District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action PCS1830938 47

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company **Williams Four Corners LLC**	Contact **Aaron Galer**
Address **1755 Arroyo Drive, Bloomfield, NM 87413**	Telephone No. **801-584-6746**
Facility Name **Kutz Canyon Gas Plant**	Facility Type **Natural Gas Processing Plant**

Surface Owner **BLM**	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	**13**	**28N**	**11W**					**San Juan**

Latitude 36.666589 **Longitude** -107.962877 **NAD83**

NATURE OF RELEASE

Type of Release **Unknown**	Volume of Release **Unknown**	Volume Recovered **None**
Source of Release **Unknown (historical release)**	Date and Hour of Occurrence **Unknown**	Date and Hour of Discovery **10/5/2017 12:00 PM**
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Cory Smith (OCD) and Whitney Thomas (BLM)**	
By Whom? **Matt Webre**	Date and Hour: **OCD 10/5/2017 @ 2:45 PM; BLM 10/5/2017 @ 3:20 PM**	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully. AP-127

Describe Cause of Problem and Remedial Action Taken.*
The Gas Company of New Mexico (GCNM) encountered hydrocarbon impacted soils while performing excavation activities along their new pipeline ROW. The ROW excavation is located on the western portion of the Kutz Canyon Gas Plant between the condensate tank and the west plant fence line.

This is a subsequent report, please see Assessment Report attached.

NMOCD

Describe Area Affected and Cleanup Action Taken.*

This is a subsequent report, please see Assessment Report attached.

AUG 17 2018

DISTRICT III

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Aaron Galer	OIL CONSERVATION DIVISION Approved by Environmental Specialist: Accepted for Record Assigned AP-127 CS
Printed Name: **Aaron Galer**	
Title: **Environmental Specialist**	Approval Date: Expiration Date:
E-mail Address: aaron.galer@williams.com	Conditions of Approval: Additional Remediation Required ☐ Attached
Date: **8/16/2018** Phone: **(801) 584-6746**	AP-Letter Sent

* Attach Additional Sheets If Necessary

#NCS 1729626631 10/30/18

248

Smith, Cory, EMNRD

From: Smith, Cory, EMNRD
Sent: Monday, November 5, 2018 9:25 AM
To: khong@harvestmidstream.com
Cc: Griswold, Jim, EMNRD; Griswold, Jim, EMNRD
Subject: RE: Abatement Plan for Kutz Canyon Gas Plant AP-127

Kijun,

Just wanted to make sure Harvest received Jims letter Assigning the Kutz Canyon Gas Plant to an Abatement plan under 19.15.30 NMAC. Please make sure you review the requirements of 19.15.30 NMAC as they are more detailed, have specific timelines compared to part 29.

Since there has been an ownership change I have accepted for record the Aug 2018 report and it will be scanned into the AP online file. As mentioned in the October 30, 2018 letter Harvest has until December 30, 2018 to submit Stage 1 to OCD D3(CC Santa Fe Digitally)

For your records, please make sure all future submittals for the Kutz Canyon Gas Plant 10/5/17 release include the following numbers.

Abatement plan # AP-127
Incident # nCS1729626631

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

From: Griswold, Jim, EMNRD
Sent: Tuesday, October 30, 2018 3:42 PM
To: khong@harvestmidstream.com
Cc: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Subject: Abatement Plan for Kutz Canyon Gas Plant

See attached. Original sent to Mr. Hong today via snailmail.

Jim Griswold
Environmental Bureau Chief
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505.476.3465
email: jim.griswold@state.nm.us

APTIM
6380 South Fiddlers Green, Suite 310
Greenwood Village, CO 80111
Tel: +1 303 741 7700
Fax: +1 303 741 7479

Soil and Groundwater Assessment Report

Kutz Canyon Gas Plant
San Juan County, New Mexico

Project 6631236951

August 16, 2018

Prepared for:

Williams Four Corners LLC

Prepared by:

APTIM Environmental & Infrastructure, Inc.

6380 South Fiddlers Green, Suite 310
Greenwood Village, CO 80111
United States
www.APTIM.com

APTIM

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1.0 INTRODUCTION

The Kutz Canyon Gas Plant (Site) is an active natural gas processing plant operated by Four Corners, LLC (Williams). Petroleum hydrocarbon impacted soils were encountered during excavation activities to install a natural gas gathering pipeline owned and operated by Gas Company of New Mexico (GCNM). The excavation was located within the GCNM pipeline right-of-way (ROW) outside of the fenced facility at the Site. GCNM notified Williams personnel upon discovery of the soil impacts. Williams personnel then reported the release to the New Mexico Oil Conservation Division (NMOCD) on October 5, 2017.

The initial testing of the soil in the trench was completed by LT Environmental, Inc. (LTE) on behalf of Williams on November 9, 2017. Two composite soil samples collected from the bottom of the trench contained total benzene, toluene, ethylbenzene, and total xylenes (BTEX) at 156.2 milligrams per kilogram (mg/kg) and 93.7 mg/kg, both above the NMOCD closure criteria of 50 mg/kg. No detectable concentrations of BTEX were noted in the water samples collected from the bottom of the excavation (LTE, 2017).

During pipeline trenching activities, the petroleum hydrocarbon impacted soil identified within the pipeline trench was excavated to the extent possible. Utilities within the highly congested pipeline corridor prevented the excavation of all petroleum hydrocarbon impacted soil within the central portion of the pipeline trench.

The NMOCD remediation action levels for soils contaminated by petroleum hydrocarbons are based on the total ranking score for a site based on the relative threat to public health, fresh waters and the environment (NMOCD, 1993). For sites with a depth to groundwater greater than 100 feet below ground surface (bgs); no water source or private domestic water source within 1,000 feet; and distance to the nearest surface water body greater than 1,000 feet, the total ranking score for a site is zero. NMOCD has indicated that due to shallow groundwater observations during the GCNM excavation and soil boring assessment work, groundwater is considered to be at depths less than 100 feet. The ranking criteria for sites with depth to groundwater of less than 50 feet bgs is a ranking score of 20. The NMOCD remediation action levels for sites with a ranking score greater than 19 is 10 parts per million (ppm) benzene, 50 ppm total BTEX, and 100 ppm total petroleum hydrocarbons (TPH).

1.1 PROJECT LOCATION AND DESCRIPTION

The Kutz Canyon Gas Plant is a natural gas processing plant located in the west ½ of the northwest quarter of Section 13 and the east ½ of the northeast ¼ of Section 14, Township 28 North, Range 11 West in San Juan County, New Mexico approximately 3 miles south of Bloomfield, New Mexico at latitude 36.66652778 degrees and a longitude of -107.96277778 degrees. **Figure 1-1** is a topographic map depicting the location of the Site. The Site is located in an area of west-slopping topography at an elevation of approximately 5,780 feet above mean sea level (ft-msl). The maximum relief over the site is approximately 40 feet. Intermittent flow from the site will follow natural drainage west to Kutz Canyon. Kutz Canyon drains to the north into San Juan River. The San Juan River, approximately 4.3 miles to the northwest of the Site, is the nearest down-gradient

perennial source of surface water at an elevation of approximately 5,380 ft-msl. **Figure 1-2** is a site map.

1.2 SITE CONDITIONS

1.2.1 Site Geology

The Site is located within the San Juan Basin, a geologic structural basin located in the north western corner of New Mexico. Surface geology at the Site consists of Quaternary alluvium overlying the early Paleocene Nacimiento Formation. The Nacimiento Formation is an ancient fluvial deposit that is dominated by fine-grained deposits, including mudstones and siltstones, with minor lenticular fine to coarse sandstone bodies. In the San Juan Basin, the Nacimiento Formation is as much as 500 meters thick (Williamson, 1993).

The Nacimiento Formation is exposed as a complex of badlands within the Kutz Canyon directly to the west of the Site. Unconsolidated deposits of silt, sand, and clay of recent alluvium unconformably overlie the bedrock at the Site, located directly to the east of Kutz Canyon.

1.2.2 Site Hydrology

The principal aquifer in the San Juan Basin is the Uinta-Animas aquifer. The Nacimiento Formation is part of the Unita-Animas aquifer in the area of the Site and is described as permeable conglomerate and sandstone interlayered within relatively impermeable shale and mudstone (USGS, 2001). In the San Juan Basin, groundwater generally flows toward the San Juan River and its tributaries where it discharges to alluvium locally present in the San Juan River valley (USGS, 2001).

Groundwater has been described in the Site discharge plan (GW-045) as shallow perched water with total dissolved solids (TDS) concentrations ranging from 8,000 to 18,000 mg/l and deeper groundwater at a depth of 200 feet with estimated TDS of 2,000 to 4,000 mg/l.

Field notes for previously installed corrosion control/cathodic protection wells installed at the Site to a depth of 300 feet bgs state that water was encountered at a depth of 260 feet. The logs for these two wells show surface casing set into shale bedrock to a depth of 20 feet bgs with no mention of shallow groundwater (LTE, 2017).

1.2.3 Historical Land Use

The Plant was originally constructed in 1949. Review of the historical topography figure for 1960 (see **Figure 1-3**) shows some of the original topography and surface drainage in the area of investigation. The more recent topography figure for 1985 (see **Figure 1-4**) shows storm water impoundments and surface regrading in the area of investigation west of the plant.

Aerial photographs for 1962, 1978, 1991, and 1997 (see **Figures 1-5** through **1-8**, respectively), also show the historical changes in storm water impoundments and surface regrading in the area of investigation.

1.3 SCOPE OF WORK

The additional investigation activities were performed in accordance with the procedures detailed in the Limited Soil and Groundwater Assessment Work Plan dated April 16, 2018. Data were collected and analyzed during the field investigation activities to fulfill the following objectives:

- To identify the potential occurrence of shallow perched groundwater beneath the site;
- Evaluate soils in the area of noted surface staining; and,
- Evaluatface seep located north of the flare for perched water and potential petroleum hydrocarbon sources.

The initial investigation activities were completed on November 30 and December 1, 2017. Additional field investigation activities were conducted from June 4, 2018 through August 3, 2018. The following activities were included in the investigation:

- Installation of 43 soil borings;
- Collected 46 soil samples for laboratory analysis of BTEX; TPH gasoline range organics (GRO); TPH diesel range organics (DRO); and, TPH motor oil range organics (MRO);
- Installation of 18 temporary 1-inch diameter piezometers;
- Leak testing of drain lines;
- Surveyed location and surface elevation of each soil boring;
- Surveyed the top of casing (TOC) elevation of the temporary piezometers;
- Development of the temporary piezometers;
- Collect groundwater samples from 16 of the soil borings with available water for laboratory analysis of BTEX; and,
- Collected fluid level measurements from the temporary piezometers.

2.0 GENERAL SCOPE OF WORK AND METHODOLOGY

Sampling activities were performed using the sample collection procedures presented in the Limited Soil and Groundwater Assessment Work Plan dated April 16, 2018. This section discusses general procedures used to collect and analyze soil and groundwater samples. Methodologies for the temporary piezometer installation and fluid level gauging are also presented.

The location of the soil borings and temporary piezometers are depicted on **Figure 1-2**. Soil borings BH-1 through BH-9 were completed with a truck mounted drill rig using hollow stem augers and split spoon sampler. Results of this sampling, completed November 29 through December 1, 2017, were originally reported in the Excavation, Delineation, and Stockpile Sampling Summary Report letter dated January 18, 2017.

The soil boring locations were marked and the utilities cleared before sampling activities began. Each of the drill rig or Geoprobe® soil boring locations were cleared using a hand auger to a depth of 5 to 8 feet bgs prior to any drilling or Geoprobe® sampling activities.

An LTE geologist was present to oversee the soil sampling and monitoring well installation activities. Soil observations, changes in lithology, and the presence of hydrocarbons were noted on the boring log for each location. Specific boring logs and temporary piezometer completion diagrams are included in **Appendix A**.

2.1 SUBSURFACE SOIL SAMPLE COLLECTION PROCEDURES

Soil borings BH-10 through BH-20 were completed with a Geoprobe® equipped with a 5-foot long dual tube soil sampling system. A new disposable clear polyvinyl chloride (PVC) liner was used for the collection of each 5-foot sample interval from surface to total depth of the soil boring. Soil samples were collected at 5-foot intervals and field screened for VOCs using a photoionization detector (PID).

Because of the shallow depth and access, additional soil borings BH-21 through BH-43 were installed with a 2.5-inch diameter hand auger to help define the lateral extent of impacted soil and shallow perched water.

The field geologist based the collection and sample interval for the soil sample laboratory analysis on the PID field screening results and visual inspection. The soil samples were containerized, preserved, and submitted to the laboratory for analysis of BTEX using method 8260B and TPH GRO, TPH DRO, and TPH MRO using method 8015.

Upon completion, each boring was plugged with bentonite.

2.2 TEMPORARY PIEZOMETER INSTALLATION

Temporary piezometers were constructed in each boring with noted saturated soils using 1-inch diameter, flush-joint, threaded Schedule 40 polyvinyl chloride (PVC) casing and well screen. A threaded plug was placed at the bottom of the well screen before installation into

the boring. A 5 or 10-foot length of 0.01-inch factory cut slotted well screen was set in the open boring and the solid PVC casing threaded to the well screen and extended to surface.

2.3 GROUNDWATER MONITORING

Groundwater monitoring activities were performed at temporary piezometers if adequate water was available to collect a sample. Groundwater samples were obtained using new high-density polyethylene (HDPE) tubing and a check valve assembly.

Specifically, the scope of work included:

- Recording the depth to groundwater (and light non-aqueous phase liquid - LNAPL if present) using an interface probe capable of measuring to 0.01 feet;
- Purging the temporary piezometer of three well volumes;
- Collecting groundwater samples and analyzing the samples for BTEX using method 8260B.

2.4 DECONTAMINATION PROCEDURES

Non-disposable sampling tools used for subsurface soil and groundwater sampling were decontaminated prior to the collection of each sample. The decontamination procedure consist of a non-phosphate soap wash, followed by a deionized water rinse.

2.5 LEAK TESTING

Leak testing was completed on the open drain system that feed the produced water tanks. This was performed by isolating all of the sources from the plant and installing PVC risers at the clean out plug locations for each line.

2.6 SURVEY

The soil boring locations were marked and the locations surveyed by a New Mexico licensed surveyor to establish locations, ground surface elevation, and top of casing elevation for the temporary piezometers, if needed.

3.0 RESULTS

3.1 SITE GEOLOGY AND HYDROGEOLOGY

Soil borings placed in the area of investigation were used to examine the surface and subsurface conditions. Characterization of the unconsolidated lithology was based on drill cuttings and soil samples collected during the investigation activities. Boring logs for the soil borings installed are provided in **Appendix A**.

- The unconsolidated lithology consist of silty sand to sand with some clay from surface to depths ranging from 3 to 24 feet bgs. The sands overlie a grey-green lean clay. The thickest sand interval of 24 feet was observed BH-10, the furthest northeast soil boring, and the thinnest sand logged in soil boring BH-25, located the furthest west. The unconsolidated lithology pinches out to the west because of surface erosion and bedrock outcrop. Refusal was encountered at a tight clay at total depths in all of the Geoprobe soil borings (BH-10 through BH-20) at depths ranging from 12 to 24 feet bgs. Cross sections from BH-10 to BH-25 (**Figure 3-1**) and from BH-27 to BH-25 (**Figure 3-2**) shows the lithology and approximate locations of former evaporation ponds in the area of investigation.
- Measurable perched water was noted in 18 of the soil borings. The saturated soils were identified in some of the soil borings as the sand on top of the grey-green clay. The average saturated thickness of perched water measured within the sands above the grey-green clay is approximately 5 feet.
- Results of fluid level gauging activities in each of temporary piezometers with measurable water, are presented in **Table 3-1**. **Figure 3-3** presents potentiometric surface contour map for the fluid level gauging activities on August 3, 2018. The perched water flow in the area of investigation is to the west.
- The soil borings along the west side of the investigation area and west of the seep location that were dry included BH-25, 32, 33, 38, and 39.

3.2 SOIL RESULTS

Summaries of the soil sampling results are shown in **Table 3-2**. The sampling locations and laboratory analytical results for BTEX and TPH in soil samples collected are shown in **Figure 3-4**. The complete laboratory analytical reports are included in **Appendix B**.

- Benzene concentrations exceeded the NMOCD remediation action level of 10 mg/kg in two of the shallow soil samples collected from BH-15 and BH-16, with the highest benzene concentration detected in soil reported in BH-15 collected from 8 to 12 feet bgs at 51 mg/kg.
- Total BTEX concentrations exceeded the NMOCD remediation action level of 50 mg/kg in five of the shallow soil samples collected from BH-11, BH-14, BH-15, BH-

16, and BH-19, with the highest total BTEX concentration detected in soil reported in BH-15 collected from 8 to 12 feet bgs at 483 mg/kg.

- TPH concentrations exceeded the NMOCD remediation action level of 100 mg/kg in 14 of the shallow soil samples collected from soil borings BH-3, BH-10, BH-11, BH-13, BH-14, BH15, BH-16, BH-17, BH-19, BH-20, BH-21, BH-22, BH-24, and BH-26, with the highest TPH concentration detected in soil reported in BH-13 collected from 8 to 12 feet bgs at 30,680 mg/kg.

3.3 GROUNDWATER RESULTS

Perched water samples were collected from 16 of the soil borings. The perched groundwater analytical results for BTEX are summarized in **Table 3-3**. The complete laboratory analytical reports are included in **Appendix B**. The extent of BTEX reported in the perched water collected from the temporary piezometers and the seep are shown on **Figure 3-5**.

- Benzene concentrations exceeded the NMOCD remediation action level of 10 micrograms per liter (ug/l) in 7 of the 16 water samples collected from the soil borings, with the highest concentration reported in the sample collected from BH-34 at 17,000 ug/l.
- Toluene concentrations exceeded the NMOCD remediation action level of 750 ug/l in 3 of the 16 samples collected from the soil borings, with the highest concentration reported in the sample collected from BH-34 at 36,000 ug/l.
- Ethylbenzene concentrations exceeded the NMOCD remediation action level of 750 ug/l in 2 of the 16 water samples collected from the soil borings, with the highest concentration reported in the sample collected from BH-34 at 1,400 ug/l.
- Total xylene concentrations exceeded the NMOCD remediation action level of 620 ug/l in 5 of the 16 water samples collected from the soil borings, with the highest concentration reported in the sample collected from BH-34 at 13,000 ug/l.

3.4 LEAK TESTING RESULTS

After observing a drop of 4-inchs in the water column over a period of one hour, the piping close to the risers was exposed and wet soil was observed around a 4-inch pipe clamp and 4-inch elbow (see **Figure 1-2** for locations SS01 and SS02). The drain lines coming off the cooling tower and condensate tank were also tested and partially exposed to visually inspect the joints. No leaks were identified.

4.0 CONCLUSIONS

Data were collected and analyzed during the field investigation activities to fulfill the following objectives:

- To identify the potential occurrence of shallow perched groundwater beneath the site;
- Evaluate soils in the area of noted surface staining; and,
- Evaluate surface seep located north of the flare for perched water and potential petroleum hydrocarbon sources.

Surface geology at the Site consists of unconsolidated alluvium overlying bedrock. The unconsolidated lithology consists of silty sand to sand with some clay from surface to depths ranging from 3 to 24 feet bgs. The sands set on top of grey-green lean clay. The unconsolidated lithology is discontinuous to the west and pinches out because of surface erosion with bedrock being exposed in Kutz Canyon directly to the west of the Site. Refusal was encountered at a tight clay at total depth in the Geoprobe soil borings at depths ranging from 12 to 24 feet.

Bedrock beneath the alluvium is the Nacimiento Formation. The Nacimiento Formation is dominated by fine-grained deposits, including dark mudstones and siltstones, with minor lenticular fine to coarse sandstone bodies. The Nacimiento Formation is exposed as a complex of badlands within the Kutz Canyon directly to the west of the Site. In the San Juan Basin, the Nacimiento Formation is as much as 500 meters thick (Williamson, 1993).

Review of the historical topography figures and aerial photographs show that the original topography has been regraded in the area of investigation into a storm water impoundment to capture surface water runoff from the Site. At least three of these evaporation ponds have been closed out and the area regraded to allow placement of the existing flare.

Measurable perched water was noted in the unconsolidated sand and clayey sand setting on top of the grey-green lean clay in several of the soil borings in the area of the flare. The average saturated thickness of perched water measured within the sands above the grey-green clay is approximately 5 feet. The perched water flow in the area of investigation is to the west.

The soil borings along the west side of the investigation area and west of the seep location were dry.

Reported concentrations of TPH and total BTEX in several of the shallow soil samples collected exceeded the recommended NMOCD remediation action level. Shallow soil samples were collected mostly from unsaturated silty and clayey sands. There were no reported detections of TPH, total BTEX, or benzene in any of the deeper soil samples generally collected at the boring total depth from either unsaturated silty sand or from the moist to dry grey-green lean clay.

The highest TPH concentration was reported in the shallow (8 to 12 feet bgs) soil sample interval collected from SB-13 along the south central west side of the pipeline trench.

The highest total BTEX concentration was reported in the shallow (8 to 12 feet bgs) soil sample interval collected from SB-15 along the west side of the above ground tanks and on the west side of the pipeline trench. Concentrations of TPH and total BTEX reported in shallow soil decrease to the west towards the seep and were not detected in shallow soil samples collected from the furthest west soil borings to the west of the seep.

Concentrations of BTEX reported in several of the perched water samples collected exceed the NMOCD remediation action level. The highest BTEX concentrations in perched water were detected at BH-34, located hydraulically up gradient of the seep and north of the flare.

The perched water is discontinuous in the area of investigation. Perched water was identified in only one of the soil borings (BH-27) located in the vicinity of the pipeline trench.

The location and flow direction of the perched water appears to be affected by former surface topography, existing and former storm water impoundments. The perched water flows to the west across the top of the grey-green clay and tight clay towards the seep, and pinches out to the west due to surface erosion and bedrock outcrop.

Petroleum impacted soil and groundwater has been defined within the shallow perched water and soil above the grey-green clay and tight clays between the trench and the seep location.

5.0 REMEDIAL TESTING

Certain remedial testing is necessary for the evaluation and design of future remediation actions. Due to in-place natural gas plant processing equipment as well as the number of buried utilities associated with the Site and pipeline ROW, excavation of the entire source of petroleum impacted soil and perched water is not a feasible remedial method. Remedial alternatives to be evaluated may include limited excavation of soils in areas of BH-13 and BH-15, and enhanced bioremediation. Additional remedial testing proposed at this time includes:

- In addition to BTEX and TPH parameters, collect groundwater samples from temporary piezometers for biological process parameters. Parameters to be measured in the field include oxidation-reduction potential (ORP), pH, temperature, conductivity, dissolved oxygen (DO), and ferrous iron. Additional parameters to be included and analyzed by the laboratory include alkalinity, nitrate/nitrite, sulfate, manganese, chemical oxygen demand (COD), and biological oxygen demand (BOD).
- Perform hydraulic slug testing to help determine the hydraulic properties of the shallow perched water for remedial technology evaluation.

6.0 REFERENCES

APTIM (2018). *Limited Soil and Groundwater Assessment Work Plan,* Kutz Canyon Gas Plant, San Juan County, New Mexico. April 16.

LT Environmental, Inc. (LTE) (2017). *Excavation, Delineation, and Stockpile Sampling Summary Report,* Kutz Canyon Gas Plant – GCNM Right-or-Way, San Juan County, New Mexico. January 18.

New Mexico Oil Conservation Division (1993). *Guidelines for Remediation of Leaks, Spills and Releases.* Santa Fe, New Mexico. August 13.

U.S. Geological Survey (2001). *Groundwater Atlas of the United States-Arizona, Colorado, New Mexico, Utah: HA 730C. Colorado Plateau Aquifer.* http://sr6cap.er.usgs.gov/gwa/ch_c/C-test4.html.

Williamson, T.E. (1996). *The Beginning of the Age of Mammals in the San Juan Basin, New Mexico: Biostratigraphy and Evolution of Paleocene Mammals of the Nacimiento Formation.* New Mexico Museum of Natural History and Science, Bulletin 8.

Tables

TABLE 3-1
HISTORIC GAUING RESULTS
WILLAMS FOUR CORNERS LLC
KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO

SITE	DATE	MP ELEVATION (FEET)	DEPTH TO WATER (FEET)	DEPTH TO PRODUCT (FEET)	PRODUCT THICKNESS (FFET)	WATER ELEVATION (FEET)
BH-18	6/18/2018	5766.96	8.91	NP	NP	5758.05
BH-18	7/13/2018	5766.96	8.95	NP	NP	5758.01
BH-18	7/26/2018	5766.96	9.01	NP	NP	5757.95
BH-18	8/3/2018	5766.96	9.02	NP	NP	5757.94
BH-19	6/18/2018	5772.26	15.69	NP	NP	5756.57
BH-19	7/13/2018	5772.26	15.41	NP	NP	5756.85
BH-19	7/26/2018	5772.26	15.45	NP	NP	5756.81
BH-19	8/3/2018	5772.26	15.43	NP	NP	5756.83
BH-20	6/12/2018	5762.81	9.84	NP	NP	5752.97
BH-20	7/13/2018	5762.81	5.49	NP	NP	5757.32
BH-20	7/26/2018	5762.81	10.15	NP	NP	5752.66
BH-20	8/3/2018	5762.81	10.32	NP	NP	5752.49
BH-22	6/12/2018	5759.19	4.69	NP	NP	5754.50
BH-22	7/13/2018	5759.19	10.21	NP	NP	5748.98
BH-22	7/26/2018	5759.19	5.56	NP	NP	5753.63
BH-22	8/3/2018	5759.19	5.48	NP	NP	5753.71
BH-26	6/12/2018	5754.28	6.86	NP	NP	5747.42
BH-26	7/13/2018	5754.28	7.41	NP	NP	5746.87
BH-26	7/26/2018	5754.28	7.39	NP	NP	5746.89
BH-26	8/3/2018	5754.28	7.58	NP	NP	5746.70
BH-27	6/12/2018	5776.70	7.76	NP	NP	5768.94
BH-27	7/13/2018	5776.70	3.83	NP	NP	5772.87
BH-27	7/26/2018	5776.70	4.01	NP	NP	5772.69
BH-27	8/3/2018	5776.70	4.05	NP	NP	5772.65
BH-28	7/6/2018	5774.60	13.21	NP	NP	5761.39
BH-28	7/13/2018	5774.60	13.25	NP	NP	5761.35
BH-28	7/26/2018	5774.60	13.28	NP	NP	5761.32
BH-28	8/3/2018	5774.60	14.31	NP	NP	5760.29
BH-29	7/6/2018	5772.70	12.08	NP	NP	5760.62
BH-29	7/13/2018	5772.70	12.11	NP	NP	5760.59
BH-29	7/26/2018	5772.70	12.16	NP	NP	5760.54
BH-29	8/3/2018	5772.70	12.20	NP	NP	5760.50
BH-31	7/6/2018	5765.52	8.28	NP	NP	5757.24
BH-31	7/13/2018	5765.52	8.35	NP	NP	5757.17
BH-31	7/26/2018	5765.52	8.31	NP	NP	5757.21
BH-31	8/3/2018	5765.52	8.26	NP	NP	5757.26
BH-34	7/26/2018	5766.15	7.30	NP	NP	5758.85
BH-34	8/3/2018	5766.15	7.32	NP	NP	5758.83
BH-35	7/26/2018	5767.06	8.84	NP	NP	5758.22
BH-35	8/3/2018	5767.06	8.87	NP	NP	5758.19
BH-36	7/26/2018	5764.26	D	NP	NP	NA
BH-36	8/3/2018	5764.26	D	NP	NP	NA
BH-37	7/26/2018	5752.95	D	NP	NP	NA
BH-37	8/3/2018	5752.95	D	NP	NP	NA

TABLE 3-1
HISTORIC GAUING RESULTS
WILLAMS FOUR CORNERS LLC
KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO

SITE	DATE	MP ELEVATION (FEET)	DEPTH TO WATER (FEET)	DEPTH TO PRODUCT (FEET)	PRODUCT THICKNESS (FFET)	WATER ELEVATION (FEET)
BH-40	8/3/2018	5770.19	7.68	NP	NP	5762.51
BH-41	8/3/2018	5772.81	12.65	NP	NP	5760.16
BH-42	8/3/2018	5772.57	13.19	NP	NP	5759.38
BH-43	8/3/2018	5770.27	7.74	NP	NP	5762.53

