew Mexico ssie Brown (msl): No Survey Da ATION (msl): N/A	ata Available	SOIL BORING NO: B-3  DRILL TYPE: CME-75  Hollow Stem Auger  BORE HOLE DIAMETER: 7 7/8"  DRILLED BY: Enviro-Drill, Inc.  DATE/TIME HOLE STARTED: 11/24/20			
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	(mdd)	Benzene (mg/kg)	Total TPH (mg/kg)
-30 —					SC: Interbedded clay and sand- reddish brown, fine to coarse grained sand, subangular, with gravel  Clayey sand- reddish brown, poorly graded sand  Gravels noted in cuttings	0.1		

LOCATION FIELD LOSURFACE GROUN REMAR	ON: _Th OGGED CE ELEV DWATE KS:	oreau, N BY: <u>Cas</u> ATION ( R ELEV	Thoreau Compress ew Mexico ssie Brown (msl): No Survey Da ATION (msl): N/A 28.13", -108°14'01.  STRATAGRAPHIC SEQUENCE	ata Available	SOIL BORING NO: B-3  DRILL TYPE: CME-75  Hollow Stem Auger  BORE HOLE DIAMETER: 7 7/8"  DRILLED BY: Enviro-Drill, Inc.  DATE/TIME HOLE STARTED: 11/24/20  DATE/TIME HOLE COMPLETED:11/24		Benzene (mg/kg)	Total TPH (mg/kg)
-40 —	/S				SP: Poorly graded sand- fine grained, trace cobbles  Yellow, fine to medium grained, well rounded, dry Encountered hard drilling, approximately 3" caliche in sample	0.2		
-50 —					SM: Silty sand- reddish brown, fine grained, poorly graded, trace limestone cobbles, moist	0.0		

LOCATION FIELD LOCATION SURFACTOR GROUND REMARK	ON: _The OGGED E ELEV OWATE (S:	oreau, N BY: <u>Cas</u> ATION ( R ELEV	Thoreau Compressew Mexicossie Brown  (msl): No Survey Da  ATION (msl): N/A	ata Available	SOIL BORING NO: B-3  DRILL TYPE: CME-75  Hollow Stem Auger  BORE HOLE DIAMETER: 7 7/8"  DRILLED BY: Enviro-Drill, Inc.  DATE/TIME HOLE STARTED: 11/24/2			
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (mdd)	Benzene (mg/kg)	Total TPH (mg/kg)
-55 —	x	B-3-54- 55.5			Moist to wet  Clay content increases  CL: Clay- blue mottling, hard, dry	0.1	< 0.058	< 79.8 < 76.6

LOCATION FIELD LOSURFAC GROUNE REMARK	DN: The DGGED E ELEV DWATE (S: NATES	oreau, N BY: <u>Cas</u> ATION ( R ELEV	Thoreau Compress lew Mexico ssie Brown (msl): No Survey Da ATION (msl): N/A	ata Available	SOIL BORING NO: B-4  DRILL TYPE: CME-75  Hollow Stem Auger  BORE HOLE DIAMETER: 7 7/8"  DRILLED BY: Enviro-Drill, Inc.  DATE/TIME HOLE STARTED: 11/25/2  DATE/TIME HOLE COMPLETED: 11/2			
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	OId (mdd)	Benzene (mg/kg)	Total TPH (mg/kg)
-5-	AS S				SP: Silty sand- reddish brown, fine grained, poorly graded  Trace coarse sand, dry  Damp	0.0		
_								

LOCATION FIELD LOSURFACE GROUN REMARI	ROJECT NAME: TWP Thoreau Compressor Station #5 OCATION: Thoreau, New Mexico IELD LOGGED BY: Cassie Brown URFACE ELEVATION (msl): No Survey Data Available GROUNDWATER ELEVATION (msl): N/A EMARKS: COORDINATES: 32°25'28.00", -108°14'03.13"				SOIL BORING NO: B-4  DRILL TYPE: CME-75  Hollow Stem Auger  BORE HOLE DIAMETER: 7 7/8"  DRILLED BY: Enviro-Drill, Inc.  DATE/TIME HOLE STARTED: 11/25/20  DATE/TIME HOLE COMPLETED: 11/25/20			
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	(mdd)	Benzene (mg/kg)	Total TPH (mg/kg)
-15 — -					With clay	0.0		
-20 —						0.0		
-25 —					SP: Poorly graded sand- reddish brown, fine grained, some silt and clay, dry	0.0		

LOCATION FIELD LOSURFAC GROUNI REMARI	ON: The OGGED SEE ELEV DWATE SEE SEE SEE SEE SEE SEE SEE SEE SEE S	oreau, N BY: <u>Ca:</u> ATION ( R ELEV	Thoreau Compress lew Mexico ssie Brown (msl): No Survey Da ATION (msl): N/A	ata Available	SOIL BORING NO: B-4 DRILL TYPE: CME-75 Hollow Stem Auger BORE HOLE DIAMETER: 7 7/8" DRILLED BY: Enviro-Drill, Inc. DATE/TIME HOLE STARTED: 11/25/2 DATE/TIME HOLE COMPLETED:11/2			
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	Old (mdd)	Benzene (mg/kg)	Total TPH (mg/kg)
-30 —					Medium to coarse grained, no fine grained sand, subrounded  Fine to medium grain, trace gravels, damp	0.1		

LOCATION FIELD LOCATION SURFACTION REMARICOORD	ON: The OGGED CE ELEV DWATE KS: INATES	oreau, N BY: <u>Cas</u> ATION ( R ELEV/ : 32°25′2	Thoreau Compress ew Mexico essie Brown msl): No Survey Da ATION (msl): N/A 28.00", -108°14'03.	ata Available	SOIL BORING NO: B-4 DRILL TYPE: CME-75 Hollow Stem Auger BORE HOLE DIAMETER: 7 7/8" DRILLED BY: Enviro-Drill, Inc. DATE/TIME HOLE STARTED: 11/25/20 DATE/TIME HOLE COMPLETED:11/25	5/2014	rne (g)	трн (9)
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE	SEQUENCE	INFORMATION	AND DESCRIPTION	(mdd)	Benzene (mg/kg)	Total TPH (mg/kg)
-40 —					SW: Well graded sand- reddish brown, fine to coarse grained, subangular, with gravel  SM: Silty sand- reddish brown, fine grained, poorly graded	0.1		
-50 —					Damp	0.0		

LOCATION FIELD LOG SURFACE I GROUNDW REMARKS:	PROJECT NAME: TWP Thoreau Compressor Station #5  LOCATION: Thoreau, New Mexico  FIELD LOGGED BY: Cassie Brown  SURFACE ELEVATION (msl): No Survey Data Available  GROUNDWATER ELEVATION (msl): N/A  REMARKS:  COORDINATES: 32°25'28.00", -108°14'03.13"				SOIL BORING NO: B-4 DRILL TYPE: CME-75 Hollow Stem Auger BORE HOLE DIAMETER: 7 7/8" DRILLED BY: Enviro-Drill, Inc. DATE/TIME HOLE STARTED: 11/25/20			
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	Old (mdd)	Benzene (mg/kg)	Total TPH (mg/kg)
-55 —	X B-	-4-56- 58 -4-58- 60		\^\^\^\^\^\^\	CL: Clay- red with blue mottling, hard, very stiff, 3" limestone layer in sample Moist	0.1	< 0.054 < 0.052	< 75.4 19

LOCATION FIELD LOCATION SURFACTION GROUN REMAR	ON: The OGGED CE ELEV DWATE KS: INATES	oreau, N BY: <u>Cas</u> ATION ( R ELEV	Thoreau Compress lew Mexico ssie Brown (msl): No Survey Da ATION (msl): N/A	ata Available	SOIL BORING NO: B-5  DRILL TYPE: CME-75  Hollow Stem Auger  BORE HOLE DIAMETER: 7 7/8"  DRILLED BY: Enviro-Drill, Inc.  DATE/TIME HOLE STARTED: 11/25/2  DATE/TIME HOLE COMPLETED: 11/25			
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	(mdd)	Benzene (mg/kg)	Total TPH (mg/kg)
-5-					SM: Silty sand- reddish brown, fine grained, poorly graded, dry	2.7		

LOCATION: Thoreau, FIELD LOGGED BY: COORDINATES: 32°2	assie Brown  I (msl): No Survey Data Available	SOIL BORING NO: B-5  DRILL TYPE: CME-75  Hollow Stem Auger  BORE HOLE DIAMETER: 7 7/8"  DRILLED BY: Enviro-Drill, Inc.  DATE/TIME HOLE STARTED: 11/25/2014  DATE/TIME HOLE COMPLETED: 11/25/2014			
DEPTH (bgs) - ft SAMPLE TO LAB SAMPLE ID	STRATAGRAPHIC COMPLETION SEQUENCE INFORMATION	CLASSIFICATION AND DESCRIPTION	(mdd)	Benzene (mg/kg)	Total TPH (mg/kg)
- X B-5-14 15.5 -15		SP: Poorly graded sand- reddish brown, fine grained, some silt, trace coarse gravel, dry  With silt and clay  Fine to medium grained, some silt and	308	< 0.052	< 69.2