Notes:
D - Dry
NA - Not Applicable
NP - No Product

TABLE 3-2
SOIL ANALYTICAL RESULTS

KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FOUR CORNERS LLC

Sample ID	Sample Date	Vapor (ppm)	Chloride (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	Total TPH (mg/kg)
Excavation /Pipeline Trench Composite Samples												
EX-South @ 10'	11/9/2017	2,156	39	3.5	49	9.7	94	**156.2**	2,600	120	81	**2,801**
TR01 @ 8'	11/9/2017	1,878	43	1.8	19	6.9	66	**93.7**	1,700	370	380	**2,450**
TR02 @ 6'	11/9/2017	36	<30	<0.15	<0.29	<0.29	<0.58	<1.31	<29	<9.6	<48	<86.6
Pipeline Trench Stockpile Samples												
SP01	12/1/2017	0	--	<0.023	<0.047	<0.047	<0.094	<0.211	<4.7	18	61	79
SP02	12/1/2017	308	--	<0.12	<0.25	<0.25	1.2	1.2	120	1,100	640	**1,860**
SP03	12/1/2017	281	--	<0.12	<0.24	<0.24	<0.49	<1.09	<24	770	2,200	**2,970**
SP04	12/1/2017	0	--	<0.025	<0.049	<0.049	<0.098	<0.221	<4.9	<9.1	<46	<60
Borehole Samples												
BH-1 @ 13' - 15'	11/30/2017	92	--	<0.025	<0.049	<0.049	<0.099	<0.222	<4.9	<9.4	<47	<61.3
BH-1 @ 18' - 20'	11/30/2017	25	--	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<10	<50	<64.8
BH-2 @ 13' - 15'	11/30/2017	835	--	<0.023	<0.047	<0.047	<0.094	<0.211	<4.7	<9.8	<49	<63.5
BH-2 @ 23' - 25'	11/30/2017	151	--	<0.023	<0.047	<0.047	<0.094	<0.211	<4.7	<9.2	<46	<59.9
BH-3 @ 2' - 4'	11/30/2017	575	--	0.04	<0.046	<0.046	0.26	0.300	64	61	730	**855**
BH-3 @ 23' - 25'	11/30/2017	0	--	<0.025	<0.049	<0.049	<0.098	<0.221	<4.9	<9.8	<49	<63.7
BH-4 @ 3' - 5'	11/30/2017	436	--	<0.024	<0.047	<0.047	0.25	0.25	15	<9.4	<47	15
BH-4 @ 18' - 20'	11/30/2017	0	--	<0.024	<0.048	<0.048	<0.096	<0.432	<4.8	<9.6	<48	<62.4
BH-5 @ 3' - 5'	12/1/2017	5	--	<0.023	<0.046	<0.046	<0.091	<0.206	<4.6	<9.1	<46	<59.7
BH-5 @ 18' - 20'	12/1/2017	0	--	<0.024	<0.048	<0.048	<0.095	<0.215	<4.8	<9.5	<47	<61.3
BH-6 @ 13' - 15'	12/1/2017	0	--	<0.025	<0.049	<0.049	<0.098	<0.221	<4.9	<9.1	<45	<59
BH-6 @ 18' - 20'	12/1/2017	19	--	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<9.5	<48	<62.4
BH-7 @ 4' - 6'	12/1/2017	436	--	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<9.9	<50	<64.8
BH-7 @ 18' - 20'	12/1/2017	5	--	<0.024	<0.047	<0.047	<0.095	<0.213	<4.7	<9.7	<49	<63.4
BH-8 @ 7' - 10'	12/1/2017	76	--	<0.025	<0.049	<0.049	<0.099	<0.222	38	<9.9	<49	38
BH-8 @ 18' - 20'	12/1/2017	1	--	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<9.5	<48	<62.4
BH-9 @ 7' - 10'	12/1/2017	17	--	<0.024	<0.048	<0.048	<0.095	<0.215	<4.8	<10	<51	<65.8
BH-9 @ 18' - 20'	12/1/2017	5	--	<0.023	<0.046	<0.046	<0.091	<0.206	<4.6	<9.5	<47	<61.1
BH-10 @ 12' - 16'	6/6/2018	364	--	<0.12	<0.23	0.53	3.2	3.73	540	25	100	**665**
BH-10 @ 20' - 24'	6/6/2018	13.6	--	<0.023	<0.046	<0.046	<0.092	<0.207	<4.6	<9.9	<50	<64.5
BH-11 @ 8'	6/4/2018	3,640	--	<0.47	8.4	4.2	44	**56.6**	1,200	160	120	**1,480**
BH-11 @ 16' - 18'	6/6/2018	16.4	--	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<10	<51	<65.8
BH-12 @ 8' - 12'	6/6/2018	43.8	--	<0.024	<0.048	<0.048	<0.095	<0.215	<4.8	<10	<50	<64.8
BH-12 @ 12' - 16'	6/6/2018	27.2	--	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<10	<50	<64.8
BH-13 @ 8' - 12'	6/6/2018	1,815	--	3.1	6.6	5.0	18	32.7	680	12,000	18,000	**30,680**
BH-13 @ 16' - 18'	6/6/2018	32.6	--	<0.024	<0.049	<0.049	<0.097	<0.219	<4.9	<9.9	<50	<64.8
BH-14 @ 8' - 12'	6/6/2018	914	--	4.9	20	8.6	78	**111.5**	2,000	300	680	**2,980**
BH-14 @ 14' - 16'	6/6/2018	64.8	--	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<10	<50	<64.8
BH-15 @ 8' - 12'	6/6/2018	398	--	**51**	<4.8	42	390	**483**	10,000	350	380	**10,730**
BH-15 @ 16' - 19'	6/6/2018	27.6	--	<0.023	<0.046	<0.046	<0.092	<0.207	<4.6	<10	<50	<64.6
BH-16 @ 8' - 12'	6/6/2018	668	--	**11**	<2.4	14	140	**165**	4,100	420	670	**5,190**
BH-16 @ 12' - 15'	6/6/2018	10.1	--	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<10	<50	<64.9
BH-17 @ 14' - 16'	6/6/2018	437	--	<0.048	<0.096	0.28	3.0	3.3	86	41	110	**237**
BH-17 @ 20' - 23'	6/6/2018	3.6	--	<0.024	<0.048	<0.048	<0.095	<0.215	<4.8	<9.9	<49	<63.7
BH-18 @ 10' - 12'	6/6/2018	124.3	--	<0.023	<0.046	<0.046	<0.092	<0.207	5.2	<9.9	<49	5.2
BH-19 @ 14' - 16'	6/7/2018	386	--	1.3	13	5.5	53	**72.8**	1,900	340	510	**2,750**
BH-19 @ 20' - 24'	6/7/2018	61	--	<0.025	<0.049	<0.049	<0.099	<0.222	<4.9	<9.9	<49	<63.8
BH-20 @ 10' - 12'	6/7/2018	17.7	--	<0.024	<0.049	<0.049	<0.097	<0.219	7.4	2,000	<490	**2,007.4**
BH-20 @ 14' - 16'	6/7/2018	5.1	--	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<9.8	<49	<63.8
BH-21 @ 5'	6/5/2018	1,154	--	<0.024	<0.048	0.25	1.5	1.75	170	20	77	**267**
BH-22 @ 4'	6/4/2018	1,601	--	3.3	17	2.5	27	49.8	1,100	45	130	**1,275**
BH-23 @ 2'	6/4/2018	166.5	--	<0.024	0.076	0.065	0.44	0.581	61	10	<50	71
BH-24 @ 8'	6/4/2018	884	--	1.7	8.1	3.8	36	49.6	2,000	93	260	**2,353**
BH-25 @ 6' - 8'	6/7/2018	1.3	--	<0.024	<0.047	<0.047	<0.094	<0.212	<4.7	<9.9	<50	<64.6
BH-26 @ 4' - 6'	6/7/2018	14.1	--	0.54	4.3	1.8	19	25.64	1,000	26	82	**1,108**
BH-26 @ 10' - 12'	6/7/2018	14.1	--	<0.023	<0.047	<0.047	<0.094	<0.211	<4.7	<9.9	<50	<64.8
NMOCD Remediation Action Level				**10**	**NE**	**NE**	**NE**	**50**	**NE**	**NE**	**NE**	**100**

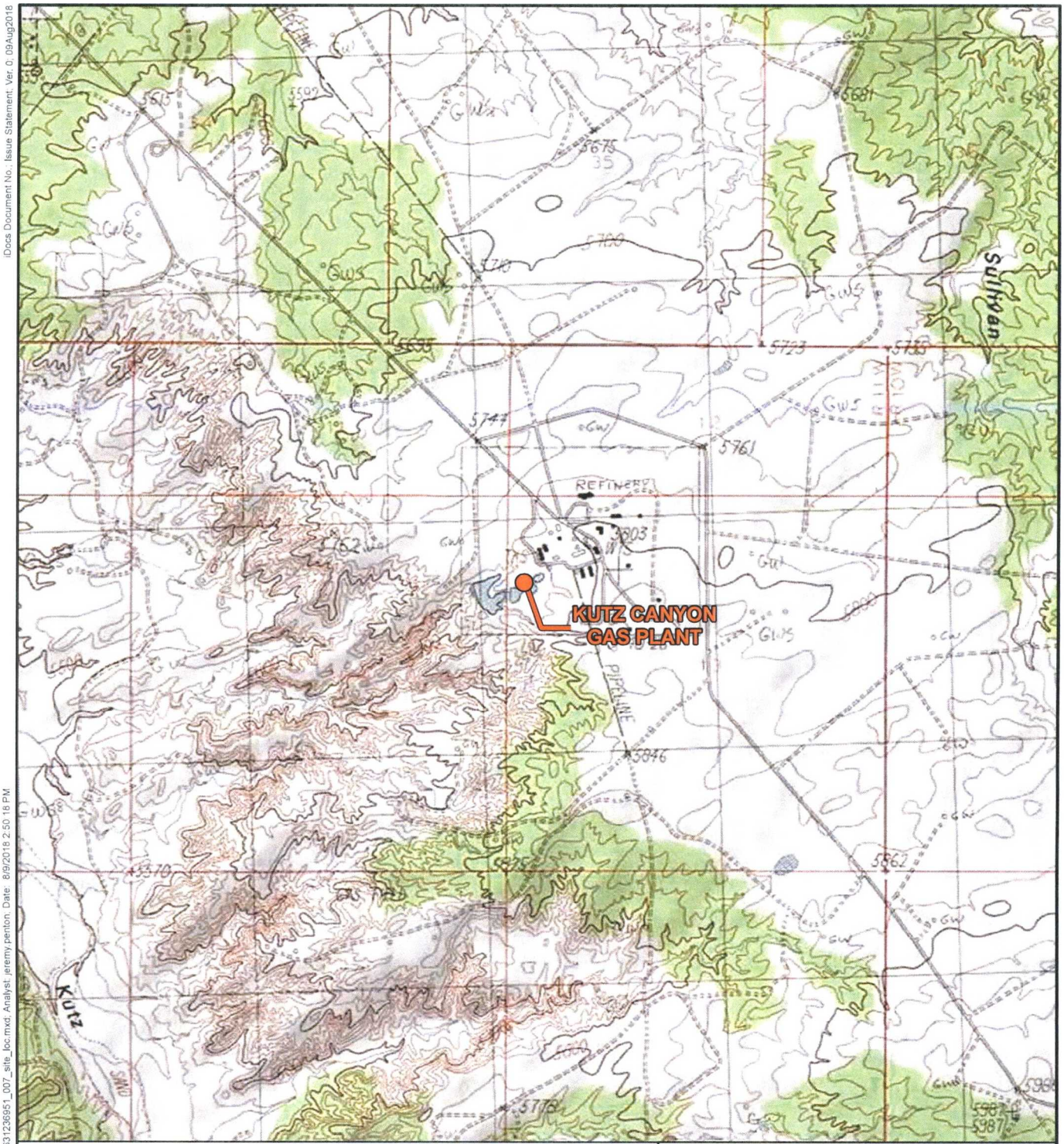
NOTES:
BTEX - benzene, toluene, ethylbenzene, total xylenes
DRO - diesel range organics
GRO - gasoline range organics
MRO - motor oil range organics
mg/kg - milligrams per kilogram
NMOCD - New Mexico Oil Conservation Division
NE - not established
ppm - parts per million
TPH - total petroleum hydrocarbons
< - indicates result is less than the stated laboratory reporting limit
BOLD indicates result exceeds applicable standard

TABLE 3-3
GROUNDWATER ANALYTICAL RESULTS
WILLAMS FOUR CORNERS LLC
KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO

SITE	DATE	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYLBENZENE (ug/L)	TOTAL XYLENES (ug/L)
NMWQCC Standard		10	750	750	620
Seep North of Flare	11/9/2017	**51**	<1.0	<1.0	210
Pipeline Trench Water	11/9/2017	<1.0	<1.0	<1.0	<1.5
BH-3	11/30/2017	1.2	1.9	<1.0	6.5
BH-18	6/18/2018	**6200**	**1200**	170	**4100**
BH-19	6/18/2018	**940**	320	64	400
BH-20	6/12/2018	2.3	6.5	1.9	13
BH-22	6/12/2018	**12000**	**11000**	670	**6400**
BH-26	6/12/2018	**810**	2.6	3.5	160
BH-27	6/12/2018	<1.0	<1.0	<1.0	<1.5
BH-28	7/6/2018	2.7	<1.0	<1.0	<1.5
BH-29	7/6/2018	<5.0	<5.0	14	230
BH-31	7/6/2018	**11000**	110	680	**6600**
BH-34	7/25/2018	**17000**	**26000**	**1400**	**13000**
BH-35	7/25/2018	**4800**	78	**810**	**7600**
BH-40	8/3/2018	**520**	<10	550	**2400**
BH-41	8/3/2018	<1.0	<1.0	<1.0	<1.5
BH-42	8/3/2018	<1.0	<1.0	<1.0	<1.5
BH-43	8/3/2018	<1.0	<1.0	<1.0	<1.5

Notes:
ug/L - micrograms per liter
NMWQCC - New Mexico Water Quality Control Commission
< - indicates result is below laboratory detection limit
Bold values exceed the MCL

Figures



N

0 1,000 2,000 4,000

Feet

WILLIAMS FOUR CORNERS LLC

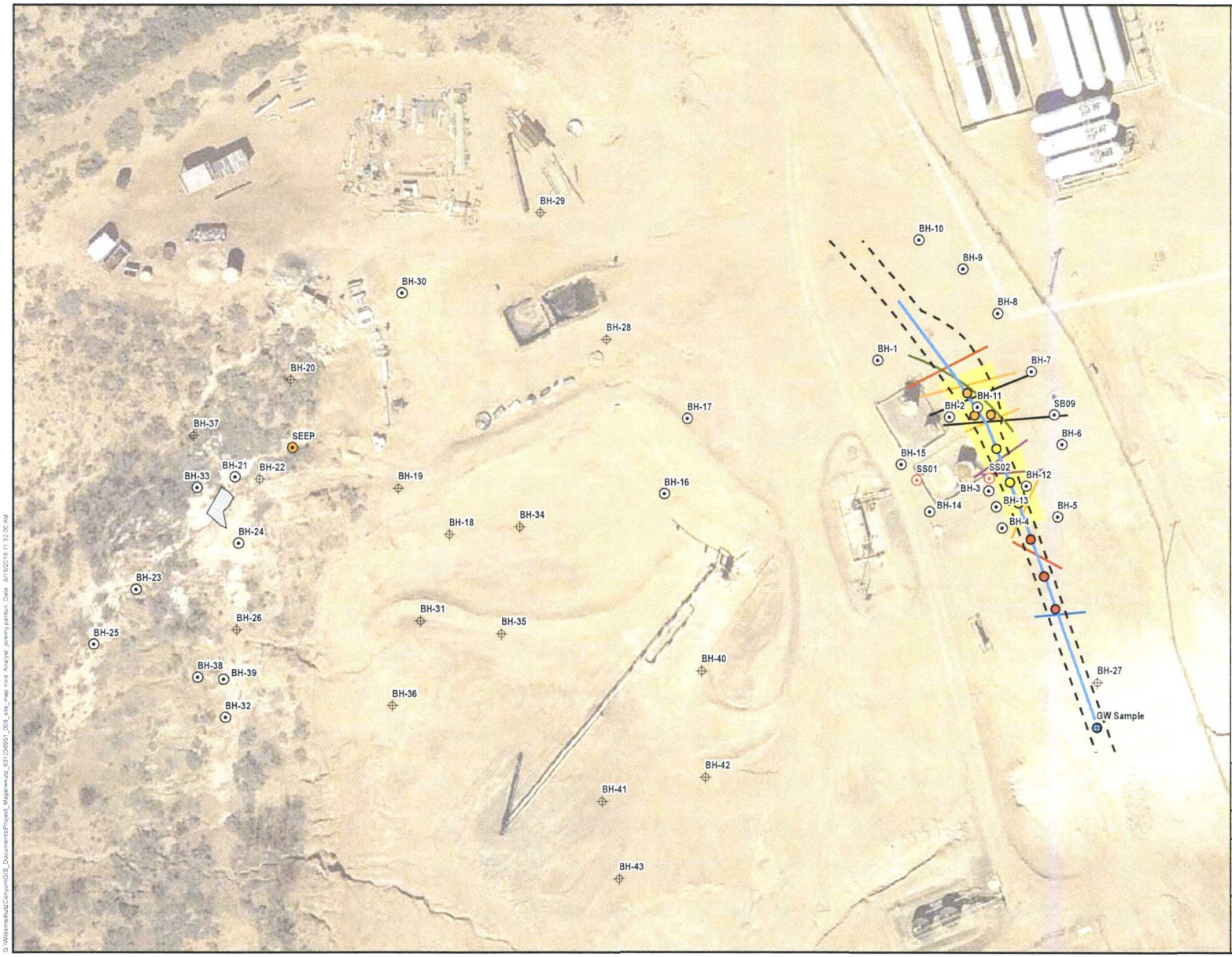
KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO

FIGURE NUMBER 1-1

SITE LOCATION

APTIM

6380 South Fiddlers Green Circle
Suite 310
Greenwood Village, CO 80111
www.APTIM.com



Legend

- Soil Boring
- Soil Sample
- Temporary Piezometer
- Groundwater Sample
- Seep
- EX-South @ 10' Composite
- TR01 @ 8' Composite
- TR02 @ 6' Composite
- Trench Groundwater
- Electrical Line
- Ground Line
- Large Gas Line
- Line
- NMGCO Line
- WFS Flare Line
- Excavation Extent
- Gas Company of New Mexico Pipeline
- Estimated Extent of TPH and BTEX Impacts Requiring Excavation and Disposal
- Area of Surface Staining

N

0 30 60 120

Feet

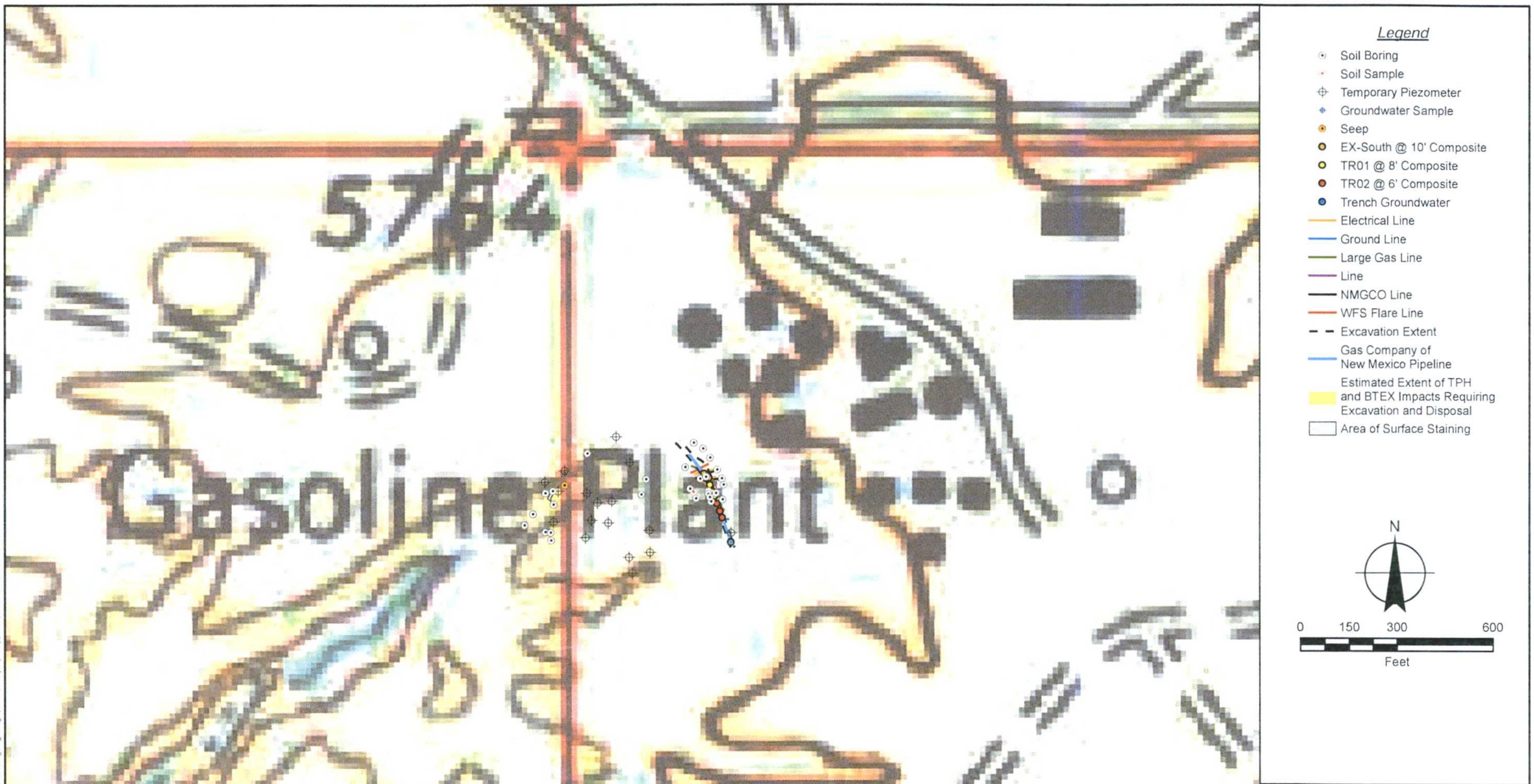
WILLIAMS FOUR CORNERS LLC

KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO

FIGURE NUMBER 1-2

SITE MAP

APTIM
6380 South Fiddlers Green Circle
Suite 310
Greenwood Village, CO 80111
www.APTIM.com



WILLIAMS FOUR CORNERS LLC

KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO

FIGURE NUMBER 1-3	1960 SITE TOPOGRAPHIC MAP

APTIM

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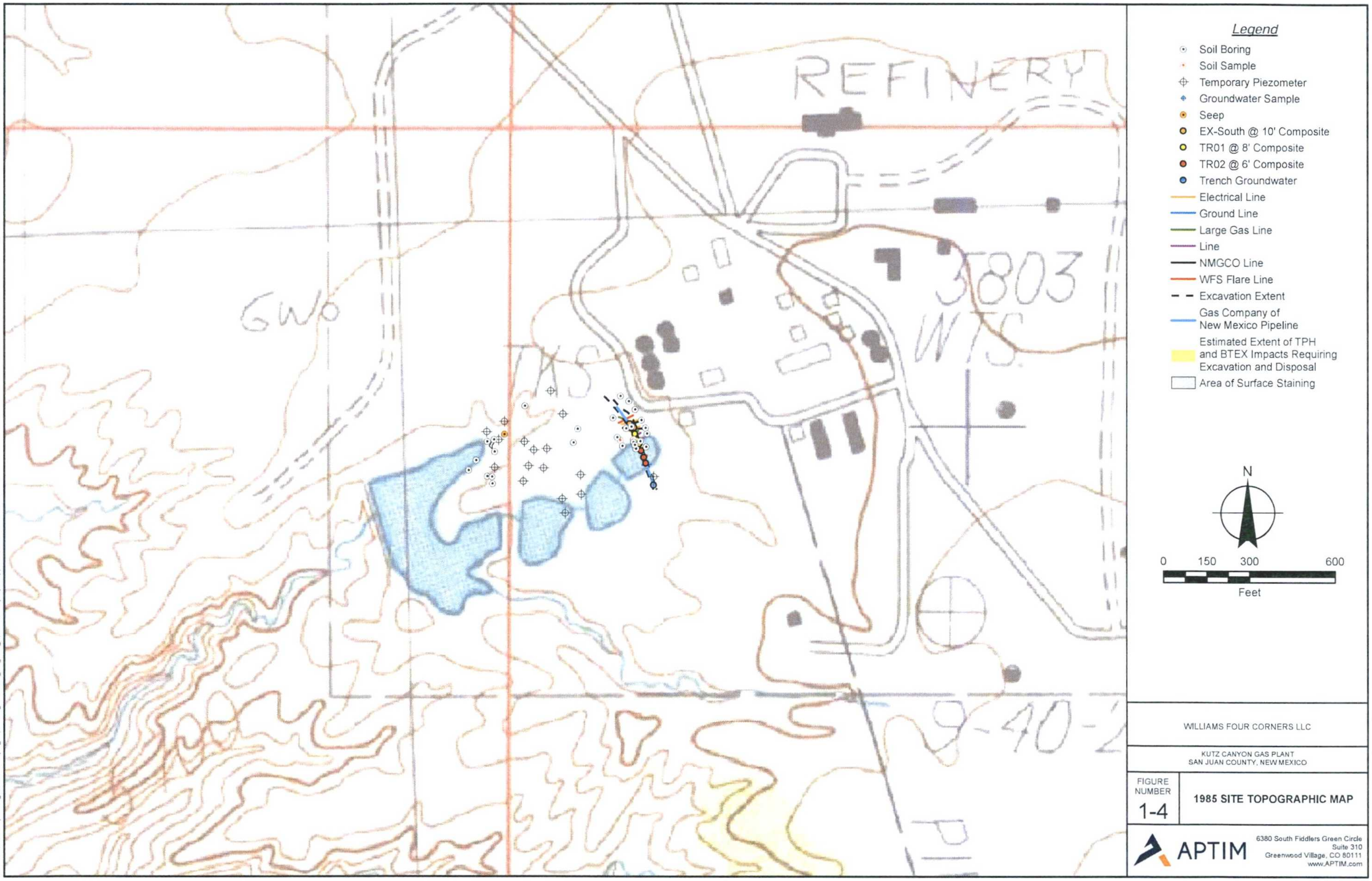

WILLIAMS FOUR CORNERS LLC

KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO

FIGURE NUMBER 1-4

1985 SITE TOPOGRAPHIC MAP

APTIM
6380 South Fiddlers Green Circle
Suite 310
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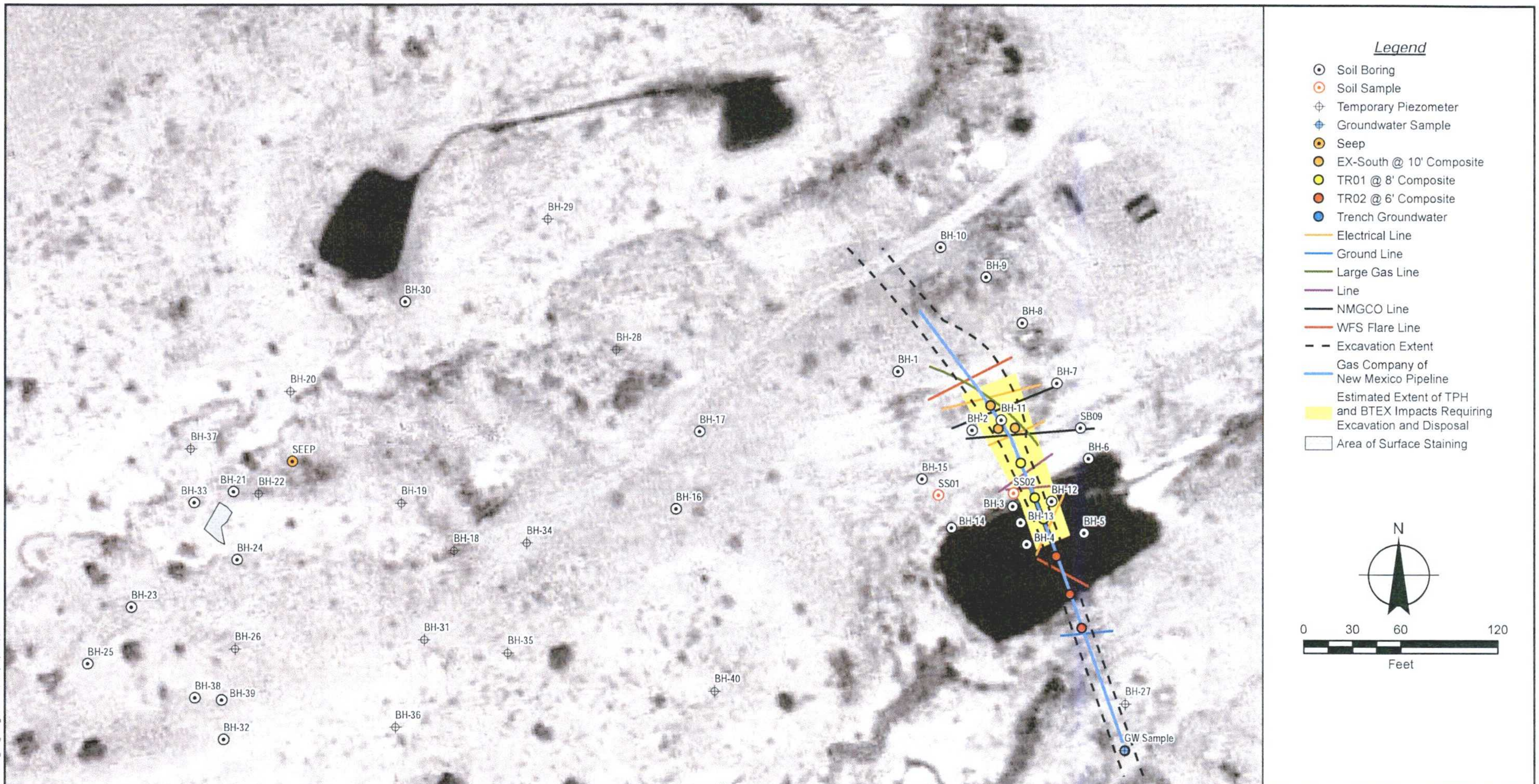
www.APTIM.com