PROJECT NAME: TWP Thoreau Compressor Station #5 LOCATION: Thoreau, New Mexico FIELD LOGGED BY: Cassie Brown SURFACE ELEVATION (msl): No Survey Data Available GROUNDWATER ELEVATION (msl): N/A REMARKS: COORDINATES: 32°25'27.39", -108°14'04.41"				ata Available	SOIL BORING NO: B-5  DRILL TYPE: CME-75  Hollow Stem Auger  BORE HOLE DIAMETER: 7 7/8"  DRILLED BY: Enviro-Drill, Inc.  DATE/TIME HOLE STARTED: 11/25/2014  DATE/TIME HOLE COMPLETED:11/25/2014			
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	(mdd)	Benzene (mg/kg)	Total TPH (mg/kg)
-30					clay, some limestone cobbles and gravels  SM: Silty sand- reddish brown, fine grained, poorly graded, dry	4.9		

PROJECT NAME: TWP Thoreau Compressor Station #5 LOCATION: Thoreau, New Mexico FIELD LOGGED BY: Cassie Brown SURFACE ELEVATION (msl): No Survey Data Available GROUNDWATER ELEVATION (msl): N/A REMARKS: COORDINATES: 32°25'27.39", -108°14'04.41"			ew Mexico ssie Brown msl): No Survey Da ATION (msl): N/A	SOIL BORING NO: B-5  DRILL TYPE: CME-75  Hollow Stem Auger  BORE HOLE DIAMETER: 7 7/8"  DRILLED BY: Enviro-Drill, Inc.  DATE/TIME HOLE STARTED: 11/25/20				
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	OIA (mdd)	Benzene (mg/kg)	Total TPH (mg/kg)
-40 — - - -45 —					SW: Well graded sand- reddish brown, fine to coarse grained, with silt and gravel, dry  SP: Poorly graded sand- reddish brown, fine grained, with silt, some clay, damp	1.8		
-50 —					Decrease in clay content, moist	67		

PROJECT NAME: TWP Thore LOCATION: Thoreau, New M FIELD LOGGED BY: Cassie B SURFACE ELEVATION (msl): GROUNDWATER ELEVATION REMARKS: COORDINATES: 32°25'27.39'	exico Brown No Survey Data Available N (msl): N/A	SOIL BORING NO: B-5  DRILL TYPE: CME-75  Hollow Stem Auger  BORE HOLE DIAMETER: 7 7/8"  DRILLED BY: Enviro-Drill, Inc.  DATE/TIME HOLE STARTED: 11/25/2014  DATE/TIME HOLE COMPLETED:11/25/2014			
	RATAGRAPHIC COMPLETION EQUENCE INFORMATION	CLASSIFICATION AND DESCRIPTION	OIA (mdd)	Benzene (mg/kg)	Total TPH (mg/kg)
-55 — X B-5-56-58.5 — X B-5-60-62 — X B-5-62		Increase in clay content, with limestone gravel, some staining	15 31 2553	< 0.057	< 75.7 14600
X B-5-62 63		CL: Clay- hard, dry, with blue mottling	2110	< 0.59	010

## **Appendix D**

**Soil Cutting Waste Disposal Documentation** 



#### is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is This Memorandum Shipper No. intended solely for filing or record. Carrier No. N/A Industrial Ecosystems \_1\_ of \_1 (Name of carrier) (SCAC) On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1. FROM: Energy Transfer Thoreau Compressor Station 5 TO: Shipper Consignee Industrial Ecosystems ~1.5 miles north-northwest of Thoreau, New Mexico 49 CR 3150 Street City State NM Zip Code McKinley County NM City Aztec State Zip Code 87410 24 hr. Emergency Contact Tel. No. -Vehicle Route Number BASIC DESCRIPTION TOTAL QUANTITY WEIGHT CHARGES HM No. of Units (Weight, Volume, RATE (Subject to (For Carrier UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group & Container Type Gallons, etc.) Correction) Use Only) NON DOT-Regulated Material (soil) DM DM NON DOT-Regulated Material (water) PLACARDS TENDERED: YES 🖂 NO 🖂 REMIT C.O.D. TO: Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding per (2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172. (3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles. I hereby declare that the contents of thi **ADDRESS** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. C.O.D. FEE: PREPAID [] COLLECT [] COD Amt: \$ Subject to Section 7 of the conditions, it this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and other lawful charges. TOTAL CHARGES FREIGHT CHARGES Check box if charges are to be collect FREIGHT PREPAID except when box at right is checked Signature RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, it is mixed to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to desthatlon and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment. Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER Energy Transfer	1.1.1	CARRIER	1
PER LAKE HOLLING	or seralt	PER	
State of the state	Trendella	DATE /a	