WILLIAMS FOUR CORNERS LLC

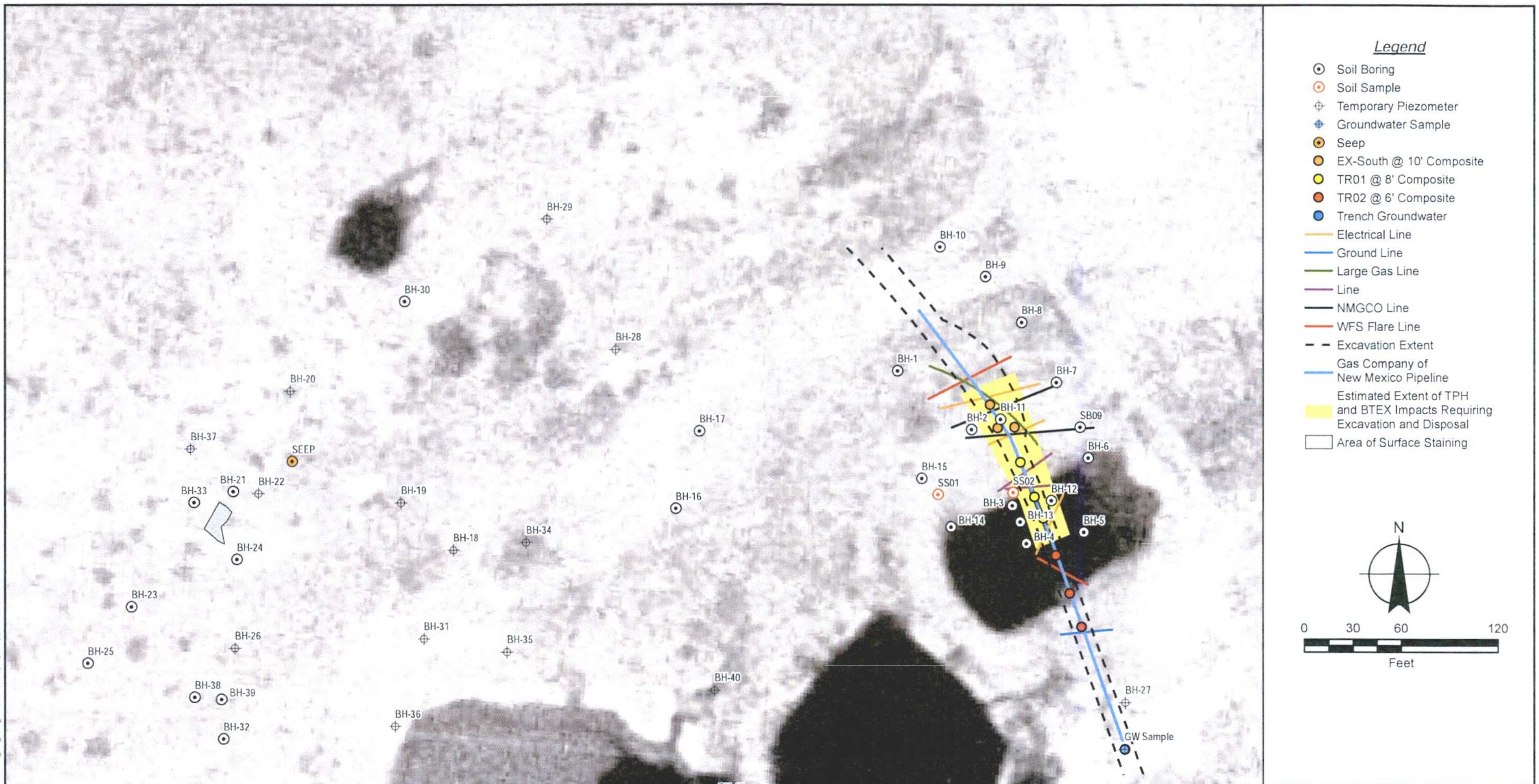
KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO

FIGURE NUMBER	
1-5	**1962 SITE AERIAL**

APTIM

6380 South Fiddlers Green Circle
Suite 310
Greenwood Village, CO 80111
www.APTIM.com

G:\Williams\KutzCanyon\GIS_Documents\Project_Maps\kutz_631236951_001_1962_aerial.mxd, Analyst: jeremy.penton Date: 8/16/2018 11:36:02 AM



WILLIAMS FOUR CORNERS LLC

KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO

FIGURE NUMBER 1-6

1978 SITE AERIAL

APTIM

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Legend
Soil Boring
Soil Sample
Temporary Piezometer
Groundwater Sample
Seep
EX-South @ 10' Composite
TR01 @ 8' Composite
TR02 @ 6' Composite
Trench Groundwater
Electrical Line
Ground Line
Large Gas Line
Line
NMGCO Line
WFS Flare Line
Excavation Extent
Gas Company of New Mexico Pipeline
Estimated Extent of TPH and BTEX Impacts Requiring Excavation and Disposal
Area of Surface Staining
N
0
30
60
120
Feet
BH-29
BH-30
BH-28
BH-20
BH-37
SEEP
BH-17
BH-21
BH-22
BH-33
BH-19
BH-16
BH-24
BH-18
BH-34
BH-23
BH-26
BH-31
BH-35
BH-25
BH-38
BH-39
BH-40
BH-32
BH-36
BH-42
BH-41
BH-43
BH-10
BH-9
BH-8
BH-1
BH-7
BH-11
BH-2
SB09
BH-6
BH-15
SS01
SS02
BH-12
BH-3
BH-13
BH-14
BH-5
BH-4
BH-27
GW Sample
WILLIAMS FOUR CORNERS LLC
KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO
FIGURE NUMBER
1-7
1991 SITE AERIAL
APTIM
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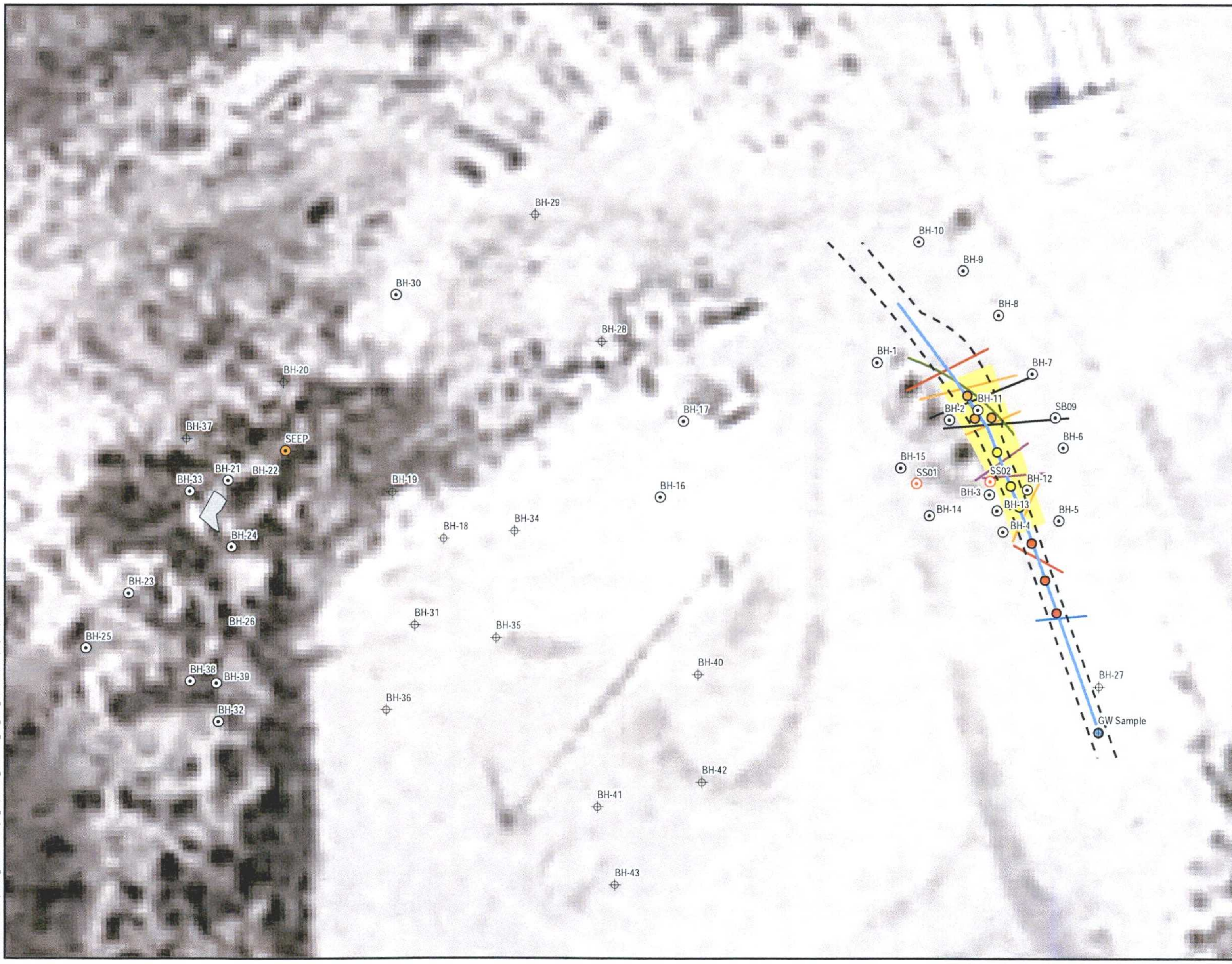

Legend

- Soil Boring
- Soil Sample
- Temporary Piezometer
- Groundwater Sample
- Seep
- EX-South @ 10' Composite
- TR01 @ 8' Composite
- TR02 @ 6' Composite
- Trench Groundwater
- Electrical Line
- Ground Line
- Large Gas Line
- Line
- NMGCO Line
- WFS Flare Line
- Excavation Extent
- Gas Company of New Mexico Pipeline
- Estimated Extent of TPH and BTEX Impacts Requiring Excavation and Disposal
- Area of Surface Staining

N

0 30 60 120

Feet

WILLIAMS FOUR CORNERS LLC

KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO

FIGURE NUMBER	
1-8	1997 SITE AERIAL

APTIM

6380 South Fiddlers Green Circle
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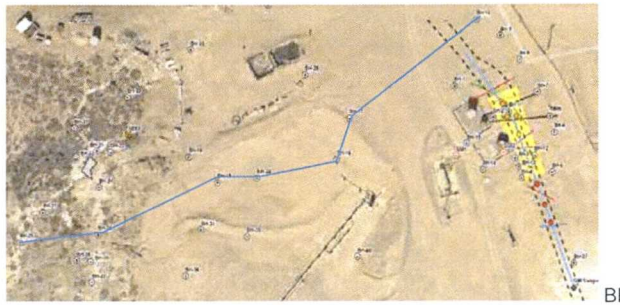

BH25
BH26
BH18
BH34
BH16
BH17
BH10

DRY
<64.6
Sand with Trace of Silt and Clay
Lean Clay
Tight Clay
810
1,108
<64.6
6,200
5.2
17,000
Sand with Trace of Silt and Clay
Lean Clay
Tight Clay
DRY
5,100
<64.8
DRY
237
<63.7
Sand with Trace of Silt and Clay
Tight Clay
DRY
665
<64.5

5780
5740
5700
5660
5620
5580
5540
5500

0
100
200
300
400
500
600
700

- Perched Water Level
- Temporary Piezometer
- Soil Borehole

Sand with Trace of Silt and Clay
Lean Clay
810 Perched Water Benzene Concentration (ug/l)
71 Soil TPH Concentration (mg/kg)

0' 100'
10'
0

WILLIAMS FOUR CORNERS LLC
KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO
FIGURE NUMBER 3.1
Cross Section A

APTIM
Aptim Environmental & Infrastructure, Inc.
6380 South Fiddlers Green, Suite 310
Greenwood Village, CO 80111

BH31 BH35 BH40 BH27

BH26

BH25

11,000 4,800 520 <1

810 1,108 <64.6

DRY <64.6

Sand with Trace of Silt and Clay

Lean Clay

Tight Clay

5780 5770 5760 5750 5740 5730

0 100 200 300 400 500 600 700

- Perched Water Level
- Temporary Piezometer
- Soil Borehole

Sand with Trace of Silt and Clay
Lean Clay
Former Pond (approximate)

810 Perched Water Benzene Concentration (ug/l)
71 Soil TPH Concentration (mg/kg)

0' 100'

10' 0

WILLIAMS FOUR CORNERS LLC

KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO

FIGURE NUMBER 3.2

Cross Section B

APTIM

Aptim Environmental & Infrastructure, Inc.
6380 South Fiddlers Green, Suite 310
Greenwood Village, CO 80111

Legend

- Soil Boring
- Soil Sample
- Temporary Piezometer
- Groundwater Sample
- Seep
- EX-South @ 10' Composite
- TR01 @ 8' Composite
- TR02 @ 6' Composite
- Trench Groundwater
- Electrical Line
- Ground Line
- Large Gas Line
- Line
- NMGCO Line
- WFS Flare Line
- Gas Company of New Mexico Pipeline
- Excavation Extent
- Area of Surface Staining
- Potentiometric Contour

BH-27 Well ID
(5772.65) Groundwater Elevation (ft AMSL)

* Groundwater elevation data not used in potentiometric surface contouring

N

0 30 60 120
Feet

REFERENCE:
Imagery provided by Pictometry, dated March 2017.

WILLIAMS FOUR CORNERS LLC

KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO

FIGURE NUMBER
3-3

POTENTIOMETRIC SURFACE CONTOUR MAP (8/03/18)

APTIM

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Suite 310
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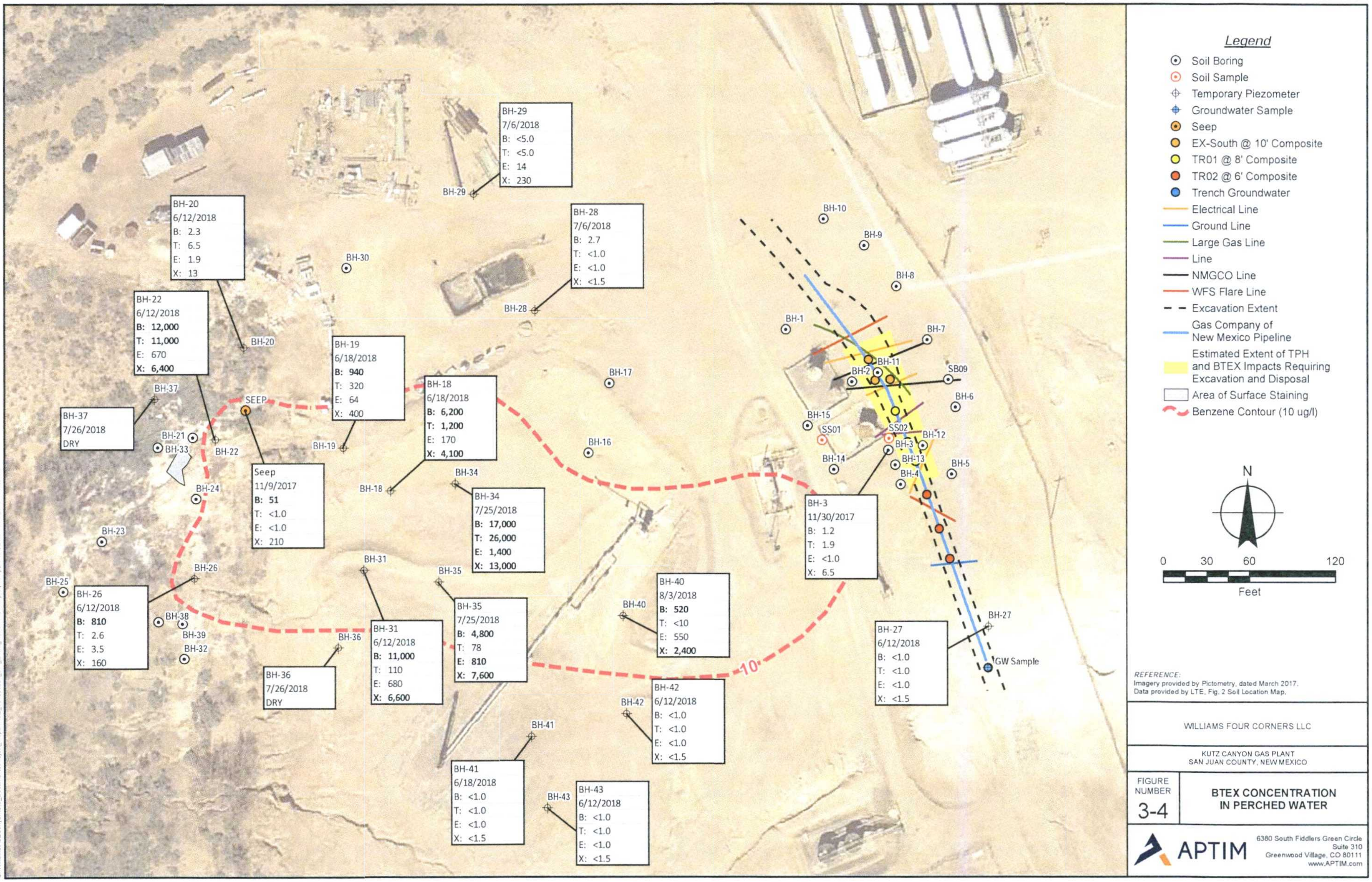
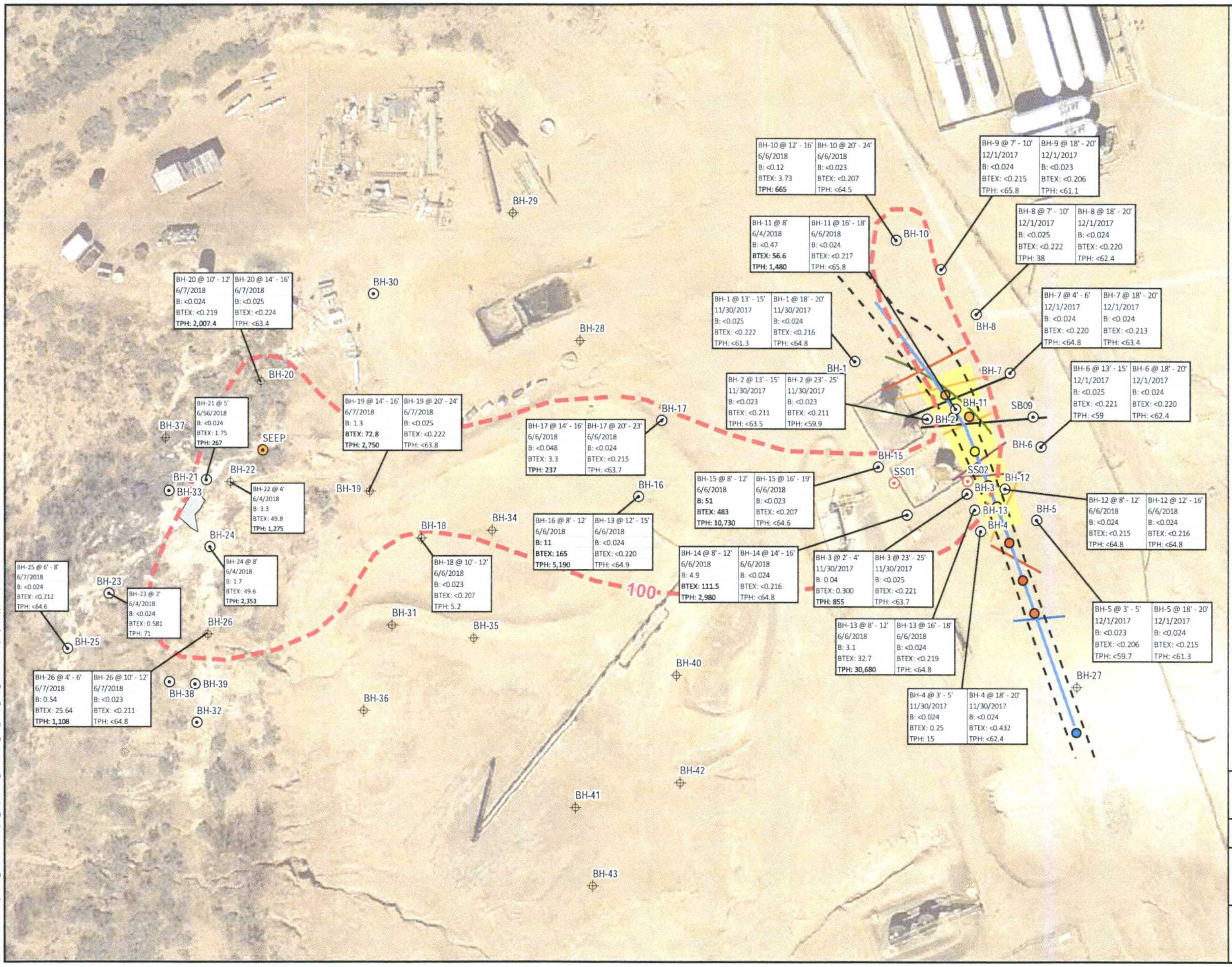

BH-29
7/6/2018
B: <5.0
T: <5.0
E: 14
X: 230
BH-28
7/6/2018
B: 2.7
T: <1.0
E: <1.0
X: <1.5
BH-20
6/12/2018
B: 2.3
T: 6.5
E: 1.9
X: 13
BH-22
6/12/2018
B: 12,000
T: 11,000
E: 670
X: 6,400
BH-19
6/18/2018
B: 940
T: 320
E: 64
X: 400
BH-18
6/18/2018
B: 6,200
T: 1,200
E: 170
X: 4,100
BH-37
7/26/2018
DRY
Seep
11/9/2017
B: 51
T: <1.0
E: <1.0
X: 210
BH-34
7/25/2018
B: 17,000
T: 26,000
E: 1,400
X: 13,000
BH-3
11/30/2017
B: 1.2
T: 1.9
E: <1.0
X: 6.5
BH-26
6/12/2018
B: 810
T: 2.6
E: 3.5
X: 160
BH-31
6/12/2018
B: 11,000
T: 110
E: 680
X: 6,600
BH-35
7/25/2018
B: 4,800
T: 78
E: 810
X: 7,600
BH-40
8/3/2018
B: 520
T: <10
E: 550
X: 2,400
BH-36
7/26/2018
DRY
BH-42
6/12/2018
B: <1.0
T: <1.0
E: <1.0
X: <1.5
BH-27
6/12/2018
B: <1.0
T: <1.0
E: <1.0
X: <1.5
BH-41
6/18/2018
B: <1.0
T: <1.0
E: <1.0
X: <1.5
BH-43
6/12/2018
B: <1.0
T: <1.0
E: <1.0
X: <1.5
BH-1
BH-2
BH-3
BH-4
BH-5
BH-6
BH-7
BH-8
BH-9
BH-10
BH-11
BH-12
BH-13
BH-14
BH-15
BH-16
BH-17
BH-18
BH-19
BH-20
BH-21
BH-22
BH-23
BH-24
BH-25
BH-26
BH-27
BH-28
BH-29
BH-30
BH-31
BH-32
BH-33
BH-34
BH-35
BH-36
BH-37
BH-38
BH-39
BH-40
BH-41
BH-42
BH-43
SB09
SS01
SS02
SEEP
GW Sample
10
Legend
Soil Boring
Soil Sample
Temporary Piezometer
Groundwater Sample
Seep
EX-South @ 10' Composite
TR01 @ 8' Composite
TR02 @ 6' Composite
Trench Groundwater
Electrical Line
Ground Line
Large Gas Line
Line
NMGCO Line
WFS Flare Line
Excavation Extent
Gas Company of New Mexico Pipeline
Estimated Extent of TPH and BTEX Impacts Requiring Excavation and Disposal
Area of Surface Staining
Benzene Contour (10 ug/l)
N
0 30 60 120
Feet
REFERENCE:
Imagery provided by Pictometry, dated March 2017.
Data provided by LTE, Fig. 2 Soil Location Map.
WILLIAMS FOUR CORNERS LLC
KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO
FIGURE NUMBER
3-4
BTEX CONCENTRATION IN PERCHED WATER
APTIM
6380 South Fiddlers Green Circle
Suite 310
Greenwood Village, CO 80111
www.APTIM.com



Legend

- Soil Boring
- Soil Sample
- Temporary Piezometer
- Seep
- EX-South @ 10' Composite
- TR01 @ 8' Composite
- TR02 @ 6' Composite
- Trench Groundwater
- Electrical Line
- Ground Line
- Large Gas Line
- Line
- NMGCO Line
- WFS Flare Line
- Excavation Extent
- Gas Company of New Mexico Pipeline
- Estimated Extent of TPH and BTEX Impacts Requiring Excavation and Disposal
- Area of Surface Staining
- TPH Contour (100 mg/Kg)

N

0 30 60 120
Feet

REFERENCE:
Imagery provided by Pictometry, dated March 2017.
Data provided by LTE, Fig. 2 Soil Location Map.