# **Appendix E**

**Monitor Well Drilling and Plug and Abandonment Permits** 



### Navajo Water Code Administration Department of Water Resources P.O. Box 678

Fort Defiance, Arizona 86504

Website: www.watercode.navajo-nsn.gov Phone: (928) 729-4132 Fax: (928) 729-4421

Well Drilling Permit (WDP) N	O: 15.004
REFERENCE WUP No:	
VALID: 11/7/14 TO_	8/31/15

# WATER WELL DRILLING APPLICATION/PERMIT TRIBAL WELL NO:\_\_\_\_\_

	For install Ins			FOF 057 0070
DRILLER'S NAM	E Envirodrill, Inc.	<del>- y - a - a - a - a - a - a - a - a - a </del>	PHONE NO:_	505-857-9876
ADDRESS: 83	05 Washington Pl. NE		-	
CITY: Albuque	erque	STATE:_	New Mexico	ZIP: 87113
LICENSE NO:	WD-1186 CO	NTACT PERSON: R	Rodney Hammer	
APPLICATION/PI	ERMIT TO: (X) DRILL	( ) RE-DRILL	( ) RE-CASE ( )	DEEPEN
WELL USE: (	) DOMESTIC ( ) ) MUNICIPAL ( )	AGRICULTURE/LIVE RECREATIONAL		NDUSTRIAL/MINING OTHER <u>Monitoring</u>
PROPOSED: V	WELL DEPTH <u>appr. 70</u> FT WEIGHT OF CASING	WELL DIA {LBS/FT}	BIN CASI PRODUCTION CAPA	ING DIA. 2 IN CITY GPM
E	ORILLING METHOD Ho	ollow Stem Auger		
PROPOSED DRIL	LING DATES: START1	1 / 17 / 2014	COMPLETIO	N 12 / 31 / 2015
LOCATION: CHA	PTER NAME: Thore	au	GRA	ZING DISTRICT /6
	ATTACH AN 8½" X 11" T	OPO MAP SHOWING	THE LOCATION O	OF DRILLING
				T, TO PROVIDE THE WATE MATION UPON COMPLETIC
A				SUMMARY DRILLER'S LO
B	INFORMATION AN COPIES OF ALL W		MATIONS IDENTIFI	ED. (See last 2 pages of this form
		HEMICAL & BIOLO	GICAL ANALYSES	
NSPECTION O	REES, AS A CONDITION F OF THEIR PROJECT F ON OF THIS PERMIT.	OR THE PERMIT, TO PREMISES BY NA	O REASONABLE AC VAJO NATION E	CESS TO, ENTRY UPON, AN MPLOYEES ENGAGED
APPLICANT NAM	IE: Cassie Brown for	Energy Transfer	- 0	
ADDRESS: 612	21 Indian School Rd N	Ste 200_CITY:/	Albuquerque	STATE: New Mexico
TELEPHONE NUM	MBER: ( 505 ) 884-00	672		ZIP: <b>87110</b>
AX NUMBER:	505-884-4932	E-MAI	L cmbrown@c	raworld.com
APPLICANT'S SIG	GNATURE: WEST	How	ک	DATE: 10/23/4

WDP NO:_	15.004
REF. WUP NO	

### **CONDITIONS!**

The following data MUST BE furnished to the Water Code Administration within 30 days of completion of the well:

- 1. Driller's log;
- 2. Stratigraphic log (if done on the well);
- 3. Copies of all electric logs;
- 4. Any completed water quality analyses, including TDS, heavy metals, radionuclides, e-coli, total coliforms, VOCs, and so on;
- 5. Copy of completed well design and construction showing casing and well screen settings, gravel pack, and packer settings;
- 6. Cement bonding log;
- 7. Pump test data, recovery rates, static water level, etc.
- 8. Copies of any additional special tests conducted on the well.
- Placing a well in service without submittal of the above information will result in a penalty, and may include fines, forfeiture of the well, and other appropriate measures.
- 10. Well may be utilized by local livestock permit holders in the area.

A water use permit is required to withdraw water from the new well, and such permit will only be valid if the appropriate data noted above have been supplied.

RECOMMENDATIONS

# GRAZING COMMITTEE MEMBER/ DISTRICT LAND BOARD MEMBER CHAPTER COUNCIL DELEGATE () YES() NO N.A. DATE / / WATER CODE ADMINISTRATOR () YES() NO NO DATE // / TECHNICAL REVIEWER () YES() NO NO DATE // / APPROVED: Director, Department of Water Resources

### **WELL RECORD**

15.004 WDP NO:\_ REF. WUP NO:\_\_\_\_ TBA

WELL NO:

Navajo Water Code Administration

Department of Water Resources P.O. Box 678 Fort Defiance, Arizona 86504

### LOCATION

7.5 min. quad name:			Quad no	Grazing Dis	t
State:	County:		Chapter:		
Approx. location:					
UTM Coordinates: X (E	East):Y	(North):	Z	one:	
		STRUCTURE	9 golf		
			B . 1 . 1	1 /	,
Date begun:/	Date completed:	/ /	Date depth	measured:/_	
Elevation:	ft. Total Depth:	ft. I	Hole Diameter(s)	):	
Casing Diameter:	in. From:	ft. to	ft. Materia	l:	5 54
Casing Diameter:	in. From:	ft. to	ft. Materia		
Casing Diameter:	in. From:	ft. to	ft. Materia	l:	
Casing Diameter:	in. From:	ft. to	ft. Materia	:	
Perforations [ ] Screen Perforations [ ] Screen	n [ ](type:) n [ ](type:) n [ ](type:)	Open Hole [ Open Hole [	] From: ] From:	ft. to ft. to ft. to	ft. ft.
	1 [ ](type:)	Open Hole [	J From:	ft. to ft. to	IL.
Perforations [ ] Screen	n [ ] (type:)	Open Hole [	J From	n. to	
Funded By:		Con	ntractor:		
Site Improvements:					
Type of Lift:	E	nergy Source:		Pump HP:_	
		<b>HYDROLOGY</b>			
Well Yield:	gallons/minute (GPM)		Date Yield	Measured:	1 1
Test Type:	Test rate: GPM for _	hours (Attac	ch copy of well to	est data.)	
Test Date:/	/ SWL at Beg	ginning of Test:	ft	. Total Drawdown	-
Specific Capacity:	GPM per fi	. Recovery:	ft	. after ho	ours.
Logs Available (attach c	copies): [ ] Driller's	[ ] Geophy	sical [	] Other	
Water Chemistry Analys	sis Available (attach copies):	[ ]Yes	]	] No	
Static Water Level (	SWL): ft. Date:	/ / SV	VL. fi	t. Date:	1 1

### **WELL RECORD**

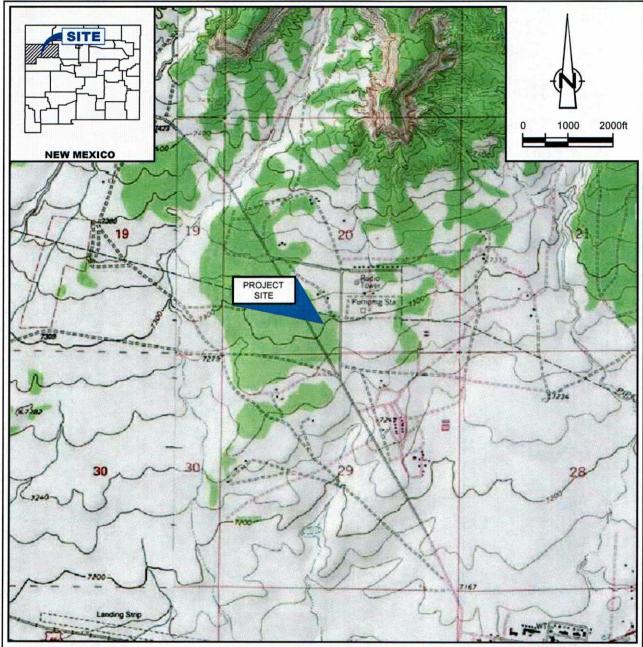
Navajo Water Code Administration Department of Water Resources P.O. Box 678 Fort Defiance, Arizona 86504