WILLIAMS FOUR CORNERS LLC

KUTZ CANYON GAS PLANT
SAN JUAN COUNTY, NEW MEXICO

FIGURE NUMBER 3-5

BENZENE, TOTAL BTEX & TPH CONCENTRATION IN SOIL

APTIM

6380 South Fiddlers Green Circle
Suite 310
Greenwood Village, CO 80111
www.APTIM.com

G:\Williams\KutzCanyon\GIS_Documents\Project_Maps\kutz_631236951_013_BTEX_TPH_soil.mxd Analyst: jeremy.penton Date: 8/16/2018 9:00:06 AM

Appendix A

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LT Environmental, Inc.
848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-1	Project: Kutz Gas Plant
Date: 11-29 to 11-	Project Number: 034017003
Logged By: Eric Carroll	Drilled By: Geomat
Elevation: 6,511 ft	Detector: PID
Drilling Method: Hollow Stem	Sampling Method: Continuous
Gravel Pack: 10-20 Silica Sand	Seal: Bentonite Chips
Grout: Bentonite Slurry	
Casing Type: Schedule 40 PVC	Diameter: 2" Length:
Hole Diameter:	Depth to Liquid:
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length:
Total Depth:	Depth to Water:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				Hand Auger	
					1					
					2				loose lt reddish brown sand	
	moist	12.3	No		3				No staining/odor	
					4					
					5					
					6					
					7					
					8					
					9				loose lt. reddish brown	
					10				Silty sand	
	moist	92.2	Yes	13'-15'	11	1			some staining	
					12				Slight odor	
					13					
					14					
					15					

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Boring/Well #	BH-1
Project:	Kutz Gas Plant
Project #	34017003.000
Date	11-30

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	25.4	NO	18'-20'	15	2			compact lt. brown fn sand some silt	
					16					
					17				NO stain/odor	
					18					
					19					
					20					
					21					
					22					
					23					
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

N

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-2	Project: Kutz Gas Plant
Date: 11-29	Project Number: 034017003
Logged By: Eric Carroll	Drilled By: Geomat
Elevation: 6,511 ft	Detector: PID
Drilling Method: Hollow Stem	Sampling Method: Continuous
Gravel Pack: 10-20 Silica Sand	Seal: Bentonite Chips
Grout: Bentonite Slurry	
Casing Type: Schedule 40 PVC	Diameter: 2" Length:
Hole Diameter:	Depth to Liquid:
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length:
Total Depth:	Depth to Water:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				Hand auger	
					1			SP	lt reddish brown sand w/gravel	
	moist	3.6	n/a		2					
					3				No stain/odor	
					4					
					5					
					6					
					7					
					8					
					9				Compact	
					10			SM	Dark grey green silty sand	
	moist	835	yes		11				stain/odor	
				13'-15'	12					
					13					
					14					
					15					

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Boring/Well #	BH-2
Project:	Kutz Gas Plant
Project #	34017003.000
Date	11-30

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	35.7	Yes		15–20			SM	Compact Dark grey green silty sand Staining slight odor	
	moist	151	Yes	23'-25'	21–25			SM	lt reddish brown silty sand small amount of staining No odor	
					26–37				TD = 25'	

N

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-3	Project: Kutz Gas Plant
Date: 11-29 to 11-30	Project Number: 034017003
Logged By: Eric Carroll	Drilled By: Geomat
Elevation: 6,511 ft	Detector: PID
Drilling Method: Hollow Stem	Sampling Method: Split Spoon ~~Continuous~~
Gravel Pack: 10-20 Silica Sand	Seal: Bentonite Chips
Grout: Bentonite Slurry	
Casing Type: Schedule 40 PVC	Diameter: 2" Length: N/A
Hole Diameter:	Depth to Liquid:
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length: NA
Total Depth:	Depth to Water:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				Hand Auger	
					1					
					2			SP	loose reddish brown sand w/ gravel	
	moist	575	Yes	2'-4'	3					
					4				Staining from 3' down	
					5				Strong odor	
					6					
	wet	305	No		7			OL	black organic mottled, sand saturated	
					8				SS	
					9					
					10				Compact dark grey green silty sand	
					11			SM		
	moist	295	Yes		12	1			Staining No odor	
					13					
					14					
					15					

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Boring/Well #	BH-3
Project:	Kutz Gas Plant
Project #	34017003.000
Date	11-30

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					15					
					16					
					17				Dark green, silty sand	
	moist	0.6	NO		18	2				
					19				NO stain/odor	
					20					
					21				Compact lt brown silty sand saturated.	
					22					
	wet	0.4	NO		23	3			NO stain/odor.	
				23'-25'	24					
					25					
					26				TD = 25'	
					27					
					28				water sample grabbed	
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-4	Project: Kutz Gas Plant
Date: 11-29	Project Number: 034017003
Logged By: Eric Carroll	Drilled By: Geomat
Elevation: 6,511 ft / Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Continuous
Gravel Pack: 10-20 Silica Sand	Seal: Bentonite Chips	Grout: Bentonite Slurry
Casing Type: Schedule 40 PVC	Diameter: 2" Length:	Hole Diameter:	Depth to Liquid:
Screen Type: Schedule 40 PVC / Slot: 0.010"	Diameter: 2" Length:	Total Depth:	Depth to Water:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				Hand Auger	
					1				lt reddish brown sand	
					2			SP		
	moist	436	yes	3'-5'	3				staining 3' down	
					4				strong odor	
					5					
					6					
					7					
					8					
					9				Dark grey green silty sand	
					10					
					11			SM	staining, slight odor (swampy)	
	moist	6.4	yes		12					
					13					
					14					
					15					

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Boring/Well #	BH-4
Project:	Kutz Gas Plant
Project #	34017003.000
Date	11-30

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	0.0	No	18'-20'	15				Compact Dark grey green Silty sand	
					16					
					17				No Stain/odor	
					18					
					19					
					20					
					21				TD = 20'	
					22					
					23					
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

N

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-5	Project: Kutz Gas Plant
Date: 11-29	Project Number: 034017003
Logged By: Eric Carroll	Drilled By: Geomat
Elevation: 6,511 ft	Detector: PID
Drilling Method: Hollow Stem	Sampling Method: Split spoon ~~Continuous~~
Gravel Pack: 10-20 Silica Sand	Seal: Bentonite Chips
Grout: Bentonite Slurry	
Casing Type: Schedule 40 PVC	Diameter: 2" Length:
Hole Diameter:	Depth to Liquid:
Screen Type: Schedule 40 PVC	Slot: 0.010"
Diameter: 2" Length:	Total Depth:
Depth to Water:	

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				Hand Auger	
					1				loose lt reddish brown sand	
	moist	5.4	NP		2			SP		
					3				NO Stain/odor	
					4					
					5					
					6					
	wet	1.0	NP		7			OL	wet ~~organic~~ black organic soil	
					8					
					9				SS	
					10				* Compact lt reddish brown silty sand	
					11			SM		
	moist	0.7	yes grey		12	1			Some Staining Slight odor	
					13					
					14					
					15					

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Boring/Well #	BH-5
Project	Kutz Gas Plant
Project #	34017003.000
Date	12-1

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	0.0	NO		15			SM	Compact lt brown silty sand w/ grey green mottling	
					16					
					17				NO Stain/odor	
					18					
					19					
					20					
					21					
					22				TD = 20'	
					23					
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-6	Project: Kutz Gas Plant
Date: 11-19	Project Number: 034017003
Logged By: Eric Carroll	Drilled By: Geomat
Elevation: 6,511 ft	Detector: PID
Drilling Method: Hollow Stem	Sampling Method: Continuous
Gravel Pack: 10-20 Silica Sand	Seal: Bentonite Chips
Grout: Bentonite Slurry	
Casing Type: Schedule 40 PVC	Diameter: 2" Length:
Hole Diameter:	Depth to Liquid:
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length:
Total Depth:	Depth to Water:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				Hand Auger	
					1					
					2			SP	loose lt. reddish brown sand	
	moist	0.3	NO		3					
					4				No Stain/odor	
					5					
					6					
					7					
					8					
					9				Compact Dark grey green	
					10			SM	Silty Sand	
					11		100%			
	Moist	0.3	NO	13'-15	12				No Stain/odor	
					13					
					14					
					15					

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Boring/Well #	BH-6
Project:	Kutz Gas Plant
Project #	34017003.000
Date	12-1

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Moist	18.9	NO	18'-20'	15		100%	SM	Compact lt. reddish brown silty sand w/ grey green mottling	
					16					
					17					
					18				NO Stain	
					19				organic swampy odor	
					20					
					21				TD = 20'	
					22					
					23					
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

N

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-7	Project: Kutz Gas Plant
Date: 11-29	Project Number: 034017003
Logged By: Eric Carroll	Drilled By: Geomat
Elevation: 6,511 ft	Detector: PID
Drilling Method: Hollow Stem	Sampling Method: Split Spoon ~~Continuous~~
Gravel Pack: 10-20 Silica Sand	Seal: Bentonite Chips
Grout: Bentonite Slurry	
Casing Type: Schedule 40 PVC	Diameter: 2" Length:
Hole Diameter:	Depth to Liquid:
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length:
Total Depth:	Depth to Water:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				Hand Auger	
					1				loose lt reddish brown sand	
					2			SP		
	moist	436	yes	4'-6'	3					
					4					
					5				Staining at 5' down	
					6				Slight odor	
					7					
					8				SS	
					9				Dark brown silty sand	
					10			SM	grey staining	
	moist	9.7	Yes		11		100%		Strong odor	
					12					
					13					
					14					
					15					

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Boring/Well #	BH-4
Project	Klutz Gas Plant
Project #	34017003.000
Date	12-1

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					15					
					16				Compact lt. brown	
					17				silty sand	
	moist	4.5	N/A	18'-20'	18		100%	SM	No stain/odor	
					19					
					20					
					21					
					22				TD = 20'	
					23					
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-8	Project: Kutz Gas Plant
Date: 11-29	Project Number: 034017003
Logged By: Eric Carroll	Drilled By: Geomat
Elevation: 6,511 ft	Detector: PID
Drilling Method: Hollow Stem	Sampling Method: Split Spoon ~~Continuous~~
Gravel Pack: 10-20 Silica Sand	Seal: Bentonite Chips
Grout: Bentonite Slurry	
Casing Type: Schedule 40 PVC	Diameter: 2" Length:
Hole Diameter:	Depth to Liquid:
Screen Type: Schedule 40 PVC	Slot: 0.010"
Diameter: 2" Length:	Total Depth:
Depth to Water:	

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				Hand Auger	
					1				loose lt reddish brown sand w/ gravel.	
					2					
	moist	4.6	No		3			SP	Coal 3'-3.5'	
					4				NO Stain/odor	
					5					
					6					
					7					
					8				loose lt reddish brown sand	
	moist	75.8	Yes	7'-10'	9			SP	black staining	
					10				Strong odor	
					11				SS compact Dark grey green silty sand	
					12					
					13			SM	NO Stain/odor	
	moist	13.9	No		14					
					15					

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Boring/Well #	BH-8
Project:	Kutz Gas Plant
Project #	34017003.000
Date	12-1

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					15				compact	
					16				Dark greenish brown silty	
	moist	0.5	NO	18'-20'	17			SM	sand	
					18				NO stain/odor	
					19					
					20					
					21					
					22				TD = 20'	
					23					
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-9	Project: Kutz Gas Plant
Date: 11-29	Project Number: 034017003
Logged By: Eric Carroll	Drilled By: Geomat
Elevation: 6,511 ft	Detector: PID
Drilling Method: Hollow Stem	Sampling Method: Split Spoon ~~Continuous~~
Gravel Pack: 10-20 Silica Sand	Seal: Bentonite Chips
Grout: Bentonite Slurry	
Casing Type: Schedule 40 PVC	Diameter: 2" Length:
Hole Diameter:	Depth to Liquid:
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length:
Total Depth:	Depth to Water:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				Hand Auger	
					1					
	moist	2.1	NO		2			SP	loose lt. reddish brown sand w/ gravel	
					3					
					4				No stain/odor	
					5					
					6					
					7					
					8				loose lt. reddish brown Sand	
	moist	16.5	Yes		9			SP	black staining	
					10				strong odor	
					11				SS	
					12		100 90	SM	Compact Dark reddish brown	
					13				Silty Sand, w/ white mottling	
	moist	0.2	NO		14				NO Stain/odor	
					15					

Compliance » Engineering » Remediation
LT Environmental, Inc.

Boring/Well #	BH-9
Project:	Kutz Gas Plant
Project #	34017003.000
Date	12-1

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					15				SAA	
					16					
					17					
	moist	4.9	NP		18		100%		NO Stain/odor	
					19					
					20					
					21					
					22					
					23				TD = 20'	
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

LTE Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 10	Project: Kutz Canyon GP
Date: 6/5/15	Project Number:
Logged By: Eric Carroll	Drilled By: Earthworx
Elevation: 5785	Detector: PID
Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 2" Length: NA
Hole Diameter: 1"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length: NA
Total Depth: 24'	Depth to Water: NA

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	3.6	No		0		100%	SP	Compact, dry, lt reddish brown sand w/ gravel	No well completed backfilled w/ bentonite chips
	moist	3.4	NO		2			SP-SM	loose, moist, dark brown sand trace silt < 15% No Stain/odor	
	moist	2.6	NO		4			SP-SM	SAA	
	moist	1.7	NO		6			SP-SM	SAA	
	moist	1.7	No		8			SP-SC	Dark brown, compact sand trace clay < 15% - Switch to Geoprobe	
	moist	54.1	yes		10			SP-SC	Black compact sand trace fines < 15%	
	wet		NO		14			SP	Dark brown, loose coarse sand No Stain/odor	

Advancing Opportunity

Boring/Well #	BH16
Project:	Kutz Canyon GP
Project #	
Date	6/5/19

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	wet	364	Yes	12-16'	15	~~12-16~~		SP	Dark brown, loose coarse sand w/ black HC staining, slight odor	
					16					
					17					
					18					
	moist	123	Yes		19			SP	compact, Yellow brown, Sand some silt/clay 30%, slight stain and odor	
					20					
					21			SP	SAA	
					22					
					23					
	Dry	13.6	NO	20-24'	24	20-24'		SP	SAA No stain/odor	
					25			CL	Green/gray lean clay Refusal @ 24' backfilled tight clay w/ bentonite no well install	
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

Advancing Opportunity

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-~~02~~ 11		Project: Kutz Canyon GP	
Date: 6/4/18		Project Number:	
Logged By: Eric Carroll		Drilled By: Earthworx	
Elevation: 5785	Detector: PID	Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand		Seal: NA	Grout: NA
Casing Type: Schedule 40 PVC		Diameter: 2" Length: NA	Hole Diameter: 1" / Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 2" Length: NA	Total Depth: 18.5' / Depth to Water: NA

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	15.1	No		0			SP	Loose, light reddish brown sand no stain/odor	No well completed backfilled w/bentonite
	moist	7.6	NO		1			SP	SAA	
	moist	23.1	NO		2			SP-SC	compact, light reddish brown sand trace clay < 15% no stain/odor	
	moist	327.7	NO		3			SP-SC	SAA	
	moist	3640	NO	8'	4			SP-SC	compact light reddish brown sand with clay < 30% No stain Slight HC odor - switch to Geoprobe	
	moist	1427	NO		5			CL	Green grey compact lean clay sand < 30% swampy odor	
					6					
					7					
					8					
					9					
					10					
					11					
					12					
					13					
					14					
					15					

Advancing Opportunity

Boring/Well #	BH11
Project:	Kutz Canyon GP
Project #	
Date	6/16/15

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	623	NO		15			CL	SAA NO Stain Swampy odor	
					16					
					17				Very compact, green grey, lean	
	Dry	164	NO	16-18'	18			CL	clay some Sand & 15% to	
					19				NO Stain Swampy odor	
					20				Refusal @ 18.5' due to	
					21				tight clay no GW encountered	
					22					
					23					
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

Advancing Opportunity

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH12	Project: Kutz Canyon GP
Date: 6/5/18	Project Number:
Logged By: Eric Carroll	Drilled By: Earthworx
Elevation: 5785	Detector: PID
Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 2" Length: NA
Hole Diameter: 1"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length: NA
Total Depth: 18'	Depth to Water: NA

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	0.0	N		0			SP-SM	loose, lt reddish brown, sand trace silt <15%	No well installed backfill w/ bentonite
					1					
	moist	0.0	N		2				No Stain/odor	
					3					
	moist	0.0	N		4			SP-SM	SAA	
					5					
	moist	0.3	N		6			SP-SM	SAA	
					7					
	moist	0.3	N		8			SP-SM	SAA Some Staining @ 10'	
					9				~Switch to Geoprobe	
					10					
					11					
	moist	43.8	Y	8-12'	12			CL	compact, Dark greengrey lean clay <15% Sand	
					13					
					14			CL	SAA	
					15					

Advancing Opportunity

Boring/Well #	BH12
Project:	Kutz canyon GP
Project #	
Date	6/6/15

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	27.2	NO	12-16'	15			CL	SAA NO staining/odor	
					16					
					17					
					18				Refusal @ 18' due to tight clay	
					19				encountered	
					20				NO well installed	
					21					
					22					
					23					
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH13	Project: Kutz Canyon GP
Date: 6/5/18	Project Number:
Logged By: Eric Carroll	Drilled By: Earthworx
Elevation: 5785	Detector: PID
Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 2" Length: NA
Hole Diameter: 1"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC Slot: 0.010"	Diameter: 2" Length: NA
Total Depth: 18'	Depth to Water: NA

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	4.8	NO		0			SP	loose, lt reddish brown, sand with gravel	NO well installed backfilled w/ bentonite
					1					
					2			SP	SAA	
					3					
					4			SP	SAA	
					5					
					6					
	moist	685	yes		7			CL	Loose, black, lean clay, ~~trac~~ <15% sand, strong odor, HC staining	
					8	~~7-11'~~				
					9					
	moist	1815	yes	6-10'	10			CL	Saturated 9.5 to 11' - switch to geoprobe @ 9'	
					11					
	~~wet~~ moist	~~1815~~ 430	NO		12			CL	compact, green grey, lean clay <15% sand	
					13					
					14				NO stain, waste water odor (sewage)	
					15					

Advancing Opportunity

Boring/Well #	BH 13
Project:	Kute Canyon IGP
Project #	
Date	6/6/15

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					15					
	moist	32.6	NO	16-18'	16			CL	SAA No Stain Sewage odor	
					17					
					18				Refusal @ 18' No groundwater encountered tight clay No well install	
					19					
					20					
					21					
					22					
					23					
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH14	Project: Kutz Canyon GP
Date: 6/5/18	Project Number:
Logged By: Eric Carroll	Drilled By: Earthworx
Elevation: 5785	Detector: PID
Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 2" Length: NA
Hole Diameter: 1"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length: NA
Total Depth: 16'	Depth to Water: NA

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	14.3	No		0			SP	Dry, lt reddish brown sand w/gravel	
					1				No stain/odor	no well installed
	moist	444	yes		2					backfill w/ bentonite
					3			SP	Black, loose ~~sand~~ Silty Sand	
	moist	887	y		4				~~[illegible]~~ Strong odor HC Stain	
					5				some organic material present	
	moist	881	y		6			SP	SAA	
					7					
	moist	864	y		8			SP	SAA	
					9				- Switch to geoprobe @ 8'	
					10			SP	SAA	
					11					
	moist	914	y	8-12	12			SP	SAA	
					13					
					14					
					15			CL	description on next page	

Advancing Opportunity

Boring/Well #	BH 14
Project:	Kutz Canyon GP
Project #	
Date	6/6/18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	64.8	N	14-16	15			CL	very compact, green grey lean clay < 15% sand No stain Sewage odor	
					16				Refusal @ 16' No GW Tight clay Encountered No well set	
					17					
					18					
					19					
					20					
					21					
					22					
					23					
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

Advancing Opportunity

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 15	Project: Kutz Canyon GP
Date: 6/5/18	Project Number:
Logged By: Eric Carroll	Drilled By: Earthworx
Elevation: 5785	Detector: PID
Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 2" Length: NA
Hole Diameter: 1"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length: NA
Total Depth: 19'	Depth to Water: NA

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	3.0	No		0			SP	loose, lt reddish brown, sand and gravel 50% No stain/odor	No well installed backfill w/ bentonite
	moist	346	yes		2			SP	Black, loose, sand, trace gravel Slight odor and HC staining	
	moist	326	yes		4			SP-SM	Grey, sand trace silt <15% loose, Slight odor, some HC Staining	
	moist	317	yes		6					
	moist	398	yes		8	8-12		CL	loose, black, Sandy clay, Strong odor, HC Staining	
	moist	222	yes		10			CL	SAA	
	moist	104.3	No		14			CL	compact, Green grey, lean clay <15% Sand No stain/odor	

Advancing Opportunity

Boring/Well #	BH 15
Project:	Kutz Canyon GP
Project #	
Date	6/6/16

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	58.6	No	~~16-19~~	15			CL	SAA No Stain Sewage odor	
					16					
					17					
	Dry	27.6	No	16-19	18			CL	SAA	
					19				Refusal @ 19' No GW encountered Tight clay No well set	
					20					
					21					
					22					
					23					
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

Advancing Opportunity

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Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH16	Project: Kutz Canyon GP
Date: 6/5/18	Project Number:
Logged By: Eric Carroll	Drilled By: Earthworx
Elevation: 5785	Detector: PID
Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 2" Length: NA
Hole Diameter: 1''	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length: NA
Total Depth: 15'	Depth to Water: NA

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	0.8	No		0			SP	loose, lt reddish brown, coarse sand No Staining lodor	No well installed backfill & due to well collapse
					1					
	moist	1.4	No		2					
					3					
	moist	1.6	No		4			SP	SAA	
					5					
	moist	413	Yes		6					
					7			SP	loose, black, sand, Strong odor and HC staining,	
	moist	427	Y	6-12	8					
	~~wet~~ moist	668	Y		9			SP	SAA	
					10					
	~~wet~~ moist	~~668~~	Y		11				~~SAA~~ compact, & green grey	
					12			CL	lean clay, slight staining and odor	
					13					
					14			CL	SAA	
					15					

Advancing Opportunity

Boring/Well #	BH 16
Project:	Kutz Canyon GP
Project #	
Date	6/6/18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	10.1	NO	12-15	15			CL	very compact, green grey, lean clay < 15% sand	
					16					
					17				Refusal @ 15' Tight clay	
					18				well collapsed no well installed	
					19				NO GW encountered	
					20				not backfilled w/ bentonite due to collapse	
					21					
					22					
					23					
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

Advancing Opportunity

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 17	Project: Kutz Canyon GP
Date: 6/5/18	Project Number:
Logged By: Eric Carroll	Drilled By: Earthworx
Elevation: 5765	Detector: PID
Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 2" Length: NA
Hole Diameter: 1"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC Slot: 0.010"	Diameter: 2" Length: NA
Total Depth: 23'	Depth to Water: NA

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	1.1	NO		0			SP	loose, lt reddish brown, coarse sand no stain/odor	NO well installed backfill w/ bentonite
					1					
	moist	1.3	NO		2			SP	SAA no s/o	
					3					
	moist	1.3	NO		4			SP	SAA no s/o	
					5					
	moist	1.2	NO		6			SP	SAA No s/o	
					7					
	moist	0.8	NO		8			SP	SAA no s/o	
					9					
					10					
	moist	0.3	NO		11			SP	SAA no s/o	
					12					
					13					
					14					
					15					

Advancing Opportunity

Boring/Well #	BH 17
Project:	Kutz Canyon GP
Project #	
Date	6/6/18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	~~137~~ 437	Yes	14-16	15			SP	loose, Black, coarse sand slight odor, HC staining	
					16					
					17					
	moist	111	NO		18			CL	compact, Green Gray, lean clay ~15% sand, slight odor, no staining	
					19					
					20			CL	SAA	
					21					
	Dry	3.6	NO	20-23	22			CL	SAA No Stain/odor	
					23				Refusal @ 23' NO GW encountered Tight clay	
					24					
					25				No well set	
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH16		Project: Kutz Canyon GP	
Date: 6/5/16		Project Number:	
Logged By: Eric Carroll		Drilled By: Earthworx	
Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand		Seal: NA	Grout:
Casing Type: Schedule 40 PVC		Diameter: 1" ~~2"~~ Length: ~~ACA~~ ~~10'~~ 5'	Hole Diameter: 1" / Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 1" ~~2"~~ Length: 5'	Total Depth: 12' / Depth to Water: 7.5'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks
	Dry	1.3	No		0			SP	loose, lt reddish brown, coarse sand, No stain/odor
					1				
	moist	2.3	No		2			SP	SAA No S/O
					3				
	moist	24.6	No		4				
					5				
	moist	160.7	yes		6			SP	Black, loose, sand trace silt <15% slight odor, HC stain
					7				GW encountered 7.5-8'
	wet	183.4	yes		8				
					9				
	↑	246.7	yes		10			SP	SAA
	Bitumen				11			CL	Compact, Green grey, lean Clay <15% sand
	moist	124.3	NO	10-12	12				
					13				
					14				
					15				Refusal @ 12' Tight clay Set well

Well Completion: 4' Stickup

Advancing Opportunity

848 E. 2nd Ave
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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH19		Project: Kutz Canyon GP	
Date: 6/5/18		Project Number:	
Logged By: Eric Carroll		Drilled By: Earthworx	
Elevation: 5785	Detector: PID	Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand		Seal: NA	Grout: NA
Casing Type: Schedule 40 PVC	Diameter: 2" Length: 10'	Hole Diameter: 1"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length: 15'	Total Depth: 24'	Depth to Water: 16'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	1.6	N		0			SP	loose, lt reddish brown, sand (coarse) NO stain/odor	5' Stickup
					1					
	moist	1.4	N		2			SP	SAA NO S/O	
					3					
	moist	2.2	N		4			SP	SAA NO S/O	
					5					
	moist	2.6	N		6			SP	SAA NO S/O	
					7					
	moist	13.4	N		8			SP	SAA NO S/O	
					9					
					10					
	moist	Sill	Yes		11			SP	loose black sand (coarse) Strong odor and HC Staining	
					12					
					13					
	moist	243	Yes		14			SP	SAA	
					15					

Advancing Opportunity

Boring/Well #	BH 19
Project:	Kutz Canyon GP
Project #	
Date	6/7/19

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	wet sabor	386	Y	14-16	15				SAA Strong odor HC stain	GW
					16			CL	compact dark green lean clay	
	moist	63.0	N		17				<15% sand slight odor no stain	
	dry	60.8	N		18				SAA	
					19					
					20					
	dry	61.0	N	20-24	21			CL	SAA	
					22					
					23					
					24				Refusal @ 24' Tight clay GW encountered @ 16' Set 1" temp well backfill w sand/	
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 20	Project: Kutz Canyon GP
Date: 6/4/19	Project Number:
Logged By: Eric Carroll	Drilled By: Earthworx
Elevation: 5785	Detector: PID
Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 2" Length: 10'
Hole Diameter: 1"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length: 10'
Total Depth: 15'	Depth to Water: 11'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	8.2	NO		0			SP	Loose, light reddish brown, Sand	
					1				No Stain/odor	
	Dry	6.7			2					
					3					
	moist	4.3			4			SP	SAA No S/O	
					5					
	moist	2.1			6			SP	SAA No S/O	
					7					
	moist	2.0			8			SP	SAA No S/O	
					9					
	moist	1.7			10			SP	Loose, lt. reddish brown Sand trace silt/clay <15%	
				10-12'	11				No Stain/odor	GW
					12					
					13					
	wet saturated	17.7	Y		14			SP	Loose, grey coarse Sand, Slight Staining and odor	
					15					

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Boring/Well #	BH20
Project:	Kutz Canyon GI
Project #	
Date	6/7/18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Moist	5.1	N	14-16	15			CL	compact grey green lean clay <15% sand NO stain/odor	
					16					
					17					
					18				Refusal @ 16' Tight clay	
					19				GW @ 11'	
					20				well installed backfill	
					21				w/ sand	
					22					
					23					
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 21	Project: Kutz Canyon GP
Date: 6/5/14	Project Number:
Logged By: Eric Carroll	Drilled By: Earthworx
Elevation:	Detector: PID
Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 2" Length: NA
Hole Diameter: 3"	Depth to Liquid: @ NA
Screen Type: Schedule 40 PVC Slot: 0.010"	Diameter: 2" Length: NA
Total Depth: 6'	Depth to Water: 6'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	150.8	No		0			SP	loose, lt reddish brown sand No Stain/odor	No well installed backfill w/ Sand
	moist	1907	yes		1			SP	Bt loose, black sand, strong odor	
	moist	1154	yes	5'	2			CL	compact green grey Sandy lean clay, slight odor	
	Sat	1170	yes		3					
	moist	1095	No		4					
					5					
					6					
					7					
					8			CL	Compact, dark brown, lean clay < 30% sand No Stain Slight odor	
					9					
					10					
					11				Stopped @ 6' due to Presence of GW	
					12					
					13					
					14					
					15					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 22		Project: Kutz Canyon GP	
Date: 6/4/18		Project Number:	
Logged By: Eric Carroll		Drilled By: Earthworx	
Elevation: 5785	Detector: PID	Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand		Seal: NA	Grout:
Casing Type: Schedule 40 PVC	Diameter: 2" Length: 5'	Hole Diameter: 3"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length: 5'	Total Depth: 8'	Depth to Water: 6'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	290.8	NP		0			SP	Loose lt reddish brown sand No stain/odor	
	moist	341.6	yes		1			SP	Black sand strong odor, ~~Gasoline~~	
	Sat	1601	yes	4'	2			SP	SAA	GW
	Sat	1164	yes		3			SP	SAA	
	Sat	1452	yes		4			~~SP~~ CL	compact grey @ lean clay trace black sand.	
	Sat	1122	yes		5			CL	SAA	
					6				Stopped @ 10' dde to contaminated GW Set well	
					7					
					8					
					9					
					10					
					11					
					12					
					13					
					14					
					15					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH23	Project: Kutz Canyon GP
Date: 6/4/15	Project Number:
Logged By: Eric Carroll	Drilled By: Earthworx
Elevation: 5785	Detector: PID
Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 2" Length: NA
Hole Diameter: 3"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length: NA
Total Depth: 8'	Depth to Water: 6'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	23.0	No		0			SP	loose lt reddish brown Sand no stain/odor	No well installed backfill w/ ~~50#~~ bentonite
	moist	1665	Yes	2'	1					
					2			SP	black, loose, Sand, Strong odor	
					3					
	wet	310	Yes		4			SP	SAA	
					5					
	Sat	659	Yes		6			CL	compact green grey lean clay	
					7					
	moist	27.6	No		8			CL	SAA	
					9					
					10				Stopped @ 8' for clean clay beneath GW. GW contaminating soil/GW beneath clay	
					11					
					12					
					13					
					14					
					15					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 24	Project: Kutz Canyon GP
Date: 6/4/15	Project Number:
Logged By: Eric Carroll	Drilled By: Earthworx
Elevation: 5765	Detector: PID
Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 2" Length: NA
Hole Diameter: 3"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length: NA
Total Depth: 8'	Depth to Water: 8'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry		no		0			SP	loose, lt reddish brown, sand no stain/odor	NO well installed backfilled w/ bentonite
					1					
	Moist	198.2	NO		2			SP	SAA	
					3					
	moist	180.4	yes		4			SP	Black loose sand strong odor	
					5					
	moist	176.0	yes		6			CL	Compact, green grey, lean clay staining and slight odor	
					7					
	sat	884	yes	8'	8					
					9					
					10				Stopped @ 8' to limit vertical impact of contaminated H_2O	
					11					
					12					
					13					
					14					
					15					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 25	Project: Kutz Canyon GP
Date: 6/7/19	Project Number:
Logged By: Eric Carroll	Drilled By: Earthworx
Elevation: 5785	Detector: PID
Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 2" Length: NA
Hole Diameter: 1"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length: NA
Total Depth: 5'	Depth to Water: NA