WDP NO:	0 0 4
REF WUP NO:	
WELL NO:	TRA

revised 9/96; reviewed 9/12

LOG

ТО	FORMATION DESCRIPTION	GEOLOGIC UNIT	REMARKS
CAR STATE			
W.			
		70.00	
7-10		215/1828	
100			2 3 5 11 15
			DATE OF THE PARTY
- C		A DATE OF THE STATE OF THE STAT	
			The settle 1 we
	5.10	727-1777	
A VICTOR OF			



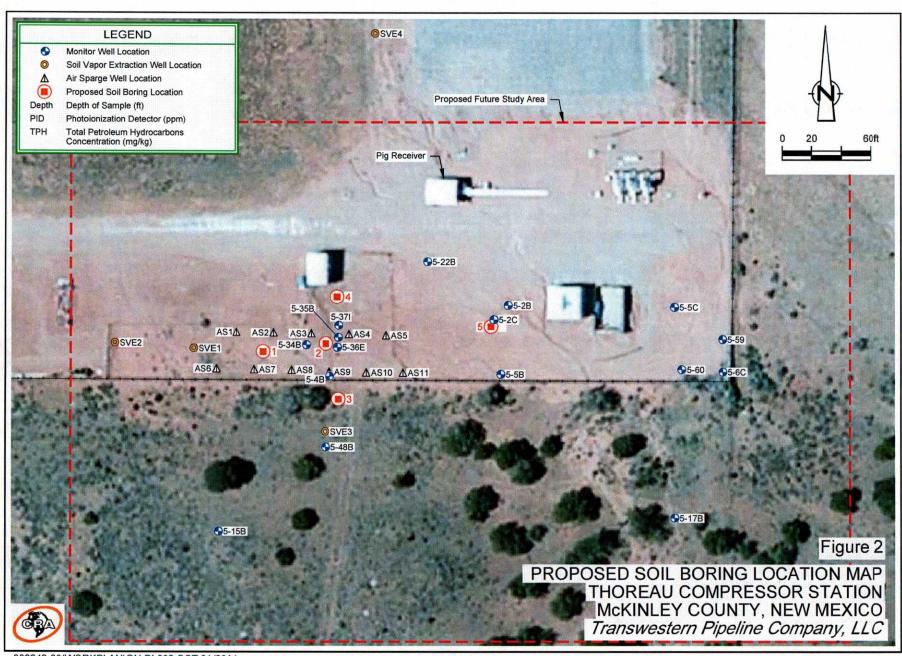
SOURCE: USGS 7.5 MINUTE QUAD
"BELL LAKE AND TIP TOP WELLS, NEW MEXICO"

LAT/LONG: 35.4262° NORTH, 108.2360° WEST COORDINATE: NAD83 DATUM, U.S. FOOT STATE PLANE ZONE - NEW MEXICO WEST

Figure 1

SITE LOCATION MAP THOREAU COMPRESSOR STATION McKINLEY COUNTY, NEW MEXICO Transwestern Pipeline Company, LLC





### **Boring Locations for Drilling Permit Energy Transfer Thoreau Compressor Station**

Thoreau, New Mexico

Boring #	Rig type	Boring Diameter (in)	Total Depth (feet bgs)	Approx. Groundwater level (feet bgs)	Approx. Latitude (N)	Approx. Longitude (W)
B-1	Hollow Stem Auger	8	up to 70	50 - 60	35°25'27.78"	108°14'05.05"
B-2	Hollow Stem Auger	8	up to 70	50 - 60	35°25'27.86	108°14'04.22"
B-3	Hollow Stem Auger	8	up to 70	50 - 60	35°25'27.39	108°14'04.41"
B-4	Hollow Stem Auger	8	up to 70	50 - 60	35°25'28.13	108°14'04.21"
B-5	Hollow Stem Auger	8	up to 70	50 - 60	35°25'28.00"	108°14'03.13"

All borings are non-artesian and breach only one aquifer

bgs = below ground surface

TD = Total Depth

## **Appendix F**

**Monitor Well Plug and Abandonment Photo Log** 





Photo 1. Facing south, of MW-5-23B prior to abandonment.



Photo 2. View facing west, of MW-5-2B prior to abandonment.



Photo 3. Photo facing south, toward MW-5-24B of well pad broken up for removal.



Photo 4. Photo facing southwest; of MW-5-41B following well pad removal.



Photo 5. Photo facing south, of MW-5-24B plugged and abandoned.



Photo 6. Photo facing south, of MW-5-12B plugged and abandoned.