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	1.2	NO		0				loose, lt reddish brown coarse	
					1			SP	sand NO stain/odor	NO well installed backfill w/ bentonite
					2					
					3					
	Dry	1.4	NO		4				Compact, green grey, lean clay	
					5			CL	< 15% sand NO stain/odor	
					6				~~SAA~~	
					7				SAA NO S/O	
	Dry	1.3	NO	~8'	8					
					9			CL	Refusal @ 8' tight clay	
					10				NO GW encountered	
					11					
					12					
					13					
					14					
					15					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 26	Project: Kutz Canyon GP
Date: 6/7/18	Project Number:
Logged By: Eric Carroll	Drilled By: Earthworx
Elevation: 5785	Detector: PID
Drilling Method: Direct Push	Sampling Method: Hand Auger/ Geoprobe
Gravel Pack: 10-20 Silica Sand	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 2" Length: 5'
Hole Diameter: 1"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010"
Diameter: 2" Length: 10'	Total Depth: 12'
Depth to Water: 6'	

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	1.2	NO		0			SP	Dry, loose, lt red brown sand	
					1			SP	No Stain Slight odor	
					2					
					3					
	moist	436	Yes	4-6'	4			CL	Compact, green grey lean clay < 15% Sand Some Staining HC odor	
					5					
					6					
	wet	64.3	yes		7			SP	Saturated, coarse Sand, grey trace clay < 10% Slight Stain/ odor	GW
					8					
					9			CL	Compact, greengrey, lean clay < 15% Sand NO Stain/odor	
	moist	14.1	NO	10-12	10					
					11					
					12				Refusal @ 12' tight clay	
					13				GW @ 6' Well set	
					14					
					15					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-27		Project: Kutz Canyon GP	
Date: 6-12-18		Project Number:	
Logged By: D. Burns		Drilled By:	
Elevation:	Detector: PID	Drilling Method: Hand Auger	Sampling Method:
Gravel Pack: 10-20 Silica Sand 5' pre pack screen		Seal:	Grout:
Casing Type: Schedule 40 PVC	Diameter: 2" 1"	Length: 5'	Hole Diameter: 2.5" / Depth to Liquid: —
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 2" 1" / Length: 5'	Total Depth: 9.5' / Depth to Water: 8'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0					
					1			SP-SC	Fill material mixed w/ lt. reddish brown med. sand w/ tr. clay No s/o	
	Dry	1.7	No		2					
					3			SP-SC	olive lt. gray fn. clayey sand No s/o	
	sl. moist	2.1	No		4					
					5				olive brown clayey med. fn. sand. No s/o	
	V. moist		No		6				some moisture on auger	
		3.8			7				SAA. No stain/odor	
	sat.		No		8				saturated soil @ 8' no sheen observed.	
					9					
	Dry	2.7	No		10				lean clay, dense, green/gray refusal @ 9.5'	
					11					
					12					
					13					
					14					
					15					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: RH-28		Project: Kutz Canyon GP	
Date: 7/3/2018		Project Number: 03401806	
Logged By: Eric Carroll		Drilled By: LTE	
Elevation:	Detector: PID	Drilling Method: Hand Auger	Sampling Method: Hand Auger
Gravel Pack: 10-20 Silica Sand Pre-pack-n screen 14-9'		Seal: NA	Grout: NA
Casing Type: Schedule 40 PVC		Diameter: 1" Length: 10	Hole Diameter: 2.5" / Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 1" Length: 5'	Total Depth: 14' / Depth to Water: 12'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	0.0	No		0			SP	loose, lt reddish brown, sand (coarse) No stain no odor	S.U.
	moist	1.6	No		1					
					2				loose, lt reddish brown, coarse sand	
					3			SP	No stain/odor	
	moist	1.4	NA		4				SAA, No s/o	
					5					
	moist	0.5	No		6				SAA, No s/o	
				NA	7	NA		SP		
	moist	1.1	No		8				SAA, No s/o	
					9					
	moist	1.8	No		10				moist, yellow brown, coarse sand white mottles no stain/odor	
					11					
	Sat	23.4	yes		12			SP	GW wet, loose, black grey, coarse sand	
					13				slight HC odor	
	Sat	20.2	yes		14				SAA	
					15					

TD-14', 5' prepack screen, complete w/ backfill

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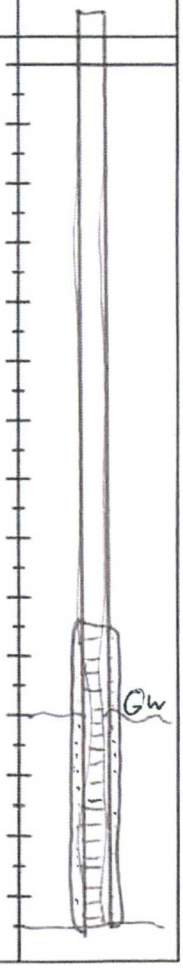
BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-29	Project: Kutz Canyon GP
Date: 7/3/2018	Project Number:
Logged By: Eric Carroll	Drilled By: LTE
Elevation:	Detector: PID
Drilling Method: Hand Auger	Sampling Method: Hand Auger
Gravel Pack: 10-20 Silica Sand Pre Pack on screen	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 1" Length: 5'
Hole Diameter: 2.5"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC Slot: 0.010"	Diameter: 1" Length: 10'
Total Depth: 15'	Depth to Water: 11'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks
	Dry	0.0	No		0				loose, lt reddish brown, coarse Sand
					1			SP	no stain/odor
	moist	0.2	No		2				loose, lt reddish brown, coarse Sand
					3				no stain/odor
	moist	0.2	No		4				SAA no s/o
					5				
	moist	0.4	No		6			SP	SAA no s/o
				NA	7	NA			
	moist	0.9	NO		8				SAA no s/o
					9				
	moist	9.7	No		10				loose dark brown, sand trace silt
					11			SP	15% no stain/odor
	Sat	80.8	yes		12				loose, black, coarse Sand
					13				Strong odor, HC Staining
	Sat	80.3	yes		14				loose, grey, coarse sand
					15				Strong odor HC Staining

Well Completion



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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH - 30	Project: Kutz Canyon GP
Date: 7/3/2018	Project Number:
Logged By: Eric Carroll	Drilled By: LTE
Elevation:	Detector: PID
Drilling Method: Hand Auger	Sampling Method: Hand Auger
Gravel Pack: 10-20 Silica Sand	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 1" Length:
Hole Diameter: 2.5"	Depth to Liquid: —
Screen Type: Schedule 40 PVC	Slot: 0.010"
Diameter: 1" Length:	Total Depth: 6'
Depth to Water: —	

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	0.0	NO		0			SP	loose, lt reddish brown, coarse sand w/ gravel	
					1				NO stain/odor	NO
	Dry	0.0	NO		2				SAA	well installed
					3					
	Dry	0.0	NO		4			SP	SAA	
					5					
	Dry	0.0	NO		6				SAA	
					7				refusal @ 6' encountered debris, boulders that stopped hand auger attempted several locations	
					8					
					9					
					10					
					11					
					12					
					13					
					14					
					15					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-31		Project: Kutz Canyon GP	
Date: 7/3/2018		Project Number:	
Logged By: Eric Carroll		Drilled By: LTE	
Elevation:	Detector: PID	Drilling Method: Hand Auger	Sampling Method: Hand Auger
Gravel Pack: 10-20 Silica Sand		Seal: NA	Grout: NA
Casing Type: Schedule 40 PVC		Diameter: 1" Length: 5'	Hole Diameter: 2.5" / Depth to Liquid: —
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 1" Length: 5'	Total Depth: 9' / Depth to Water: 7'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	0.0	No		0				Very loose, lt reddish brown, coarse sand	
					1			SP	no stain /odor	
	Dry	0.0	No		2				SAA	
					3					
	moist	27.6	yes		4			SP	loose, brown, coarse sand, slight odor	
					5					
				NA	6	NA				
	Sat	213.3	yes					SP	loose, lt grey, coarse sand, strong odor	
					7				saturated sheen on water	
					8					
	moist	31.3	No		9			CH	Dense, green/grey, lean clay	
									<15% Sand	
					10					
					11					
					12					
					13					
					14					
					15					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-32	Project: Kutz Canyon GP
Date: 7/3/2018	Project Number:
Logged By: Eric Carroll	Drilled By: LTE
Elevation:	Detector: PID
Drilling Method: Hand Auger	Sampling Method: Hand Auger
Gravel Pack: 10-20 Silica Sand	Seal: N/A
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 1" Length: —
Hole Diameter: 2.5"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010"
Diameter: 1" Length: —	Total Depth: 10'
Depth to Water: NA	

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	0.0	No		0				compact, reddish brown, sand no stain/odor	
					1			SP		Dry
	Dry	0.0	No		2				SAA	No well installed
					3					
	Dry	0.0	No		4				compact, yellow red, sand no stain/odo	
					5			SP		
				NA	6	NA				
	Dry	0.0	No		7			CL	compact, dark brown, leanclay <30% sand	
					8					
	Dry	0.0	No		9				SAA No S/O	
					10			CL	SAA No S/O	
	Dry	0.0	No		11					
					12					
					13					
					14					
					15					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH-33	Project: Kutz Canyon GP
Date: 7/3/2018	Project Number:
Logged By: Eric Carroll	Drilled By: LTE
Elevation:	Detector: PID
Drilling Method: Hand Auger	Sampling Method: Hand Auger
Gravel Pack: 10-20 Silica Sand	Seal:
Grout:	
Casing Type: Schedule 40 PVC	Diameter: 1" Length: —
Hole Diameter: 2.5"	Depth to Liquid: —
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 1" Length: —
Total Depth: 9'	Depth to Water: —

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	0.0	NO		0				Compact, lt reddish brown, Sand no stain/odor	
					1			SP		Dry well not installed
	Dry	0.0	NI		2				SAA No S/O	
					3					
	Dry	1.1	NO		4				dense, friable, dark brown lean clay ~20% sand	
				NA	5	NA		CL	No stain/odor.	
	Dry	0.6	NO		6				SAA	
					7			CL		
	Dry	0.6	NO		8				SAA No S/O	
					9					
					10					
					11					
					12					
					13					
					14					
					15					

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 34	Project: Kutz Canyon GP
Date: 7/23/2018	Project Number:
Logged By: Eric Carroll	Drilled By: LTE
Elevation: 5770	Detector: PID
Drilling Method: Hand Auger	Sampling Method: Hand Auger
Gravel Pack: 0-20 Silica Sand Pre Pac	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 1" Length: 5'
Hole Diameter: 2.5"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 1" Length: 5'
Total Depth: 9'	Depth to Water: 7.5'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks
	Dry	1.3	NO		0			SP	Loose, Reddish brown, coarse Sand no stain/odor
					1				
	moist	12.3	NO		2			SP	SAA NO Stain/odor
					3				
	moist	16.3	NO		4			SP	SAA NO Stain/odor
					5				
	moist	506	yes		6			SP	Loose, black grey coarse Sand trace silt <15%
					7				HC staining, Strong odor
	~~moist~~ Soil	231	YES		8			SP/SM	SAA
					9				
	moist Soil	97	YES		10			CL	
					11				compact green lean clay
					12				<15% Sand
					13				no Stain, Slight odor
					14				Refusal @ 9' due to tight clay
					15				

Well Completion 1.05'

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848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 35	Project: Kutz Canyon GP
Date: 7/23/2018	Project Number:
Logged By: Eric Carroll	Drilled By: LTE
Elevation: 5770	Detector: PID
Drilling Method: Hand Auger	Sampling Method: Hand Auger
Gravel Pack: 0-20 Silica Sand Pre Pac	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 1" Length: 5'
Hole Diameter: 2.5"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 1" Length: 5'
Total Depth: 8'	Depth to Water: 6.5'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks
	Dry	1.3	No		0			SP	Loose, Reddish brown, coarse Sand No Stain/odor
					1				
	Moist	14.6	No		2			SP	SAA NO Stain/odor
					3				
	moist	487	Yes		4			SP	Loose, Black, coarse Sand HC Staining, ~~and~~ strong odor
					5				
	Sat	364	Yes		6			SP	SAA
					7				
					8			CL	Compact, green, lean clay < 15% Sand, no Stain/odor
	Moist	43	No		9				
					10				
					11				
					12				
					13				
					14				
					15				

Well Completion

3.37

GW

Advancing Opportunity

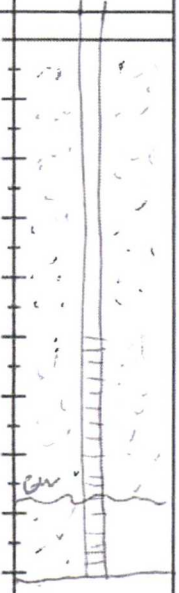
848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 36	Project: Kutz Canyon GP
Date: 7/23/2018	Project Number:
Logged By: Eric Carroll	Drilled By: LTE
Elevation: 5770 / Detector: PID	Drilling Method: Hand Auger / Sampling Method: Hand Auger
Gravel Pack: 0-20 Silica Sand Pre Pac	Seal: NA / Grout: NA
Casing Type: Schedule 40 PVC — Diameter: 1" Length: 5'	Hole Diameter: 2.5" / Depth to Liquid: ~~8'~~ NA
Screen Type: Schedule 40 PVC — Slot: 0.010" — Diameter: 1" Length: 5'	Total Depth: 9' / Depth to Water: 6'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks
	Dry	0.3	NO		0			SP	Loose, lt reddish brown, coarse sand No stain/odor
					1				
	moist	0.7	NO		2			SP	SAA No Stain/odor
					3				
	moist	0.6	NO		4			SP	SAA No Stain/odor
					5				
	moist	1.1	NO		6			SP	Loose, yellow brown, coarse sand No Stain/odor
					7				
	Sat	0.8	NO		8			SP	Loose, dark brown, coarse sand, some gravel No stain/odor
					9				
	moist	0.4	NO		10			CL	Compact, green, leanchy < 15% sand No Stain/odor
					11				
					12				
					13				
					14				
					15				

Well Completion



Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 37	Project: Kutz Canyon GP
Date: 7/23/2018	Project Number:
Logged By: Eric Carroll	Drilled By: LTE
Elevation:	Detector: PID
Drilling Method: Hand Auger	Sampling Method: Hand Auger
Gravel Pack: 0-20 Silica Sand Pre Pac	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 1" Length: 4' 1.5'
Hole Diameter: 2.5"	Depth to Liquid: N/A
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 1" Length: 5'
Total Depth: 6'	Depth to Water: 4'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion 1.4'
	Dry	0.6	NS		0			SP	Loose, lt reddish brown, coarse sand No stain/odor	
					1					
	moist	1.6	NO		2			SP	SAA NO stain/odor	
					3					
	Sat	14.6	NO		4			SP	loose, grey, coarse sand, saturated No stain/odor	
					5					
	moist	12.3	NO		6			CL	compact, green, lean clay < 15% sand No stain/odor	
					7					
					8					
					9					
					10					
					11					
					12					
					13					
					14					
					15					

Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 38		Project: Kutz Canyon GP	
Date: 7/23/2018		Project Number:	
Logged By: Eric Carroll		Drilled By: LTE	
Elevation: 5770	Detector: PID	Drilling Method: Hand Auger	Sampling Method: Hand Auger
Gravel Pack: 0-20 Silica Sand Pre Pac		Seal: NA	Grout: NA
Casing Type: Schedule 40 PVC	Diameter: 1" Length: NA	Hole Diameter: 2.5"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 1" Length: NA	Total Depth: 8'	Depth to Water: NA

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	0.0	NO		0			CL	Loose, friable, green/olive, lean clay	
					1				<30% sand	NP Well Installed
									NO Stain/odor	
	Dry	0.0	NO		2					
					3					
	Dry	0.0	NO		4			CL	SAA NO Stain/odor	
					5					
	Dry	0.0	NO		6			CL	SAA NO Stain/odor	
					7					
	Dry	0.0	NO		8			CL	SAA NO Stain/odor	
					9					
					10				Stopped auger @ 8'	
					11				NO GW encountered	
									NO well installed	
					12					
					13					
					14					
					15					

LTE Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 39	Project: Kutz Canyon GP
Date: 7/23/2018	Project Number:
Logged By: Eric Carroll	Drilled By: LTE
Elevation: 5770	Detector: PID
Drilling Method: Hand Auger	Sampling Method: Hand Auger
Gravel Pack: 0-20 Silica Sand Pre Pac	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 1" Length: NA
Hole Diameter: 7.5"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC Slot: 0.010"	Diameter: 1" Length: NA
Total Depth: 9'	Depth to Water: NA

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	0.0	No		0			CL	Loose, ~~sandy~~ grey, sandy clay 40% sand/60% clay	
					1					No well installed
	moist	17.0	No		2			CL	Loose, green grey, lean clay <15% sand No Stain, light odor	
					3					
	moist	54.4	NO		4			CL	SAA No Stain/odor	
					5					
	moist	48.6	No		6			CL	SAA No Stain/odor	
					7					
	moist	12.1	No		8			CL	compact hard, green, lean clay <15% sand No Stain/odor	
					9					
					10				Boring refusal @ 9' due to tight clay	
					11					
					12				NO GW encountered	
					13				no well installed	
					14					
					15					

LTE Advancing Opportunity

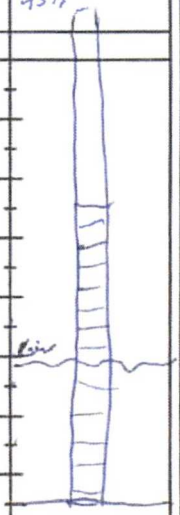
848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 40	Project: Kutzs Canyon GP
Date: 8/1/2018	Project Number:
Logged By: Eric Carroll	Drilled By: LTE
Elevation: 5770	Detector: PID
Drilling Method: Hand Auger	Sampling Method: Hand Auger
Gravel Pack: 10-20 Silica Sand Pre Pack	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 1" 2" Length: 5'
Hole Diameter: 2.5"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 1" 2" Length: 5'
Total Depth: 7.5'	Depth to Water: 5.5'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks
	Dry	0.0	NO		0			SP	Loose, lt reddish brown, coarse sand NO stain/odor
					1				
	moist	0.7	NO		2			SP	SAA NO stain/odor
					3				
	moist	12.1	NO		4			SP-SC	Loose, grey, sand trace clay <15% fines NO stain/odor
					5				
	Sat	894	Yes		6			SP	Loose, Black, coarse sand, HC Staining and odor, Heavy sheen
					7				
	moist	601	NO		8			CL	compact, green grey, lean clay <15% sand. NO Stain, Slight odor
					9				
					10				
					11				
					12				
					13				
					14				
					15				

Well Completion



LTE Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 41	Project: Kutzs Canyon GP
Date: 8/1/2018	Project Number:
Logged By: Eric Carroll	Drilled By: LTE
Elevation: 5770	Detector: PID
Drilling Method: Hand Auger	Sampling Method: Hand Auger
Gravel Pack: 10-20 Silica Sand Pre Pack	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 1" 2" Length: 10'
Hole Diameter: 2.5"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 1" 2" Length: 5'
Total Depth: 11.5'	Depth to Water: 8'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks
	Dry	0.0	NO		0			SP	Loose, lt reddish brown, coarse Sand no stain/ odor
	moist	0.0	NO		1 2			SP	SAA NO Stain/odor
	moist	0.2	NO		3 4			SP	SAA NO Stain/odor
	moist	6.8	NO		5 6			SP	Loose, lt reddish brown, coarse sand grey mottles, No stain/odor
	Sat	17.4	No		7 8			SP SC	Loose, lt reddish brown, coarse Sand trace clay <15% fines no Stain no odor, Saturated Soil
	moist	276.3	yes		9 10			SP	~~SAA NO~~ Loose, Black, Sand, HC Stain slight odor
					11 12 13 14 15				Refusal @ ≈ 11-12' due to gravel

Well Completion

Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH4D	Project: Kutzs Canyon GP
Date: 8/3/2018	Project Number:
Logged By: Eric Carroll	Drilled By: LTE
Elevation: 5770	Detector: PID
Drilling Method: Hand Auger	Sampling Method: Hand Auger
Gravel Pack: 10-20 Silica Sand	Pre-Pack
Seal: NA	Grout: NA
Casing Type: Schedule 40 PVC	Diameter: 1" Length: 5'
Hole Diameter: 2.5"	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010"
Diameter: 1" Length: 5'	Total Depth: ~~10~~ 9.5'
Depth to Water: 8'	

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	0.0	NE		0			SP	Loose, lt reddish brown coarse sand w/ gravel <20% NO stain/odor	13"
					1					
	moist	0.0	NE		2			SP	SAA NO stain/odor	
					3					
	moist	1.3	NE		4			SP	Loose, dark reddish brown, coarse sand NO stain/odor	
					5					
	moist	1.4	NE		6				SAA NO stain/odor	
					7			SP		
	~~Sat~~ wet	24.3	NE		8				Loose, saturated, grey, coarse sand NO stain slight odor	GW
					9					
	moist	41.1	NO		10			CL	Compact, friable, green, lean clay <30% sand, NO stain slight odor	
					11					
					12					
					13					
					14					
					15					

Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH 43	Project: Kutzs Canyon GP
Date: 8/3/2018	Project Number:
Logged By: Eric Carroll	Drilled By: LTE
Elevation: 5770 / Detector: PID	Drilling Method: Hand Auger / Sampling Method: Hand Auger
Gravel Pack: 10-20 Silica Sand / Pre-Pack	Seal: NA / Grout: NA
Casing Type: Schedule 40 PVC	Diameter: 1" / Length: 10' / Hole Diameter: 2.5" / Depth to Liquid: NA
Screen Type: Schedule 40 PVC / Slot: 0.010"	Diameter: 1" / Length: 5' / Total Depth: 12.5' / Depth to Water: 11'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	0.0	No		0			SP	Loose, lt reddish brown, coarse sand	56"
					1				No Stain/odor	
	Dry	0.0	No		2				SAA No Stain/odor	
					3					
	moist	0.1	No		4			SP	SAA NO Stain/odor	
					5					
	moist	0.0	No		6				SAA No Stain/odor	
					7					
	moist	0.0	No		8				SAA No Stain/odor	
					9					
	~~Slight moist~~	0.4	No		10			SP	Loose, grey, coarse Sand	GW
					11				No Stain/odor	
	moist ~~Slight~~	0.8	No		12			CL	Compact, green, lean clay, <15% Sand	
					13				No Stain/odor	
					14					
					15					

Appendix B

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

November 14, 2017

Kijun Hong
Williams Four Corners
188 CR 4900
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Kutz GCNM ROW OrderNo.: 1711594

Dear Kijun Hong:

Hall Environmental Analysis Laboratory received 3 sample(s) on 11/10/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. 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 qualifiers 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
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1711594**
Date Reported: **11/14/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz GCNM ROW
Lab ID: 1711594-001
Matrix: MEOH (SOIL)
Client Sample ID: EX-South@10'
Collection Date: 11/9/2017 3:00:00 PM
Received Date: 11/10/2017 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	39	30		mg/Kg	20	11/10/2017 12:31:22 PM	34942
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	120	9.4		mg/Kg	1	11/10/2017 10:06:37 AM	34939
Motor Oil Range Organics (MRO)	81	47		mg/Kg	1	11/10/2017 10:06:37 AM	34939
Surr: DNOP	109	70-130		%Rec	1	11/10/2017 10:06:37 AM	34939
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	2600	78		mg/Kg	20	11/10/2017 12:34:09 PM	34930
Surr: BFB	477	15-316	S	%Rec	20	11/10/2017 12:34:09 PM	34930
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	3.5	0.39		mg/Kg	20	11/10/2017 12:34:09 PM	34930
Toluene	49	0.78		mg/Kg	20	11/10/2017 12:34:09 PM	34930
Ethylbenzene	9.7	0.78		mg/Kg	20	11/10/2017 12:34:09 PM	34930
Xylenes, Total	94	1.6		mg/Kg	20	11/10/2017 12:34:09 PM	34930
Surr: 4-Bromofluorobenzene	142	80-120	S	%Rec	20	11/10/2017 12:34:09 PM	34930

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz GCNM ROW
Lab ID: 1711594-002
Matrix: MEOH (SOIL)
Client Sample ID: TR01@8'
Collection Date: 11/9/2017 3:15:00 PM
Received Date: 11/10/2017 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	43	30		mg/Kg	20	11/10/2017 12:43:46 PM	34942
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	370	10		mg/Kg	1	11/10/2017 10:30:54 AM	34939
Motor Oil Range Organics (MRO)	380	50		mg/Kg	1	11/10/2017 10:30:54 AM	34939
Surr: DNOP	106	70-130		%Rec	1	11/10/2017 10:30:54 AM	34939
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	1700	78		mg/Kg	20	11/10/2017 12:57:51 PM	34930
Surr: BFB	416	15-316	S	%Rec	20	11/10/2017 12:57:51 PM	34930
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	1.8	0.39		mg/Kg	20	11/10/2017 12:57:51 PM	34930
Toluene	19	0.78		mg/Kg	20	11/10/2017 12:57:51 PM	34930
Ethylbenzene	6.9	0.78		mg/Kg	20	11/10/2017 12:57:51 PM	34930
Xylenes, Total	66	1.6		mg/Kg	20	11/10/2017 12:57:51 PM	34930
Surr: 4-Bromofluorobenzene	137	80-120	S	%Rec	20	11/10/2017 12:57:51 PM	34930

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Client Sample ID: TR02@6'
Project: Kutz GCNM ROW
Collection Date: 11/9/2017 3:30:00 PM
Lab ID: 1711594-003
Matrix: MEOH (SOIL)
Received Date: 11/10/2017 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	11/10/2017 1:20:58 PM	34942
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	11/10/2017 10:55:28 AM	34939
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/10/2017 10:55:28 AM	34939
Surr: DNOP	102	70-130		%Rec	1	11/10/2017 10:55:28 AM	34939
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	29		mg/Kg	5	11/10/2017 1:21:35 PM	34930
Surr: BFB	113	15-316		%Rec	5	11/10/2017 1:21:35 PM	34930
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.15		mg/Kg	5	11/10/2017 1:21:35 PM	34930
Toluene	ND	0.29		mg/Kg	5	11/10/2017 1:21:35 PM	34930
Ethylbenzene	ND	0.29		mg/Kg	5	11/10/2017 1:21:35 PM	34930
Xylenes, Total	ND	0.58		mg/Kg	5	11/10/2017 1:21:35 PM	34930
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	5	11/10/2017 1:21:35 PM	34930

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711594**

14-Nov-17

Client: Williams Four Corners

Project: Kutz GCNM ROW

Sample ID	**MB-34942**	SampType:	**mblk**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**34942**		RunNo:	**47043**				
Prep Date:	**11/10/2017**	Analysis Date:	**11/10/2017**		SeqNo:	**1501826**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-34942**	SampType:	**lcs**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**34942**		RunNo:	**47043**				
Prep Date:	**11/10/2017**	Analysis Date:	**11/10/2017**		SeqNo:	**1501827**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711594**

14-Nov-17

Client: Williams Four Corners

Project: Kutz GCNM ROW

Sample ID	**LCS-34939**	SampType: **LCS**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**LCSS**	Batch ID: **34939**			RunNo: **47029**					
Prep Date:	**11/10/2017**	Analysis Date: **11/10/2017**			SeqNo: **1500662**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.7	73.2	114			
Surr: DNOP	4.8		5.000		96.0	70	130			

Sample ID	**MB-34939**	SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**PBS**	Batch ID: **34939**			RunNo: **47029**					
Prep Date:	**11/10/2017**	Analysis Date: **11/10/2017**			SeqNo: **1500664**		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	10		10.00		101	70	130			

Sample ID	**LCS-34925**	SampType: **LCS**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**LCSS**	Batch ID: **34925**			RunNo: **47029**					
Prep Date:	**11/9/2017**	Analysis Date: **11/10/2017**			SeqNo: **1502323**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		5.000		92.6	70	130			

Sample ID	**MB-34925**	SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**PBS**	Batch ID: **34925**			RunNo: **47029**					
Prep Date:	**11/9/2017**	Analysis Date: **11/10/2017**			SeqNo: **1502324**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.9		10.00		99.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711594**

14-Nov-17

Client: Williams Four Corners

Project: Kutz GCNM ROW

Sample ID **MB-34930**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **34930**	RunNo: **47044**
Prep Date: **11/9/2017**	Analysis Date: **11/10/2017**	SeqNo: **1501473** 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	1100		1000		108	15	316			

Sample ID **LCS-34930**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **34930**	RunNo: **47044**
Prep Date: **11/9/2017**	Analysis Date: **11/10/2017**	SeqNo: **1501474** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	75.9	131			
Surr: BFB	1200		1000		118	15	316			

Qualifiers:

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711594**

14-Nov-17

Client: Williams Four Corners

Project: Kutz GCNM ROW

Sample ID **MB-34930**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **34930**	RunNo: **47044**
Prep Date: **11/9/2017**	Analysis Date: **11/10/2017**	SeqNo: **1501482** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Sample ID **LCS-34930**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **34930**	RunNo: **47044**
Prep Date: **11/9/2017**	Analysis Date: **11/10/2017**	SeqNo: **1501483** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	97.8	77.3	128			
Toluene	1.0	0.050	1.000	0	101	79.2	125			
Ethylbenzene	1.0	0.050	1.000	0	101	80.7	127			
Xylenes, Total	3.0	0.10	3.000	0	98.9	81.6	129			
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			

Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN Work Order Number: 1711594 RcptNo: 1

Received By: Richie Eriacho 11/10/2017 7:30:00 AM

Completed By: Erin Melendrez 11/10/2017 8:31:00 AM

Reviewed By: 11/10/17

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?	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 ☐
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 ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	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 with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.9	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: Williams Four Corners	Turn-Around Time: ☐ Standard ☒ Rush same day, EOD 11-10-17
Matt Webre	Project Name: Kutz GCNM ROW
Mailing Address: 1755 Arroyo Dr. Bloomfield, NM	Project #:
Phone #: 505-632-4442	
email or Fax#: matt.webre@williams.com	Project Manager: Williams - Kijun Hong LTE-Danny Burns 701-570 (cell) 4727
QA/QC Package: ☒ Standard ☐ Level 4 (Full Validation)	
Accreditation: ☐ NELAP ☐ Other	Sampler: D Burns
☒ EDD (Type) PDF	On Ice: ☒ Yes ☐ No
	Sample Temperature: 3.8 + 0.1 = 3.9

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1711594	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride				Air Bubbles (Y or N)
11-9	1500	S	EX-South@10'	2-2oz	cool	-001	X		X									X				
↓	1515	↓	TR01@8'	↓	↓	-002	X		X									X				
↓	1530	↓	TR02@6'	↓	↓	-003	X		X									X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
11-9-17	1825		Cindy Waet	11/9/17	1825
11/9/17	2045			11/10/17	0730

Remarks:
cc: Kijun.hong@williams.com DB
aaron.galer@williams.com
dburns@ltenv.com aager@ltenv.com

Courier

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

November 16, 2017

Danny Burns
Williams Four Corners
188 CR 4900
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Kutz Gas Plant OrderNo.: 1711647

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 3 sample(s) on 11/11/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. 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 qualifiers 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
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1711647**
Date Reported: **11/16/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Gas Plant
Lab ID: 1711647-001 **Matrix:** AQUEOUS

Client Sample ID: Seep North of Flare
Collection Date: 11/9/2017 5:00:00 PM
Received Date: 11/11/2017 10:26:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Fluoride	0.65	0.50		mg/L	5	11/14/2017 3:54:47 PM	R47134
Chloride	1100	50	*	mg/L	100	11/15/2017 10:12:50 AM	R47167
Bromide	13	0.50		mg/L	5	11/14/2017 3:54:47 PM	R47134
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	11/14/2017 3:54:47 PM	R47134
Sulfate	71	2.5		mg/L	5	11/14/2017 3:54:47 PM	R47134
Nitrate+Nitrite as N	3.8	1.0		mg/L	5	11/14/2017 5:34:04 PM	R47134
EPA METHOD 200.7: METALS						Analyst: **pmf**	
Calcium	130	10		mg/L	10	11/15/2017 2:30:40 PM	34982
Magnesium	80	1.0		mg/L	1	11/15/2017 2:28:57 PM	34982
Potassium	11	1.0		mg/L	1	11/15/2017 2:28:57 PM	34982
Sodium	2900	50		mg/L	50	11/15/2017 4:00:05 PM	34982
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/15/2017 1:53:38 PM	34994
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/15/2017 1:53:38 PM	34994
Surr: DNOP	102	77.5-161		%Rec	1	11/15/2017 1:53:38 PM	34994
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	5.2	0.050	P	mg/L	1	11/13/2017 3:16:48 PM	G47078
Surr: BFB	128	69.3-150	P	%Rec	1	11/13/2017 3:16:48 PM	G47078
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	51	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Toluene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Ethylbenzene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Methyl tert-butyl ether (MTBE)	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,2,4-Trimethylbenzene	11	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,3,5-Trimethylbenzene	10	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,2-Dichloroethane (EDC)	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,2-Dibromoethane (EDB)	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Naphthalene	ND	2.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1-Methylnaphthalene	ND	4.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
2-Methylnaphthalene	ND	4.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Acetone	25	10	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Bromobenzene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Bromodichloromethane	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Bromoform	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Bromomethane	ND	3.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
2-Butanone	ND	10	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Carbon disulfide	ND	10	P	µg/L	1	11/14/2017 5:33:00 AM	A47088

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Gas Plant
Lab ID: 1711647-001 **Matrix:** AQUEOUS

Client Sample ID: Seep North of Flare
Collection Date: 11/9/2017 5:00:00 PM
Received Date: 11/11/2017 10:26:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Carbon Tetrachloride	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Chlorobenzene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Chloroethane	ND	2.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Chloroform	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Chloromethane	ND	3.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
2-Chlorotoluene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
4-Chlorotoluene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
cis-1,2-DCE	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
cis-1,3-Dichloropropene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,2-Dibromo-3-chloropropane	ND	2.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Dibromochloromethane	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Dibromomethane	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,2-Dichlorobenzene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,3-Dichlorobenzene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,4-Dichlorobenzene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Dichlorodifluoromethane	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,1-Dichloroethane	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,1-Dichloroethene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,2-Dichloropropane	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,3-Dichloropropane	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
2,2-Dichloropropane	ND	2.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,1-Dichloropropene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Hexachlorobutadiene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
2-Hexanone	ND	10	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Isopropylbenzene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
4-Isopropyltoluene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
4-Methyl-2-pentanone	ND	10	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Methylene Chloride	ND	3.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
n-Butylbenzene	ND	3.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
n-Propylbenzene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
sec-Butylbenzene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Styrene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
tert-Butylbenzene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,1,1,2-Tetrachloroethane	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,1,2,2-Tetrachloroethane	ND	2.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Tetrachloroethene (PCE)	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
trans-1,2-DCE	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
trans-1,3-Dichloropropene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,2,3-Trichlorobenzene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088

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

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Gas Plant
Lab ID: 1711647-001 **Matrix:** AQUEOUS

Client Sample ID: Seep North of Flare
Collection Date: 11/9/2017 5:00:00 PM
Received Date: 11/11/2017 10:26:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,2,4-Trichlorobenzene	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,1,1-Trichloroethane	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,1,2-Trichloroethane	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Trichloroethene (TCE)	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Trichlorofluoromethane	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,2,3-Trichloropropane	ND	2.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Vinyl chloride	ND	1.0	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Xylenes, Total	210	1.5	P	µg/L	1	11/14/2017 5:33:00 AM	A47088
Surr: 1,2-Dichloroethane-d4	120	70-130	P	%Rec	1	11/14/2017 5:33:00 AM	A47088
Surr: 4-Bromofluorobenzene	108	70-130	P	%Rec	1	11/14/2017 5:33:00 AM	A47088
Surr: Dibromofluoromethane	118	70-130	P	%Rec	1	11/14/2017 5:33:00 AM	A47088
Surr: Toluene-d8	102	70-130	P	%Rec	1	11/14/2017 5:33:00 AM	A47088

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Gas Plant
Lab ID: 1711647-002 **Matrix:** AQUEOUS

Client Sample ID: API Water Outlet
Collection Date: 11/9/2017 5:15:00 PM
Received Date: 11/11/2017 10:26:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Fluoride	ND	0.50		mg/L	5	11/14/2017 4:19:36 PM	R47134
Chloride	95	2.5		mg/L	5	11/14/2017 4:19:36 PM	R47134
Bromide	ND	0.50		mg/L	5	11/14/2017 4:19:36 PM	R47134
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	11/14/2017 4:19:36 PM	R47134
Sulfate	74	2.5		mg/L	5	11/14/2017 4:19:36 PM	R47134
Nitrate+Nitrite as N	ND	1.0		mg/L	5	11/14/2017 5:46:29 PM	R47134
EPA METHOD 200.7: METALS						Analyst: **pmf**	
Calcium	28	1.0		mg/L	1	11/15/2017 2:32:23 PM	34982
Magnesium	3.9	1.0		mg/L	1	11/15/2017 2:32:23 PM	34982
Potassium	2.3	1.0		mg/L	1	11/15/2017 2:32:23 PM	34982
Sodium	81	1.0		mg/L	1	11/15/2017 2:32:23 PM	34982
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **TOM**	
Diesel Range Organics (DRO)	20	1.0		mg/L	1	11/15/2017 2:21:42 PM	34994
Motor Oil Range Organics (MRO)	6.5	5.0		mg/L	1	11/15/2017 2:21:42 PM	34994
Surr: DNOP	108	77.5-161		%Rec	1	11/15/2017 2:21:42 PM	34994
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	240	5.0		mg/L	100	11/13/2017 4:27:55 PM	G47078
Surr: BFB	138	69.3-150		%Rec	100	11/13/2017 4:27:55 PM	G47078
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	24000	1000		µg/L	1E	11/14/2017 6:30:00 PM	R47131
Toluene	40000	1000		µg/L	1E	11/14/2017 6:30:00 PM	R47131
Ethylbenzene	1200	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
Methyl tert-butyl ether (MTBE)	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,2,4-Trimethylbenzene	440	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,3,5-Trimethylbenzene	190	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,2-Dichloroethane (EDC)	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,2-Dibromoethane (EDB)	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
Naphthalene	ND	100		µg/L	50	11/14/2017 5:57:00 AM	A47088
1-Methylnaphthalene	ND	200		µg/L	50	11/14/2017 5:57:00 AM	A47088
2-Methylnaphthalene	ND	200		µg/L	50	11/14/2017 5:57:00 AM	A47088
Acetone	32000	10000		µg/L	1E	11/14/2017 6:30:00 PM	R47131
Bromobenzene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
Bromodichloromethane	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
Bromoform	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
Bromomethane	ND	150		µg/L	50	11/14/2017 5:57:00 AM	A47088
2-Butanone	6100	500		µg/L	50	11/14/2017 5:57:00 AM	A47088
Carbon disulfide	1400	500		µg/L	50	11/14/2017 5:57:00 AM	A47088

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Gas Plant
Lab ID: 1711647-002 **Matrix:** AQUEOUS

Client Sample ID: API Water Outlet
Collection Date: 11/9/2017 5:15:00 PM
Received Date: 11/11/2017 10:26:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Carbon Tetrachloride	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
Chlorobenzene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
Chloroethane	ND	100		µg/L	50	11/14/2017 5:57:00 AM	A47088
Chloroform	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
Chloromethane	ND	150		µg/L	50	11/14/2017 5:57:00 AM	A47088
2-Chlorotoluene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
4-Chlorotoluene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
cis-1,2-DCE	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
cis-1,3-Dichloropropene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,2-Dibromo-3-chloropropane	ND	100		µg/L	50	11/14/2017 5:57:00 AM	A47088
Dibromochloromethane	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
Dibromomethane	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,2-Dichlorobenzene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,3-Dichlorobenzene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,4-Dichlorobenzene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
Dichlorodifluoromethane	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,1-Dichloroethane	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,1-Dichloroethene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,2-Dichloropropane	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,3-Dichloropropane	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
2,2-Dichloropropane	ND	100		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,1-Dichloropropene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
Hexachlorobutadiene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
2-Hexanone	ND	500		µg/L	50	11/14/2017 5:57:00 AM	A47088
Isopropylbenzene	64	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
4-Isopropyltoluene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
4-Methyl-2-pentanone	500	500		µg/L	50	11/14/2017 5:57:00 AM	A47088
Methylene Chloride	ND	150		µg/L	50	11/14/2017 5:57:00 AM	A47088
n-Butylbenzene	ND	150		µg/L	50	11/14/2017 5:57:00 AM	A47088
n-Propylbenzene	66	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
sec-Butylbenzene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
Styrene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
tert-Butylbenzene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,1,1,2-Tetrachloroethane	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,1,2,2-Tetrachloroethane	ND	100		µg/L	50	11/14/2017 5:57:00 AM	A47088
Tetrachloroethene (PCE)	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
trans-1,2-DCE	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
trans-1,3-Dichloropropene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,2,3-Trichlorobenzene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Gas Plant
Lab ID: 1711647-002 **Matrix:** AQUEOUS

Client Sample ID: API Water Outlet
Collection Date: 11/9/2017 5:15:00 PM
Received Date: 11/11/2017 10:26:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,2,4-Trichlorobenzene	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,1,1-Trichloroethane	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,1,2-Trichloroethane	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
Trichloroethene (TCE)	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
Trichlorofluoromethane	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
1,2,3-Trichloropropane	ND	100		µg/L	50	11/14/2017 5:57:00 AM	A47088
Vinyl chloride	ND	50		µg/L	50	11/14/2017 5:57:00 AM	A47088
Xylenes, Total	11000	75		µg/L	50	11/14/2017 5:57:00 AM	A47088
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	50	11/14/2017 5:57:00 AM	A47088
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	50	11/14/2017 5:57:00 AM	A47088
Surr: Dibromofluoromethane	106	70-130		%Rec	50	11/14/2017 5:57:00 AM	A47088
Surr: Toluene-d8	101	70-130		%Rec	50	11/14/2017 5:57:00 AM	A47088

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Gas Plant
Lab ID: 1711647-003 **Matrix:** AQUEOUS

Client Sample ID: Pipeline Trench Water
Collection Date: 11/9/2017 5:30:00 PM
Received Date: 11/11/2017 10:26:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Fluoride	ND	0.50		mg/L	5	11/14/2017 5:09:15 PM	R47134
Chloride	450	100	*	mg/L	200	11/15/2017 10:25:15 AM	R47167
Bromide	8.2	0.50		mg/L	5	11/14/2017 5:09:15 PM	R47134
Phosphorus, Orthophosphate (As P)	ND	10	H	mg/L	20	11/14/2017 5:21:39 PM	R47134
Sulfate	6900	100	*	mg/L	200	11/15/2017 10:25:15 AM	R47167
Nitrate+Nitrite as N	3.6	1.0		mg/L	5	11/14/2017 5:58:54 PM	R47134
EPA METHOD 200.7: METALS						Analyst: **pmf**	
Calcium	490	10		mg/L	10	11/15/2017 2:37:28 PM	34982
Magnesium	140	10		mg/L	10	11/15/2017 2:37:28 PM	34982
Potassium	3.2	1.0		mg/L	1	11/15/2017 2:35:40 PM	34982
Sodium	2800	50		mg/L	50	11/15/2017 4:01:09 PM	34982
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **TOM**	
Diesel Range Organics (DRO)	1.3	1.0		mg/L	1	11/15/2017 2:49:48 PM	34994
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/15/2017 2:49:48 PM	34994
Surr: DNOP	101	77.5-161		%Rec	1	11/15/2017 2:49:48 PM	34994
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/13/2017 5:15:12 PM	G47078
Surr: BFB	111	69.3-150		%Rec	1	11/13/2017 5:15:12 PM	G47078
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Toluene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Ethylbenzene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Naphthalene	ND	2.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Acetone	23	10		µg/L	1	11/14/2017 6:53:00 PM	R47131
Bromobenzene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Bromodichloromethane	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Bromoform	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Bromomethane	ND	3.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
2-Butanone	ND	10		µg/L	1	11/14/2017 6:53:00 PM	R47131
Carbon disulfide	ND	10		µg/L	1	11/14/2017 6:53:00 PM	R47131

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Gas Plant
Lab ID: 1711647-003 **Matrix:** AQUEOUS

Client Sample ID: Pipeline Trench Water
Collection Date: 11/9/2017 5:30:00 PM
Received Date: 11/11/2017 10:26:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Chlorobenzene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Chloroethane	ND	2.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Chloroform	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Chloromethane	ND	3.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Dibromochloromethane	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Dibromomethane	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,1-Dichloropropene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
2-Hexanone	ND	10		µg/L	1	11/14/2017 6:53:00 PM	R47131
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2017 6:53:00 PM	R47131
Methylene Chloride	ND	3.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Styrene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Gas Plant
Lab ID: 1711647-003 **Matrix:** AQUEOUS

Client Sample ID: Pipeline Trench Water
Collection Date: 11/9/2017 5:30:00 PM
Received Date: 11/11/2017 10:26:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Vinyl chloride	ND	1.0		µg/L	1	11/14/2017 6:53:00 PM	R47131
Xylenes, Total	ND	1.5		µg/L	1	11/14/2017 6:53:00 PM	R47131
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	11/14/2017 6:53:00 PM	R47131
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	11/14/2017 6:53:00 PM	R47131
Surr: Dibromofluoromethane	110	70-130		%Rec	1	11/14/2017 6:53:00 PM	R47131
Surr: Toluene-d8	96.9	70-130		%Rec	1	11/14/2017 6:53:00 PM	R47131

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711647**

16-Nov-17

Client: Williams Four Corners

Project: Kutz Gas Plant

Sample ID	**MB-34982**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Metals**					
Client ID:	**PBW**	Batch ID:	**34982**	RunNo:	**47156**					
Prep Date:	**11/14/2017**	Analysis Date:	**11/15/2017**	SeqNo:	**1504301**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID	**LLLCS-34982**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Metals**					
Client ID:	**BatchQC**	Batch ID:	**34982**	RunNo:	**47156**					
Prep Date:		Analysis Date:	**11/15/2017**	SeqNo:	**1504302**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	102	50	150			
Magnesium	ND	1.0	0.5000	0	108	50	150			
Potassium	ND	1.0	0.5000	0	102	50	150			
Sodium	ND	1.0	0.5000	0	107	50	150			

Sample ID	**LCS-34982**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Metals**					
Client ID:	**LCSW**	Batch ID:	**34982**	RunNo:	**47156**					
Prep Date:	**11/14/2017**	Analysis Date:	**11/15/2017**	SeqNo:	**1504303**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	49	1.0	50.00	0	97.8	85	115			
Magnesium	51	1.0	50.00	0	101	85	115			
Potassium	50	1.0	50.00	0	100	85	115			
Sodium	51	1.0	50.00	0	101	85	115			

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711647**

16-Nov-17

Client: Williams Four Corners
Project: Kutz Gas Plant

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R47134**	RunNo: **47134**
Prep Date:	Analysis Date: **11/14/2017**	SeqNo: **1503723** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R47134**	RunNo: **47134**
Prep Date:	Analysis Date: **11/14/2017**	SeqNo: **1503724** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	98.7	90	110			
Chloride	4.7	0.50	5.000	0	94.5	90	110			
Bromide	2.4	0.10	2.500	0	97.4	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.2	90	110			
Sulfate	9.6	0.50	10.00	0	96.1	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	98.9	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R47167**	RunNo: **47167**
Prep Date:	Analysis Date: **11/15/2017**	SeqNo: **1504645** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R47167**	RunNo: **47167**
Prep Date:	Analysis Date: **11/15/2017**	SeqNo: **1504646** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.5	90	110			
Sulfate	9.5	0.50	10.00	0	95.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711647**

16-Nov-17

Client: Williams Four Corners

Project: Kutz Gas Plant

Sample ID **LCS-34994**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **34994**	RunNo: **47146**
Prep Date: **11/14/2017**	Analysis Date: **11/15/2017**	SeqNo: **1504200** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	112	92.3	135			
Surr: DNOP	0.55		0.5000		109	77.5	161			

Sample ID **MB-34994**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **34994**	RunNo: **47146**
Prep Date: **11/14/2017**	Analysis Date: **11/15/2017**	SeqNo: **1504201** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.96		1.000		96.0	77.5	161			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711647**

16-Nov-17

Client: Williams Four Corners

Project: Kutz Gas Plant

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G47078**	RunNo: **47078**
Prep Date:	Analysis Date: **11/13/2017**	SeqNo: **1502249** 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	23		20.00		115	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G47078**	RunNo: **47078**
Prep Date:	Analysis Date: **11/13/2017**	SeqNo: **1502250** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.53	0.050	0.5000	0	107	75.8	123			
Surr: BFB	25		20.00		126	69.3	150			

Sample ID **1711647-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **Seep North of Flare**	Batch ID: **G47078**	RunNo: **47078**
Prep Date:	Analysis Date: **11/13/2017**	SeqNo: **1502258** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	5.7	0.050	0.5000	5.201	103	52.5	149			
Surr: BFB	26		20.00		131	69.3	150			

Sample ID **1711647-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **Seep North of Flare**	Batch ID: **G47078**	RunNo: **47078**
Prep Date:	Analysis Date: **11/13/2017**	SeqNo: **1502259** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	5.7	0.050	0.5000	5.201	93.5	52.5	149	0.840	20	
Surr: BFB	26		20.00		131	69.3	150	0	0	

Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711647**

16-Nov-17

Client: Williams Four Corners
Project: Kutz Gas Plant

Sample ID **100ng lcs**	SampType: **LCS4**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BatchQC**	Batch ID: **R47088**	RunNo: **47088**
Prep Date:	Analysis Date: **11/13/2017**	SeqNo: **1502364** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	11		10.00		112	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	11		10.00		113	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R47088**	RunNo: **47088**
Prep Date:	Analysis Date: **11/13/2017**	SeqNo: **1502370** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	12		10.00		116	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	12		10.00		116	70	130			
Surr: Toluene-d8	9.9		10.00		99.0	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A47088**	RunNo: **47088**
Prep Date:	Analysis Date: **11/14/2017**	SeqNo: **1502423** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	114	70	130			
Toluene	20	1.0	20.00	0	99.5	70	130			
Chlorobenzene	20	1.0	20.00	0	98.5	70	130			
1,1-Dichloroethene	25	1.0	20.00	0	124	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	112	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		114	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00		113	70	130			
Surr: Toluene-d8	9.9		10.00		99.4	70	130			

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A47088**	RunNo: **47088**
Prep Date:	Analysis Date: **11/14/2017**	SeqNo: **1502428** 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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								

Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711647**

16-Nov-17

Client: Williams Four Corners
Project: Kutz Gas Plant

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A47088**	RunNo: **47088**
Prep Date:	Analysis Date: **11/14/2017**	SeqNo: **1502428** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								

Qualifiers:

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711647**

16-Nov-17

Client: Williams Four Corners
Project: Kutz Gas Plant

Sample ID **rb2** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **A47088** RunNo: **47088**
Prep Date: Analysis Date: **11/14/2017** SeqNo: **1502428** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		114	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	9.9		10.00		99.0	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R47131** RunNo: **47131**
Prep Date: Analysis Date: **11/14/2017** SeqNo: **1503470** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	70	130			
Toluene	20	1.0	20.00	0	98.7	70	130			
Chlorobenzene	19	1.0	20.00	0	97.3	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	115	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	107	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711647**

16-Nov-17

Client: Williams Four Corners
Project: Kutz Gas Plant

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R47131**	RunNo: **47131**
Prep Date:	Analysis Date: **11/14/2017**	SeqNo: **1503470** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Toluene-d8	9.7		10.00		96.8	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R47131**	RunNo: **47131**
Prep Date:	Analysis Date: **11/14/2017**	SeqNo: **1503471** 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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711647**

16-Nov-17

Client: Williams Four Corners
Project: Kutz Gas Plant

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R47131**	RunNo: **47131**
Prep Date:	Analysis Date: **11/14/2017**	SeqNo: **1503471** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.8		10.00		97.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN Work Order Number: 1711647 RcptNo: 1

Received By: Anne Thorne 11/11/2017 10:26:00 AM Anne Thorne
Completed By: Erin Melendrez 11/13/2017 8:58:47 AM
Reviewed By: DDS 11/13/17

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?	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 ☐
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 ☑ ENM 11/13/17 @1005	
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 ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 6 (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? YES
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: ENM

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person	
Regarding:			
Client Instructions:			

17. Additional remarks: Added 4mL HNO_3 to -0016 and 1mL HNO_3 -0026 for acceptable pH for metals analysis. -ENM 11/13/17 @ 1005

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.7	Good	Yes			

Chain-of-Custody Record

Client: Williams Four Corners
Matt Webre
Mailing Address: 17755 Arroya Dr
Bloomfield, NM
Phone #: 505-632-4442
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) PDF

Turn-Around Time: 2 day
☐ Standard ☒ Rush TAT
Project Name: Kutz Gas Plant
Project #:
Project Manager: Williams - Kijun Hong
LTE- Danny Burns 701-570-4727
Sampler: D. Burns
On Ice: ☒ Yes ☐ No
Sample Temperature: 4.7

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1711647	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA) VOC's	8270 (Semi-VOA)	Cations				Air Bubbles (Y or N)
11-9	17:00	AQ	Seep North of Flare	10	HCl, H_2SO_4, HNO_3	-001			X					X		X		X				
	17:15	AQ	API Water Outlet	10		-002			X					X		X		X				
	17:30	AQ	Pipeline Trench Water	10		-003			X					X		X		X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
11-10	0445			11-10-17	0445
Date:	Time:	Relinquished by:	Received by:	Date	Time
11-10-17	1026		Mr-Wat	11/10/17	1026

Remarks:
CC: Kijun.Hong@williams.com
aaron.gaier@williams.com
dburns@ltenv.com aager@ltenv.com

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
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December 08, 2017

Aaron Galer
Williams Four Corners
188 CR 4900
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Kutz Canyon Gas Plant GCNM ROW OrderNo.: 1712115

Dear Aaron Galer:

Hall Environmental Analysis Laboratory received 4 sample(s) on 12/2/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. 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 qualifiers 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
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Client Sample ID: SP01
Project: Kutz Canyon Gas Plant GCNM ROW
Collection Date: 12/1/2017 1:15:00 PM
Lab ID: 1712115-001
Matrix: SOIL
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	18	9.2		mg/Kg	1	12/7/2017 2:10:47 PM	35365
Motor Oil Range Organics (MRO)	61	46		mg/Kg	1	12/7/2017 2:10:47 PM	35365
Surr: DNOP	85.6	70-130		%Rec	1	12/7/2017 2:10:47 PM	35365
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/6/2017 10:33:14 PM	35320
Surr: BFB	107	15-316		%Rec	1	12/6/2017 10:33:14 PM	35320
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	12/6/2017 10:33:14 PM	35320
Toluene	ND	0.047		mg/Kg	1	12/6/2017 10:33:14 PM	35320
Ethylbenzene	ND	0.047		mg/Kg	1	12/6/2017 10:33:14 PM	35320
Xylenes, Total	ND	0.094		mg/Kg	1	12/6/2017 10:33:14 PM	35320
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	12/6/2017 10:33:14 PM	35320

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Client Sample ID: SP02
Project: Kutz Canyon Gas Plant GCNM ROW
Collection Date: 12/1/2017 1:20:00 PM
Lab ID: 1712115-002
Matrix: SOIL
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	1100	91		mg/Kg	10	12/7/2017 1:50:15 PM	35365
Motor Oil Range Organics (MRO)	640	450		mg/Kg	10	12/7/2017 1:50:15 PM	35365
Surr: DNOP	0	70-130	S	%Rec	10	12/7/2017 1:50:15 PM	35365
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	120	25		mg/Kg	5	12/6/2017 12:40:35 PM	35320
Surr: BFB	305	15-316		%Rec	5	12/6/2017 12:40:35 PM	35320
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.12		mg/Kg	5	12/6/2017 12:40:35 PM	35320
Toluene	ND	0.25		mg/Kg	5	12/6/2017 12:40:35 PM	35320
Ethylbenzene	ND	0.25		mg/Kg	5	12/6/2017 12:40:35 PM	35320
Xylenes, Total	1.2	0.49		mg/Kg	5	12/6/2017 12:40:35 PM	35320
Surr: 4-Bromofluorobenzene	121	80-120	S	%Rec	5	12/6/2017 12:40:35 PM	35320

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Client Sample ID: SP03
Project: Kutz Canyon Gas Plant GCNM ROW
Collection Date: 12/1/2017 1:30:00 PM
Lab ID: 1712115-003 **Matrix:** SOIL
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	770	93		mg/Kg	10	12/7/2017 2:14:51 PM	35365
Motor Oil Range Organics (MRO)	2200	470		mg/Kg	10	12/7/2017 2:14:51 PM	35365
Surr: DNOP	0	70-130	S	%Rec	10	12/7/2017 2:14:51 PM	35365
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	24	D	mg/Kg	5	12/6/2017 10:56:43 PM	35320
Surr: BFB	111	15-316	D	%Rec	5	12/6/2017 10:56:43 PM	35320
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.12	D	mg/Kg	5	12/6/2017 10:56:43 PM	35320
Toluene	ND	0.24	D	mg/Kg	5	12/6/2017 10:56:43 PM	35320
Ethylbenzene	ND	0.24	D	mg/Kg	5	12/6/2017 10:56:43 PM	35320
Xylenes, Total	ND	0.49	D	mg/Kg	5	12/6/2017 10:56:43 PM	35320
Surr: 4-Bromofluorobenzene	102	80-120	D	%Rec	5	12/6/2017 10:56:43 PM	35320

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Client Sample ID: SP04
Project: Kutz Canyon Gas Plant GCNM ROW
Collection Date: 12/1/2017 1:40:00 PM
Lab ID: 1712115-004
Matrix: SOIL
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	12/7/2017 3:03:39 PM	35365
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/7/2017 3:03:39 PM	35365
Surr: DNOP	104	70-130		%Rec	1	12/7/2017 3:03:39 PM	35365
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/6/2017 11:20:13 PM	35320
Surr: BFB	106	15-316		%Rec	1	12/6/2017 11:20:13 PM	35320
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	12/6/2017 11:20:13 PM	35320
Toluene	ND	0.049		mg/Kg	1	12/6/2017 11:20:13 PM	35320
Ethylbenzene	ND	0.049		mg/Kg	1	12/6/2017 11:20:13 PM	35320
Xylenes, Total	ND	0.098		mg/Kg	1	12/6/2017 11:20:13 PM	35320
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	12/6/2017 11:20:13 PM	35320

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712115**

08-Dec-17

Client: Williams Four Corners

Project: Kutz Canyon Gas Plant GCNM ROW

Sample ID **LCS-35365**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **35365**	RunNo: **47518**
Prep Date: **12/6/2017**	Analysis Date: **12/7/2017**	SeqNo: **1520345** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.8	73.2	114			
Surr: DNOP	4.5		5.000		89.3	70	130			

Sample ID **MB-35365**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **35365**	RunNo: **47518**
Prep Date: **12/6/2017**	Analysis Date: **12/7/2017**	SeqNo: **1520346** 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	9.8		10.00		98.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712115**

08-Dec-17

Client: Williams Four Corners

Project: Kutz Canyon Gas Plant GCNM ROW

Sample ID **MB-35320**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **35320**	RunNo: **47565**
Prep Date: **12/5/2017**	Analysis Date: **12/6/2017**	SeqNo: **1519555** 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	1100		1000		111	15	316			

Sample ID **LCS-35320**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **35320**	RunNo: **47565**
Prep Date: **12/5/2017**	Analysis Date: **12/6/2017**	SeqNo: **1519556** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	107	75.9	131			
Surr: BFB	1200		1000		124	15	316			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712115**

08-Dec-17

Client: Williams Four Corners

Project: Kutz Canyon Gas Plant GCNM ROW

Sample ID **MB-35320**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **35320**	RunNo: **47565**
Prep Date: **12/5/2017**	Analysis Date: **12/6/2017**	SeqNo: **1519593** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID **LCS-35320**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **35320**	RunNo: **47565**
Prep Date: **12/5/2017**	Analysis Date: **12/6/2017**	SeqNo: **1519594** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	109	77.3	128			
Toluene	1.1	0.050	1.000	0	108	79.2	125			
Ethylbenzene	1.0	0.050	1.000	0	104	80.7	127			
Xylenes, Total	3.1	0.10	3.000	0	102	81.6	129			
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN Work Order Number: 1712115 RcptNo: 1

Received By: Ashley Gallegos 12/2/2017 8:30:00 AM

Completed By: Anne Thorne 12/4/2017 1:16:52 PM

Reviewed By: DDS 12/04/17

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?	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 ☐
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 for pH: _____ (<2 or >12 unless noted)
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	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 with this order? Yes | No | NA ✓

Person Notified: _____ Date: _____

By Whom: _____ Via: eMail | Phone | | Fax | | In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.9	Good	Yes			

Chain-of-Custody Record

Client: Williams Four Corners LLC
Aaron Galer
Mailing Address: 1755 Arroyo Dr
Bloomfield NM 87413
Phone #:
email or Fax#: aaron.galer@williams.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) PDF

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Kutz Canyon Gas Plant GCNM ROW
Project #:
Project Manager: Danny Burns – LTE
Sampler: D. Burns
On Ice: ☒ Yes ☐ No
Sample Temperature: 0.4+0.5(CF)=0.9

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1712115	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
12-1-17	1315	S	SP01	1-4oz	Cool	-001	X		X												
↓	1320	↓	SP02	↓	↓	-002	X		X												
↓	1330	↓	SP03	↓	↓	-003	X		X												
↓	1340	↓	SP04	↓	↓	-004	X		X												

Please give Ar folder

Date	Received by	Date	Time
12-1-17	Christ Walls	12/1/17	1442
12/1/17	Ashley McGallegos	12/02/17	0830

Remarks: cc: dburns@ltenv.com
ageer@ltenv.com

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 13, 2017

Aaron Galer
Williams
295 Chipeta Way
Salt Lake City, UT 84105
TEL: (505) 632-4442
FAX

RE: Kutz Gas Plan OrderNo.: 1712109

Dear Aaron Galer:

Hall Environmental Analysis Laboratory received 19 sample(s) on 12/2/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. 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 qualifiers 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
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Case Narrative

WO#: **1712109**
Date: **12/13/2017**

CLIENT: Williams
Project: Kutz Gas Plan

Analytical Notes Regarding sample BH-3:
The DRO sample was received in 40ml HCL VOA vial. DRO was analzyed past the holding time.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-001 **Matrix:** SOIL

Client Sample ID: BH-3 2'-4'
Collection Date: 11/30/2017 11:15:00 AM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	61	9.7		mg/Kg	1	12/7/2017 11:48:51 AM	35332
Motor Oil Range Organics (MRO)	730	49		mg/Kg	1	12/7/2017 11:48:51 AM	35332
Surr: DNOP	114	70-130		%Rec	1	12/7/2017 11:48:51 AM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	64	4.6		mg/Kg	1	12/6/2017 2:21:24 PM	35319
Surr: BFB	355	15-316	S	%Rec	1	12/6/2017 2:21:24 PM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	0.040	0.023		mg/Kg	1	12/6/2017 2:21:24 PM	35319
Toluene	ND	0.046		mg/Kg	1	12/6/2017 2:21:24 PM	35319
Ethylbenzene	ND	0.046		mg/Kg	1	12/6/2017 2:21:24 PM	35319
Xylenes, Total	0.26	0.093		mg/Kg	1	12/6/2017 2:21:24 PM	35319
Surr: 4-Bromofluorobenzene	95.2	80-120		%Rec	1	12/6/2017 2:21:24 PM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-002 **Matrix:** SOIL

Client Sample ID: BH-3 23'-25'
Collection Date: 11/30/2017 11:30:00 AM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	12/6/2017 12:39:04 PM	35332
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/6/2017 12:39:04 PM	35332
Surr: DNOP	105	70-130		%Rec	1	12/6/2017 12:39:04 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/6/2017 3:31:27 PM	35319
Surr: BFB	93.8	15-316		%Rec	1	12/6/2017 3:31:27 PM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	12/6/2017 3:31:27 PM	35319
Toluene	ND	0.049		mg/Kg	1	12/6/2017 3:31:27 PM	35319
Ethylbenzene	ND	0.049		mg/Kg	1	12/6/2017 3:31:27 PM	35319
Xylenes, Total	ND	0.098		mg/Kg	1	12/6/2017 3:31:27 PM	35319
Surr: 4-Bromofluorobenzene	85.1	80-120		%Rec	1	12/6/2017 3:31:27 PM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-003
Matrix: AQUEOUS
Client Sample ID: BH-3
Collection Date: 11/30/2017 11:50:00 AM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **TOM**	
Diesel Range Organics (DRO)	31	1.0	H	mg/L	1	12/12/2017 10:29:01 AM	35444
Motor Oil Range Organics (MRO)	ND	5.0	H	mg/L	1	12/12/2017 10:29:01 AM	35444
Surr: DNOP	105	77.5-161	H	%Rec	1	12/12/2017 10:29:01 AM	35444
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.10	D	mg/L	2	12/8/2017 10:45:05 AM	G47631
Surr: BFB	109	69.3-150	D	%Rec	2	12/8/2017 10:45:05 AM	G47631
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	1.2	1.0	DP	µg/L	2	12/6/2017 5:30:43 PM	A47582
Toluene	1.9	1.0	DP	µg/L	2	12/6/2017 5:30:43 PM	A47582
Ethylbenzene	ND	1.0	DP	µg/L	2	12/6/2017 5:30:43 PM	A47582
Xylenes, Total	6.5	1.5	DP	µg/L	2	12/6/2017 5:30:43 PM	A47582
Surr: 1,2-Dichloroethane-d4	83.1	70-130	DP	%Rec	2	12/6/2017 5:30:43 PM	A47582
Surr: 4-Bromofluorobenzene	112	70-130	DP	%Rec	2	12/6/2017 5:30:43 PM	A47582
Surr: Dibromofluoromethane	87.6	70-130	DP	%Rec	2	12/6/2017 5:30:43 PM	A47582
Surr: Toluene-d8	99.5	70-130	DP	%Rec	2	12/6/2017 5:30:43 PM	A47582

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-004 **Matrix:** SOIL

Client Sample ID: BH-4 3'-5'
Collection Date: 11/30/2017 12:10:00 PM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	12/6/2017 1:03:22 PM	35332
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/6/2017 1:03:22 PM	35332
Surr: DNOP	103	70-130		%Rec	1	12/6/2017 1:03:22 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	15	4.7		mg/Kg	1	12/7/2017 7:29:34 PM	35319
Surr: BFB	125	15-316		%Rec	1	12/7/2017 7:29:34 PM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/7/2017 7:29:34 PM	35319
Toluene	ND	0.047		mg/Kg	1	12/7/2017 7:29:34 PM	35319
Ethylbenzene	ND	0.047		mg/Kg	1	12/7/2017 7:29:34 PM	35319
Xylenes, Total	0.25	0.094		mg/Kg	1	12/7/2017 7:29:34 PM	35319
Surr: 4-Bromofluorobenzene	87.1	80-120		%Rec	1	12/7/2017 7:29:34 PM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-005 **Matrix:** SOIL

Client Sample ID: BH-4 18'-20'
Collection Date: 11/30/2017 12:40:00 PM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/6/2017 1:27:49 PM	35332
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/6/2017 1:27:49 PM	35332
Surr: DNOP	101	70-130		%Rec	1	12/6/2017 1:27:49 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/6/2017 5:05:14 PM	35319
Surr: BFB	91.3	15-316		%Rec	1	12/6/2017 5:05:14 PM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/6/2017 5:05:14 PM	35319
Toluene	ND	0.048		mg/Kg	1	12/6/2017 5:05:14 PM	35319
Ethylbenzene	ND	0.048		mg/Kg	1	12/6/2017 5:05:14 PM	35319
Xylenes, Total	ND	0.096		mg/Kg	1	12/6/2017 5:05:14 PM	35319
Surr: 4-Bromofluorobenzene	83.7	80-120		%Rec	1	12/6/2017 5:05:14 PM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-006 **Matrix:** SOIL

Client Sample ID: BH-2 13-'15'
Collection Date: 11/30/2017 1:40:00 PM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	12/6/2017 1:52:16 PM	35332
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/6/2017 1:52:16 PM	35332
Surr: DNOP	100	70-130		%Rec	1	12/6/2017 1:52:16 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/7/2017 7:52:32 PM	35319
Surr: BFB	88.8	15-316		%Rec	1	12/7/2017 7:52:32 PM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	12/7/2017 7:52:32 PM	35319
Toluene	ND	0.047		mg/Kg	1	12/7/2017 7:52:32 PM	35319
Ethylbenzene	ND	0.047		mg/Kg	1	12/7/2017 7:52:32 PM	35319
Xylenes, Total	ND	0.094		mg/Kg	1	12/7/2017 7:52:32 PM	35319
Surr: 4-Bromofluorobenzene	81.8	80-120		%Rec	1	12/7/2017 7:52:32 PM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-007 **Matrix:** SOIL

Client Sample ID: BH-2 23'-25'
Collection Date: 11/30/2017 2:00:00 PM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	12/6/2017 2:16:42 PM	35332
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/6/2017 2:16:42 PM	35332
Surr: DNOP	100	70-130		%Rec	1	12/6/2017 2:16:42 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/7/2017 8:15:29 PM	35319
Surr: BFB	89.5	15-316		%Rec	1	12/7/2017 8:15:29 PM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	12/7/2017 8:15:29 PM	35319
Toluene	ND	0.047		mg/Kg	1	12/7/2017 8:15:29 PM	35319
Ethylbenzene	ND	0.047		mg/Kg	1	12/7/2017 8:15:29 PM	35319
Xylenes, Total	ND	0.094		mg/Kg	1	12/7/2017 8:15:29 PM	35319
Surr: 4-Bromofluorobenzene	84.4	80-120		%Rec	1	12/7/2017 8:15:29 PM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-008 **Matrix:** SOIL

Client Sample ID: BH-1 13'-15'
Collection Date: 11/30/2017 2:20:00 PM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	12/6/2017 2:41:12 PM	35332
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/6/2017 2:41:12 PM	35332
Surr: DNOP	101	70-130		%Rec	1	12/6/2017 2:41:12 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/7/2017 8:38:27 PM	35319
Surr: BFB	87.4	15-316		%Rec	1	12/7/2017 8:38:27 PM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	12/7/2017 8:38:27 PM	35319
Toluene	ND	0.049		mg/Kg	1	12/7/2017 8:38:27 PM	35319
Ethylbenzene	ND	0.049		mg/Kg	1	12/7/2017 8:38:27 PM	35319
Xylenes, Total	ND	0.099		mg/Kg	1	12/7/2017 8:38:27 PM	35319
Surr: 4-Bromofluorobenzene	83.1	80-120		%Rec	1	12/7/2017 8:38:27 PM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-009 **Matrix:** SOIL

Client Sample ID: BH-1 18'-20'
Collection Date: 11/30/2017 2:40:00 PM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/6/2017 3:05:17 PM	35332
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/6/2017 3:05:17 PM	35332
Surr: DNOP	95.3	70-130		%Rec	1	12/6/2017 3:05:17 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/7/2017 3:28:58 AM	35319
Surr: BFB	83.6	15-316		%Rec	1	12/7/2017 3:28:58 AM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/7/2017 3:28:58 AM	35319
Toluene	ND	0.048		mg/Kg	1	12/7/2017 3:28:58 AM	35319
Ethylbenzene	ND	0.048		mg/Kg	1	12/7/2017 3:28:58 AM	35319
Xylenes, Total	ND	0.096		mg/Kg	1	12/7/2017 3:28:58 AM	35319
Surr: 4-Bromofluorobenzene	81.3	80-120		%Rec	1	12/7/2017 3:28:58 AM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-010 **Matrix:** SOIL

Client Sample ID: BH-5 3'-5'
Collection Date: 12/1/2017 9:15:00 AM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	12/6/2017 3:29:04 PM	35332
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/6/2017 3:29:04 PM	35332
Surr: DNOP	100	70-130		%Rec	1	12/6/2017 3:29:04 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	12/7/2017 9:01:21 PM	35319
Surr: BFB	84.0	15-316		%Rec	1	12/7/2017 9:01:21 PM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	12/7/2017 9:01:21 PM	35319
Toluene	ND	0.046		mg/Kg	1	12/7/2017 9:01:21 PM	35319
Ethylbenzene	ND	0.046		mg/Kg	1	12/7/2017 9:01:21 PM	35319
Xylenes, Total	ND	0.091		mg/Kg	1	12/7/2017 9:01:21 PM	35319
Surr: 4-Bromofluorobenzene	82.2	80-120		%Rec	1	12/7/2017 9:01:21 PM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-011 **Matrix:** SOIL

Client Sample ID: BH-5 18'-20'
Collection Date: 12/1/2017 9:30:00 AM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/6/2017 3:53:29 PM	35332
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/6/2017 3:53:29 PM	35332
Surr: DNOP	97.6	70-130		%Rec	1	12/6/2017 3:53:29 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/7/2017 4:14:39 AM	35319
Surr: BFB	83.4	15-316		%Rec	1	12/7/2017 4:14:39 AM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/7/2017 4:14:39 AM	35319
Toluene	ND	0.048		mg/Kg	1	12/7/2017 4:14:39 AM	35319
Ethylbenzene	ND	0.048		mg/Kg	1	12/7/2017 4:14:39 AM	35319
Xylenes, Total	ND	0.095		mg/Kg	1	12/7/2017 4:14:39 AM	35319
Surr: 4-Bromofluorobenzene	81.1	80-120		%Rec	1	12/7/2017 4:14:39 AM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-012 **Matrix:** SOIL

Client Sample ID: BH-6 13'-15'
Collection Date: 12/1/2017 9:50:00 AM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	12/6/2017 4:17:45 PM	35332
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	12/6/2017 4:17:45 PM	35332
Surr: DNOP	96.8	70-130		%Rec	1	12/6/2017 4:17:45 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/7/2017 9:24:17 PM	35319
Surr: BFB	85.8	15-316		%Rec	1	12/7/2017 9:24:17 PM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	12/7/2017 9:24:17 PM	35319
Toluene	ND	0.049		mg/Kg	1	12/7/2017 9:24:17 PM	35319
Ethylbenzene	ND	0.049		mg/Kg	1	12/7/2017 9:24:17 PM	35319
Xylenes, Total	ND	0.098		mg/Kg	1	12/7/2017 9:24:17 PM	35319
Surr: 4-Bromofluorobenzene	82.4	80-120		%Rec	1	12/7/2017 9:24:17 PM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-013 **Matrix:** SOIL

Client Sample ID: BH-6 18'-20'
Collection Date: 12/1/2017 10:10:00 AM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/6/2017 4:43:21 PM	35332
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/6/2017 4:43:21 PM	35332
Surr: DNOP	88.2	70-130		%Rec	1	12/6/2017 4:43:21 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/7/2017 9:47:11 PM	35319
Surr: BFB	90.2	15-316		%Rec	1	12/7/2017 9:47:11 PM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/7/2017 9:47:11 PM	35319
Toluene	ND	0.049		mg/Kg	1	12/7/2017 9:47:11 PM	35319
Ethylbenzene	ND	0.049		mg/Kg	1	12/7/2017 9:47:11 PM	35319
Xylenes, Total	ND	0.098		mg/Kg	1	12/7/2017 9:47:11 PM	35319
Surr: 4-Bromofluorobenzene	87.2	80-120		%Rec	1	12/7/2017 9:47:11 PM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-014 **Matrix:** SOIL

Client Sample ID: BH-7 4'-6'
Collection Date: 12/1/2017 10:40:00 AM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/6/2017 5:07:33 PM	35332
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/6/2017 5:07:33 PM	35332
Surr: DNOP	103	70-130		%Rec	1	12/6/2017 5:07:33 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/7/2017 12:30:32 AM	35319
Surr: BFB	112	15-316		%Rec	1	12/7/2017 12:30:32 AM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/7/2017 12:30:32 AM	35319
Toluene	ND	0.049		mg/Kg	1	12/7/2017 12:30:32 AM	35319
Ethylbenzene	ND	0.049		mg/Kg	1	12/7/2017 12:30:32 AM	35319
Xylenes, Total	ND	0.098		mg/Kg	1	12/7/2017 12:30:32 AM	35319
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	12/7/2017 12:30:32 AM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-015 **Matrix:** SOIL

Client Sample ID: BH-7 18'-20'
Collection Date: 12/1/2017 10:50:00 AM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/6/2017 5:31:57 PM	35332
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/6/2017 5:31:57 PM	35332
Surr: DNOP	92.6	70-130		%Rec	1	12/6/2017 5:31:57 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/7/2017 10:10:06 PM	35319
Surr: BFB	86.6	15-316		%Rec	1	12/7/2017 10:10:06 PM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/7/2017 10:10:06 PM	35319
Toluene	ND	0.047		mg/Kg	1	12/7/2017 10:10:06 PM	35319
Ethylbenzene	ND	0.047		mg/Kg	1	12/7/2017 10:10:06 PM	35319
Xylenes, Total	ND	0.095		mg/Kg	1	12/7/2017 10:10:06 PM	35319
Surr: 4-Bromofluorobenzene	84.8	80-120		%Rec	1	12/7/2017 10:10:06 PM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-016 **Matrix:** SOIL

Client Sample ID: BH-8 7'-10'
Collection Date: 12/1/2017 11:30:00 AM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/6/2017 5:56:03 PM	35332
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/6/2017 5:56:03 PM	35332
Surr: DNOP	102	70-130		%Rec	1	12/6/2017 5:56:03 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	38	4.9		mg/Kg	1	12/7/2017 1:17:22 AM	35319
Surr: BFB	446	15-316	S	%Rec	1	12/7/2017 1:17:22 AM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	12/7/2017 1:17:22 AM	35319
Toluene	ND	0.049		mg/Kg	1	12/7/2017 1:17:22 AM	35319
Ethylbenzene	ND	0.049		mg/Kg	1	12/7/2017 1:17:22 AM	35319
Xylenes, Total	0.14	0.099		mg/Kg	1	12/7/2017 1:17:22 AM	35319
Surr: 4-Bromofluorobenzene	117	80-120		%Rec	1	12/7/2017 1:17:22 AM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-017 **Matrix:** SOIL

Client Sample ID: BH-8 18'-20'
Collection Date: 12/1/2017 11:45:00 AM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/6/2017 6:20:10 PM	35332
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/6/2017 6:20:10 PM	35332
Surr: DNOP	87.0	70-130		%Rec	1	12/6/2017 6:20:10 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/7/2017 1:40:45 AM	35319
Surr: BFB	115	15-316		%Rec	1	12/7/2017 1:40:45 AM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/7/2017 1:40:45 AM	35319
Toluene	ND	0.049		mg/Kg	1	12/7/2017 1:40:45 AM	35319
Ethylbenzene	ND	0.049		mg/Kg	1	12/7/2017 1:40:45 AM	35319
Xylenes, Total	ND	0.098		mg/Kg	1	12/7/2017 1:40:45 AM	35319
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	12/7/2017 1:40:45 AM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-018 **Matrix:** SOIL

Client Sample ID: BH-9 7'-10'
Collection Date: 12/1/2017 12:10:00 PM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/6/2017 6:44:08 PM	35332
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	12/6/2017 6:44:08 PM	35332
Surr: DNOP	102	70-130		%Rec	1	12/6/2017 6:44:08 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/7/2017 2:04:07 AM	35319
Surr: BFB	105	15-316		%Rec	1	12/7/2017 2:04:07 AM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/7/2017 2:04:07 AM	35319
Toluene	ND	0.048		mg/Kg	1	12/7/2017 2:04:07 AM	35319
Ethylbenzene	ND	0.048		mg/Kg	1	12/7/2017 2:04:07 AM	35319
Xylenes, Total	ND	0.095		mg/Kg	1	12/7/2017 2:04:07 AM	35319
Surr: 4-Bromofluorobenzene	98.4	80-120		%Rec	1	12/7/2017 2:04:07 AM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams
Project: Kutz Gas Plan
Lab ID: 1712109-019 **Matrix:** SOIL

Client Sample ID: BH-9 18'-20'
Collection Date: 12/1/2017 12:20:00 PM
Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/6/2017 7:08:16 PM	35332
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/6/2017 7:08:16 PM	35332
Surr: DNOP	94.5	70-130		%Rec	1	12/6/2017 7:08:16 PM	35332
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	12/7/2017 10:32:59 PM	35319
Surr: BFB	86.2	15-316		%Rec	1	12/7/2017 10:32:59 PM	35319
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	12/7/2017 10:32:59 PM	35319
Toluene	ND	0.046		mg/Kg	1	12/7/2017 10:32:59 PM	35319
Ethylbenzene	ND	0.046		mg/Kg	1	12/7/2017 10:32:59 PM	35319
Xylenes, Total	ND	0.091		mg/Kg	1	12/7/2017 10:32:59 PM	35319
Surr: 4-Bromofluorobenzene	84.8	80-120		%Rec	1	12/7/2017 10:32:59 PM	35319

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712109**

13-Dec-17

Client: Williams

Project: Kutz Gas Plan

Sample ID **LCS-35333**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **35333**	RunNo: **47491**
Prep Date: **12/5/2017**	Analysis Date: **12/6/2017**	SeqNo: **1518687** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		88.5	70	130			

Sample ID **MB-35333**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **35333**	RunNo: **47491**
Prep Date: **12/5/2017**	Analysis Date: **12/6/2017**	SeqNo: **1518689** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.6		10.00		95.5	70	130			

Sample ID **LCS-35332**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **35332**	RunNo: **47518**
Prep Date: **12/5/2017**	Analysis Date: **12/6/2017**	SeqNo: **1518925** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.9	73.2	114			
Surr: DNOP	4.4		5.000		88.2	70	130			

Sample ID **MB-35332**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **35332**	RunNo: **47518**
Prep Date: **12/5/2017**	Analysis Date: **12/6/2017**	SeqNo: **1518926** 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	10		10.00		103	70	130			

Sample ID **LCS-35334**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **35334**	RunNo: **47491**
Prep Date: **12/5/2017**	Analysis Date: **12/6/2017**	SeqNo: **1520256** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.6		5.000		71.7	70	130			

Sample ID **MB-35334**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **35334**	RunNo: **47491**
Prep Date: **12/5/2017**	Analysis Date: **12/6/2017**	SeqNo: **1520258** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.8		10.00		78.0	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712109**

13-Dec-17

Client: Williams

Project: Kutz Gas Plan

Sample ID **1712109-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-3 2'-4'**	Batch ID: **35332**	RunNo: **47518**
Prep Date: **12/5/2017**	Analysis Date: **12/7/2017**	SeqNo: **1521039** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	64	9.3	46.38	61.38	4.84	55.8	125			S
Surr: DNOP	4.8		4.638		104	70	130			

Sample ID **1712109-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-3 2'-4'**	Batch ID: **35332**	RunNo: **47518**
Prep Date: **12/5/2017**	Analysis Date: **12/7/2017**	SeqNo: **1521040** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	9.3	46.64	61.38	-20.6	55.8	125	20.6	20	RS
Surr: DNOP	5.0		4.664		108	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712109**

13-Dec-17

Client: Williams

Project: Kutz Gas Plan

Sample ID **LCS-35300**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **35300**	RunNo: **47491**
Prep Date: **12/4/2017**	Analysis Date: **12/5/2017**	SeqNo: **1518569** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	0.49		0.5000		97.5	77.5	161			

Sample ID **MB-35300**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **35300**	RunNo: **47491**
Prep Date: **12/4/2017**	Analysis Date: **12/5/2017**	SeqNo: **1518570** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	0.99		1.000		99.3	77.5	161			

Sample ID **LCS-35444**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **35444**	RunNo: **47698**
Prep Date: **12/11/2017**	Analysis Date: **12/12/2017**	SeqNo: **1524686** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	112	92.3	135			
Surr: DNOP	0.51		0.5000		102	77.5	161			

Sample ID **MB-35444**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **35444**	RunNo: **47698**
Prep Date: **12/11/2017**	Analysis Date: **12/12/2017**	SeqNo: **1524687** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.95		1.000		95.4	77.5	161			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712109**

13-Dec-17

Client: Williams

Project: Kutz Gas Plan

Sample ID **MB-35330**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **35330**	RunNo: **47564**
Prep Date: **12/5/2017**	Analysis Date: **12/6/2017**	SeqNo: **1519487** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	970		1000		97.4	15	316			

Sample ID **LCS-35330**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **35330**	RunNo: **47564**
Prep Date: **12/5/2017**	Analysis Date: **12/6/2017**	SeqNo: **1519488** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		108	15	316			

Sample ID **MB-35319**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **35319**	RunNo: **47564**
Prep Date: **12/5/2017**	Analysis Date: **12/6/2017**	SeqNo: **1519510** 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	890		1000		88.6	15	316			

Sample ID **LCS-35319**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **35319**	RunNo: **47564**
Prep Date: **12/5/2017**	Analysis Date: **12/6/2017**	SeqNo: **1519511** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	110	75.9	131			
Surr: BFB	1100		1000		114	15	316			

Sample ID **1712109-002AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-3 23'-25'**	Batch ID: **35319**	RunNo: **47564**
Prep Date: **12/5/2017**	Analysis Date: **12/6/2017**	SeqNo: **1519517** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.9	24.51	0	106	77.8	128			
Surr: BFB	1000		980.4		105	15	316			

Sample ID **1712109-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-3 23'-25'**	Batch ID: **35319**	RunNo: **47564**
Prep Date: **12/5/2017**	Analysis Date: **12/6/2017**	SeqNo: **1519518** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.8	24.15	0	102	77.8	128	5.42	20	
Surr: BFB	1000		966.2		106	15	316	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712109**

13-Dec-17

Client: Williams

Project: Kutz Gas Plan

Sample ID	**MB-35335**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**PBS**	Batch ID:	**35335**		RunNo:	**47603**				
Prep Date:	**12/5/2017**	Analysis Date:	**12/7/2017**		SeqNo:	**1521404**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	860		1000		86.4	15	316			

Sample ID	**LCS-35335**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**LCSS**	Batch ID:	**35335**		RunNo:	**47603**				
Prep Date:	**12/5/2017**	Analysis Date:	**12/7/2017**		SeqNo:	**1521405**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		105	15	316			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712109**

13-Dec-17

Client: Williams

Project: Kutz Gas Plan

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G47631**	RunNo: **47631**
Prep Date:	Analysis Date: **12/8/2017**	SeqNo: **1522771** 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	23		20.00		114	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G47631**	RunNo: **47631**
Prep Date:	Analysis Date: **12/8/2017**	SeqNo: **1522772** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.51	0.050	0.5000	0	103	75.8	123			
Surr: BFB	25		20.00		126	69.3	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712109**

13-Dec-17

Client: Williams

Project: Kutz Gas Plan

Sample ID	**MB-35330**	SampType:	**MBLK**		TestCode:	**EPA Method 8021B: Volatiles**				
Client ID:	**PBS**	Batch ID:	**35330**		RunNo:	**47564**				
Prep Date:	**12/5/2017**	Analysis Date:	**12/6/2017**		SeqNo:	**1519530**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.91		1.000		91.0	80	120			

Sample ID	**LCS-35330**	SampType:	**LCS**		TestCode:	**EPA Method 8021B: Volatiles**				
Client ID:	**LCSS**	Batch ID:	**35330**		RunNo:	**47564**				
Prep Date:	**12/5/2017**	Analysis Date:	**12/6/2017**		SeqNo:	**1519531**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.95		1.000		94.6	80	120			

Sample ID	**MB-35319**	SampType:	**MBLK**		TestCode:	**EPA Method 8021B: Volatiles**				
Client ID:	**PBS**	Batch ID:	**35319**		RunNo:	**47564**				
Prep Date:	**12/5/2017**	Analysis Date:	**12/6/2017**		SeqNo:	**1519534**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.87		1.000		86.6	80	120			

Sample ID	**LCS-35319**	SampType:	**LCS**		TestCode:	**EPA Method 8021B: Volatiles**				
Client ID:	**LCSS**	Batch ID:	**35319**		RunNo:	**47564**				
Prep Date:	**12/5/2017**	Analysis Date:	**12/6/2017**		SeqNo:	**1519535**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.3	77.3	128			
Toluene	0.95	0.050	1.000	0	94.9	79.2	125			
Ethylbenzene	0.94	0.050	1.000	0	93.8	80.7	127			
Xylenes, Total	2.8	0.10	3.000	0	94.6	81.6	129			
Surr: 4-Bromofluorobenzene	0.87		1.000		86.9	80	120			

Sample ID	**1712109-001AMS**	SampType:	**MS**		TestCode:	**EPA Method 8021B: Volatiles**				
Client ID:	**BH-3 2'-4'**	Batch ID:	**35319**		RunNo:	**47564**				
Prep Date:	**12/5/2017**	Analysis Date:	**12/6/2017**		SeqNo:	**1519540**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	0.9862	0.03957	96.5	80.9	132			
Toluene	0.98	0.049	0.9862	0	99.6	79.8	136			
Ethylbenzene	0.98	0.049	0.9862	0	99.7	79.4	140			
Xylenes, Total	3.2	0.099	2.959	0.2630	98.3	78.5	142			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712109**

13-Dec-17

Client: Williams

Project: Kutz Gas Plan

Sample ID	**1712109-001AMS**	SampType: **MS**			TestCode: **EPA Method 8021B: Volatiles**				
Client ID:	**BH-3 2'-4'**	Batch ID: **35319**			RunNo: **47564**				
Prep Date:	**12/5/2017**	Analysis Date: **12/6/2017**			SeqNo: **1519540**	Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.90		0.9862		91.6	80	120			

Sample ID	**1712109-001AMSD**	SampType: **MSD**			TestCode: **EPA Method 8021B: Volatiles**				
Client ID:	**BH-3 2'-4'**	Batch ID: **35319**			RunNo: **47564**				
Prep Date:	**12/5/2017**	Analysis Date: **12/6/2017**			SeqNo: **1519541**	Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	0.9823	0.03957	91.0	80.9	132	6.04	20	
Toluene	0.92	0.049	0.9823	0	93.5	79.8	136	6.66	20	
Ethylbenzene	0.93	0.049	0.9823	0	94.3	79.4	140	5.95	20	
Xylenes, Total	2.9	0.098	2.947	0.2630	90.4	78.5	142	8.05	20	
Surr: 4-Bromofluorobenzene	0.90		0.9823		91.5	80	120	0	0	

Sample ID	**MB-35335**	SampType: **MBLK**			TestCode: **EPA Method 8021B: Volatiles**				
Client ID:	**PBS**	Batch ID: **35335**			RunNo: **47603**				
Prep Date:	**12/5/2017**	Analysis Date: **12/7/2017**			SeqNo: **1521440**	Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.81		1.000		81.4	80	120			

Sample ID	**LCS-35335**	SampType: **LCS**			TestCode: **EPA Method 8021B: Volatiles**				
Client ID:	**LCSS**	Batch ID: **35335**			RunNo: **47603**				
Prep Date:	**12/5/2017**	Analysis Date: **12/7/2017**			SeqNo: **1521441**	Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.85		1.000		85.2	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712109**

13-Dec-17

Client: Williams

Project: Kutz Gas Plan

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **A47582**	RunNo: **47582**
Prep Date:	Analysis Date: **12/6/2017**	SeqNo: **1519841** 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	8.0		10.00		79.6	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	8.6		10.00		86.0	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **A47582**	RunNo: **47582**
Prep Date:	Analysis Date: **12/6/2017**	SeqNo: **1519842** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	85.3	70	130			
Toluene	20	1.0	20.00	0	98.6	70	130			
Surr: 1,2-Dichloroethane-d4	7.9		10.00		79.1	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.0	70	130			
Surr: Toluene-d8	9.7		10.00		96.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN Work Order Number: 1712109 RcptNo: 1

Received By: Ashley Gallegos 12/2/2017 8:30:00 AM

Completed By: Anne Thorne 12/4/2017 12:13:32 PM

Reviewed By: DRS 12/04/17

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?	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 ☐
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 ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	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 with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: [ ] eMail [ ] Phone [ ] Fax [ ] In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.9	Good	Yes			

Chain-of-Custody Record

Client: Williams

Attn. Aaron Goller

Mailing Address: 295 Chipeta Way

Salt Lake City, UT. 84104

Phone #: 801-584-6746

email or Fax#: aaron.goller@williams.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other _____

☒ EDD (Type) PDF

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: Kutz Gas Plant

Project #: 03401700 3

Project Manager: Williams: Aaron Goller
LTE: Danny Burns

Sampler: Eric Carroll

On Ice: ☒ Yes ☐ No

Sample Temperature: 0.4+0.5(CF)=0.9

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1712109	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA) BTEx	8270 (Semi-VOA)	Air Bubbles (Y or N)
11/3/17	11:15	Soil	BH-3 2'-4'	1 4oz	cool	001	X		X									
	11:30	Soil	BH-3 23'-25'	1 4oz	cool	002	X		X									
	11:50	GW	BH-3	4 VOAs	HCl	003			X							X		
	12:10	Soil	BH-4 3'-5'	1 4oz	cool	004	X		X									
	12:40	Soil	BH-4 18'-20'	1 4oz	cool	005	X		X									
	13:40	Soil	BH-2 13'-15'	↓	↓	006	X		X									
	14:00	Soil	BH-2 23'-25'			007	X		X									
	14:30	Soil	BH-1 13'-15'			008	X		X									
	14:40	Soil	BH-1 18'-20'	↓	↓	009	X		X									
~~12/1/17~~	~~13:30~~	~~Soil~~	~~SP03~~	~~1 4oz~~	~~Cool~~		~~X~~		~~X~~			EC						
~~12/1/17~~	~~13:40~~	~~Soil~~	~~SP04~~	~~1 4oz~~	~~Cool~~		~~X~~		~~X~~				EC					

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
12/1/17	14:40	Eric Carroll	Chris Watt	12/1/17	1440	Please CC: aager@ltenv.com dburns@ltenv.com
12/1/17	1955	Chris Watt	Ashley M Gallegos	12/02/17	0830	

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

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: Williams	Turn-Around Time: ☑ Standard ☐ Rush
Attn: Aaron Goler	Project Name: Kutz Gas plant
Mailing Address: 295 Chipeta Way	Project #: 034017003
Salt Lake City, UT 84108	
Phone #: 801-584-6746	
email or Fax#: aaron.goler@williams.com	Project Manager: Williams: Aaron Goler LTE: Donny Burns
QA/QC Package: ☑ Standard ☐ Level 4 (Full Validation)	Sampler: Eric Carroll
Accreditation ☐ NELAP ☐ Other	On Ice: ☑ Yes ☐ No
☑ EDD (Type) PDF	Sample Temperature: 0.4+0.5(CF)=0.9

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1712109	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
12/1/17	09:15	Soil	BH-5 3'-5'	1403	cool	-010	X		X									
	09:30		BH-5 18'-20'			-011	X		X									
	09:50		BH-6 13'-15'			-012	X		X									
	10:10		BH-6 18'-20'			-013	X		X									
	10:40		BH-7 4'-6'			-014	X		X									
	10:50		BH-7 18'-20'			-015	X		X									
	11:30		BH-8 7'-10'			-016	X		X									
	11:45		BH-8 18'-20'			-017	X		X									
	12:10		BH-9 7'-10'			-018	X		X									
	12:20		BH-9 18'-20'			-019	X		X									
	13:15		SPO1				X		X		EC							
	13:20		SPO2				X		X			EC						

Date	Time	Relinquished by:	Received by:	Date	Time
12/1/17	14:40			12/1/17	1440
12/1/17	1958			12/02/17	0830

Remarks: Please cc: aager@itenv.com dburns@itenv.com

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 15, 2018

Aaron Galer
Williams Four Corners
188 CR 4900
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Kutz Canyon GP OrderNo.: 1806560

Dear Aaron Galer:

Hall Environmental Analysis Laboratory received 28 sample(s) on 6/9/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. 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 qualifiers 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1806560**
Date Reported: **6/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-001 **Matrix:** SOIL

Client Sample ID: BH16 8-12'
Collection Date: 6/6/2018 2:30:00 PM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	420	9.9		mg/Kg	1	6/13/2018 11:15:00 PM	38631
Motor Oil Range Organics (MRO)	670	50		mg/Kg	1	6/13/2018 11:15:00 PM	38631
Surr: DNOP	129	70-130		%Rec	1	6/13/2018 11:15:00 PM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	4100	240		mg/Kg	50	6/12/2018 10:22:49 AM	38605
Surr: BFB	200	15-316		%Rec	50	6/12/2018 10:22:49 AM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	11	1.2		mg/Kg	50	6/12/2018 10:22:49 AM	38605
Toluene	ND	2.4		mg/Kg	50	6/12/2018 10:22:49 AM	38605
Ethylbenzene	14	2.4		mg/Kg	50	6/12/2018 10:22:49 AM	38605
Xylenes, Total	140	4.8		mg/Kg	50	6/12/2018 10:22:49 AM	38605
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	50	6/12/2018 10:22:49 AM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-002 **Matrix:** SOIL

Client Sample ID: BH16 12-15'
Collection Date: 6/6/2018 2:35:00 PM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2018 12:27:41 AM	38631
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2018 12:27:41 AM	38631
Surr: DNOP	106	70-130		%Rec	1	6/14/2018 12:27:41 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/12/2018 11:46:06 PM	38605
Surr: BFB	86.8	15-316		%Rec	1	6/12/2018 11:46:06 PM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/12/2018 11:46:06 PM	38605
Toluene	ND	0.049		mg/Kg	1	6/12/2018 11:46:06 PM	38605
Ethylbenzene	ND	0.049		mg/Kg	1	6/12/2018 11:46:06 PM	38605
Xylenes, Total	ND	0.098		mg/Kg	1	6/12/2018 11:46:06 PM	38605
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	6/12/2018 11:46:06 PM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-003 **Matrix:** SOIL

Client Sample ID: BH17 14-16'
Collection Date: 6/6/2018 2:00:00 PM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	41	9.9		mg/Kg	1	6/14/2018 12:51:52 AM	38631
Motor Oil Range Organics (MRO)	110	50		mg/Kg	1	6/14/2018 12:51:52 AM	38631
Surr: DNOP	111	70-130		%Rec	1	6/14/2018 12:51:52 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	86	9.6		mg/Kg	2	6/13/2018 4:20:03 PM	38605
Surr: BFB	307	15-316		%Rec	2	6/13/2018 4:20:03 PM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.048		mg/Kg	2	6/13/2018 4:20:03 PM	38605
Toluene	ND	0.096		mg/Kg	2	6/13/2018 4:20:03 PM	38605
Ethylbenzene	0.28	0.096		mg/Kg	2	6/13/2018 4:20:03 PM	38605
Xylenes, Total	3.0	0.19		mg/Kg	2	6/13/2018 4:20:03 PM	38605
Surr: 4-Bromofluorobenzene	116	80-120		%Rec	2	6/13/2018 4:20:03 PM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-004 **Matrix:** SOIL

Client Sample ID: BH17 20-23'
Collection Date: 6/6/2018 2:05:00 PM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/14/2018 1:16:12 AM	38631
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/14/2018 1:16:12 AM	38631
Surr: DNOP	112	70-130		%Rec	1	6/14/2018 1:16:12 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/13/2018 12:32:41 AM	38605
Surr: BFB	85.9	15-316		%Rec	1	6/13/2018 12:32:41 AM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/13/2018 12:32:41 AM	38605
Toluene	ND	0.048		mg/Kg	1	6/13/2018 12:32:41 AM	38605
Ethylbenzene	ND	0.048		mg/Kg	1	6/13/2018 12:32:41 AM	38605
Xylenes, Total	ND	0.095		mg/Kg	1	6/13/2018 12:32:41 AM	38605
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	6/13/2018 12:32:41 AM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-005 **Matrix:** SOIL

Client Sample ID: BH18 10-12'
Collection Date: 6/6/2018 3:00:00 PM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/14/2018 1:40:29 AM	38631
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/14/2018 1:40:29 AM	38631
Surr: DNOP	111	70-130		%Rec	1	6/14/2018 1:40:29 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	5.2	4.6		mg/Kg	1	6/13/2018 4:43:46 PM	38605
Surr: BFB	97.7	15-316		%Rec	1	6/13/2018 4:43:46 PM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	6/13/2018 4:43:46 PM	38605
Toluene	ND	0.046		mg/Kg	1	6/13/2018 4:43:46 PM	38605
Ethylbenzene	ND	0.046		mg/Kg	1	6/13/2018 4:43:46 PM	38605
Xylenes, Total	ND	0.092		mg/Kg	1	6/13/2018 4:43:46 PM	38605
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	6/13/2018 4:43:46 PM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-006 **Matrix:** SOIL

Client Sample ID: BH19 14-16'
Collection Date: 6/7/2018 9:40:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	340	10		mg/Kg	1	6/14/2018 2:04:53 AM	38631
Motor Oil Range Organics (MRO)	510	50		mg/Kg	1	6/14/2018 2:04:53 AM	38631
Surr: DNOP	126	70-130		%Rec	1	6/14/2018 2:04:53 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	1900	240		mg/Kg	50	6/13/2018 12:55:59 AM	38605
Surr: BFB	161	15-316		%Rec	50	6/13/2018 12:55:59 AM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	1.3	1.2		mg/Kg	50	6/13/2018 12:55:59 AM	38605
Toluene	13	2.4		mg/Kg	50	6/13/2018 12:55:59 AM	38605
Ethylbenzene	5.5	2.4		mg/Kg	50	6/13/2018 12:55:59 AM	38605
Xylenes, Total	53	4.8		mg/Kg	50	6/13/2018 12:55:59 AM	38605
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	50	6/13/2018 12:55:59 AM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-007 **Matrix:** SOIL

Client Sample ID: BH19 20-24'
Collection Date: 6/7/2018 9:50:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/14/2018 2:29:04 AM	38631
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/14/2018 2:29:04 AM	38631
Surr: DNOP	122	70-130		%Rec	1	6/14/2018 2:29:04 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/13/2018 5:07:25 PM	38605
Surr: BFB	83.9	15-316		%Rec	1	6/13/2018 5:07:25 PM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/13/2018 5:07:25 PM	38605
Toluene	ND	0.049		mg/Kg	1	6/13/2018 5:07:25 PM	38605
Ethylbenzene	ND	0.049		mg/Kg	1	6/13/2018 5:07:25 PM	38605
Xylenes, Total	ND	0.099		mg/Kg	1	6/13/2018 5:07:25 PM	38605
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	6/13/2018 5:07:25 PM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-008 **Matrix:** SOIL

Client Sample ID: BH20 14-16'
Collection Date: 6/7/2018 10:45:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/14/2018 2:53:18 AM	38631
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/14/2018 2:53:18 AM	38631
Surr: DNOP	106	70-130		%Rec	1	6/14/2018 2:53:18 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/13/2018 5:31:05 PM	38605
Surr: BFB	82.0	15-316		%Rec	1	6/13/2018 5:31:05 PM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/13/2018 5:31:05 PM	38605
Toluene	ND	0.050		mg/Kg	1	6/13/2018 5:31:05 PM	38605
Ethylbenzene	ND	0.050		mg/Kg	1	6/13/2018 5:31:05 PM	38605
Xylenes, Total	ND	0.099		mg/Kg	1	6/13/2018 5:31:05 PM	38605
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	6/13/2018 5:31:05 PM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-009 **Matrix:** SOIL

Client Sample ID: BH21 5'
Collection Date: 6/5/2018 10:00:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	20	9.9		mg/Kg	1	6/14/2018 3:17:35 AM	38631
Motor Oil Range Organics (MRO)	77	49		mg/Kg	1	6/14/2018 3:17:35 AM	38631
Surr: DNOP	105	70-130		%Rec	1	6/14/2018 3:17:35 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	170	4.8		mg/Kg	1	6/13/2018 5:54:54 PM	38605
Surr: BFB	790	15-316	S	%Rec	1	6/13/2018 5:54:54 PM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/13/2018 5:54:54 PM	38605
Toluene	ND	0.048		mg/Kg	1	6/13/2018 5:54:54 PM	38605
Ethylbenzene	0.25	0.048		mg/Kg	1	6/13/2018 5:54:54 PM	38605
Xylenes, Total	1.5	0.096		mg/Kg	1	6/13/2018 5:54:54 PM	38605
Surr: 4-Bromofluorobenzene	136	80-120	S	%Rec	1	6/13/2018 5:54:54 PM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-010 **Matrix:** SOIL

Client Sample ID: BH22 4'
Collection Date: 6/4/2018 9:30:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	45	9.9		mg/Kg	1	6/14/2018 3:41:51 AM	38631
Motor Oil Range Organics (MRO)	130	49		mg/Kg	1	6/14/2018 3:41:51 AM	38631
Surr: DNOP	111	70-130		%Rec	1	6/14/2018 3:41:51 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	1100	94		mg/Kg	20	6/13/2018 1:19:15 AM	38605
Surr: BFB	140	15-316		%Rec	20	6/13/2018 1:19:15 AM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	3.3	0.47		mg/Kg	20	6/13/2018 1:19:15 AM	38605
Toluene	17	0.94		mg/Kg	20	6/13/2018 1:19:15 AM	38605
Ethylbenzene	2.5	0.94		mg/Kg	20	6/13/2018 1:19:15 AM	38605
Xylenes, Total	27	1.9		mg/Kg	20	6/13/2018 1:19:15 AM	38605
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	20	6/13/2018 1:19:15 AM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-011 **Matrix:** SOIL

Client Sample ID: BH23 2'
Collection Date: 6/4/2018 10:40:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	10	10		mg/Kg	1	6/14/2018 4:06:01 AM	38631
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2018 4:06:01 AM	38631
Surr: DNOP	104	70-130		%Rec	1	6/14/2018 4:06:01 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	61	4.9		mg/Kg	1	6/13/2018 7:52:54 PM	38605
Surr: BFB	192	15-316		%Rec	1	6/13/2018 7:52:54 PM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/13/2018 7:52:54 PM	38605
Toluene	0.076	0.049		mg/Kg	1	6/13/2018 7:52:54 PM	38605
Ethylbenzene	0.065	0.049		mg/Kg	1	6/13/2018 7:52:54 PM	38605
Xylenes, Total	0.44	0.098		mg/Kg	1	6/13/2018 7:52:54 PM	38605
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	6/13/2018 7:52:54 PM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-012 **Matrix:** SOIL

Client Sample ID: BH24 8'
Collection Date: 6/4/2018 11:15:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	93	9.9		mg/Kg	1	6/14/2018 4:30:27 AM	38631
Motor Oil Range Organics (MRO)	260	50		mg/Kg	1	6/14/2018 4:30:27 AM	38631
Surr: DNOP	116	70-130		%Rec	1	6/14/2018 4:30:27 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	2000	48		mg/Kg	10	6/13/2018 1:42:39 AM	38605
Surr: BFB	277	15-316		%Rec	10	6/13/2018 1:42:39 AM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	1.7	0.24		mg/Kg	10	6/13/2018 1:42:39 AM	38605
Toluene	8.1	0.48		mg/Kg	10	6/13/2018 1:42:39 AM	38605
Ethylbenzene	3.8	0.48		mg/Kg	10	6/13/2018 1:42:39 AM	38605
Xylenes, Total	36	0.97		mg/Kg	10	6/13/2018 1:42:39 AM	38605
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	10	6/13/2018 1:42:39 AM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-013 **Matrix:** SOIL

Client Sample ID: BH10 12-16'
Collection Date: 6/6/2018 9:30:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	25	10		mg/Kg	1	6/14/2018 4:54:35 AM	38631
Motor Oil Range Organics (MRO)	100	50		mg/Kg	1	6/14/2018 4:54:35 AM	38631
Surr: DNOP	106	70-130		%Rec	1	6/14/2018 4:54:35 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	540	23		mg/Kg	5	6/13/2018 2:05:53 AM	38605
Surr: BFB	484	15-316	S	%Rec	5	6/13/2018 2:05:53 AM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.12		mg/Kg	5	6/13/2018 2:05:53 AM	38605
Toluene	ND	0.23		mg/Kg	5	6/13/2018 2:05:53 AM	38605
Ethylbenzene	0.53	0.23		mg/Kg	5	6/13/2018 2:05:53 AM	38605
Xylenes, Total	3.2	0.46		mg/Kg	5	6/13/2018 2:05:53 AM	38605
Surr: 4-Bromofluorobenzene	124	80-120	S	%Rec	5	6/13/2018 2:05:53 AM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-014 **Matrix:** SOIL

Client Sample ID: BH10 20-24'
Collection Date: 6/6/2018 9:45:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/14/2018 5:18:47 AM	38631
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2018 5:18:47 AM	38631
Surr: DNOP	107	70-130		%Rec	1	6/14/2018 5:18:47 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	6/13/2018 8:16:20 PM	38605
Surr: BFB	87.8	15-316		%Rec	1	6/13/2018 8:16:20 PM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	6/13/2018 8:16:20 PM	38605
Toluene	ND	0.046		mg/Kg	1	6/13/2018 8:16:20 PM	38605
Ethylbenzene	ND	0.046		mg/Kg	1	6/13/2018 8:16:20 PM	38605
Xylenes, Total	ND	0.092		mg/Kg	1	6/13/2018 8:16:20 PM	38605
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	6/13/2018 8:16:20 PM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-015 **Matrix:** SOIL

Client Sample ID: BH11 8'
Collection Date: 6/4/2018 9:45:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	160	10		mg/Kg	1	6/14/2018 5:42:51 AM	38631
Motor Oil Range Organics (MRO)	120	50		mg/Kg	1	6/14/2018 5:42:51 AM	38631
Surr: DNOP	110	70-130		%Rec	1	6/14/2018 5:42:51 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	1200	93		mg/Kg	20	6/13/2018 8:39:48 PM	38605
Surr: BFB	381	15-316	S	%Rec	20	6/13/2018 8:39:48 PM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.47		mg/Kg	20	6/13/2018 8:39:48 PM	38605
Toluene	8.4	0.93		mg/Kg	20	6/13/2018 8:39:48 PM	38605
Ethylbenzene	4.2	0.93		mg/Kg	20	6/13/2018 8:39:48 PM	38605
Xylenes, Total	44	1.9		mg/Kg	20	6/13/2018 8:39:48 PM	38605
Surr: 4-Bromofluorobenzene	120	80-120		%Rec	20	6/13/2018 8:39:48 PM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-016 **Matrix:** SOIL

Client Sample ID: BH11 16-18'
Collection Date: 6/6/2018 10:40:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2018 6:06:52 AM	38631
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	6/14/2018 6:06:52 AM	38631
Surr: DNOP	103	70-130		%Rec	1	6/14/2018 6:06:52 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/13/2018 9:03:14 PM	38605
Surr: BFB	95.5	15-316		%Rec	1	6/13/2018 9:03:14 PM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/13/2018 9:03:14 PM	38605
Toluene	ND	0.048		mg/Kg	1	6/13/2018 9:03:14 PM	38605
Ethylbenzene	ND	0.048		mg/Kg	1	6/13/2018 9:03:14 PM	38605
Xylenes, Total	ND	0.097		mg/Kg	1	6/13/2018 9:03:14 PM	38605
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	6/13/2018 9:03:14 PM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-017 **Matrix:** SOIL

Client Sample ID: BH12 8-12'
Collection Date: 6/6/2018 11:00:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2018 6:30:52 AM	38631
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2018 6:30:52 AM	38631
Surr: DNOP	107	70-130		%Rec	1	6/14/2018 6:30:52 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/13/2018 9:26:36 PM	38605
Surr: BFB	87.1	15-316		%Rec	1	6/13/2018 9:26:36 PM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/13/2018 9:26:36 PM	38605
Toluene	ND	0.048		mg/Kg	1	6/13/2018 9:26:36 PM	38605
Ethylbenzene	ND	0.048		mg/Kg	1	6/13/2018 9:26:36 PM	38605
Xylenes, Total	ND	0.095		mg/Kg	1	6/13/2018 9:26:36 PM	38605
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	6/13/2018 9:26:36 PM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-018 **Matrix:** SOIL

Client Sample ID: BH12 12-16'
Collection Date: 6/6/2018 11:05:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2018 6:54:53 AM	38631
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2018 6:54:53 AM	38631
Surr: DNOP	112	70-130		%Rec	1	6/14/2018 6:54:53 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/13/2018 9:49:59 PM	38605
Surr: BFB	86.9	15-316		%Rec	1	6/13/2018 9:49:59 PM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/13/2018 9:49:59 PM	38605
Toluene	ND	0.048		mg/Kg	1	6/13/2018 9:49:59 PM	38605
Ethylbenzene	ND	0.048		mg/Kg	1	6/13/2018 9:49:59 PM	38605
Xylenes, Total	ND	0.096		mg/Kg	1	6/13/2018 9:49:59 PM	38605
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	6/13/2018 9:49:59 PM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-019 **Matrix:** SOIL

Client Sample ID: BH13 8-12'
Collection Date: 6/6/2018 11:45:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	12000	500		mg/Kg	50	6/14/2018 7:18:55 AM	38631
Motor Oil Range Organics (MRO)	18000	2500		mg/Kg	50	6/14/2018 7:18:55 AM	38631
Surr: DNOP	0	70-130	S	%Rec	50	6/14/2018 7:18:55 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	680	240		mg/Kg	50	6/13/2018 2:52:40 AM	38605
Surr: BFB	95.0	15-316		%Rec	50	6/13/2018 2:52:40 AM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	3.1	1.2		mg/Kg	50	6/13/2018 2:52:40 AM	38605
Toluene	6.6	2.4		mg/Kg	50	6/13/2018 2:52:40 AM	38605
Ethylbenzene	5.0	2.4		mg/Kg	50	6/13/2018 2:52:40 AM	38605
Xylenes, Total	18	4.7		mg/Kg	50	6/13/2018 2:52:40 AM	38605
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	50	6/13/2018 2:52:40 AM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-020 **Matrix:** SOIL

Client Sample ID: BH13 16-18'
Collection Date: 6/6/2018 11:50:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/14/2018 8:07:01 AM	38631
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2018 8:07:01 AM	38631
Surr: DNOP	107	70-130		%Rec	1	6/14/2018 8:07:01 AM	38631
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/13/2018 10:13:17 PM	38605
Surr: BFB	85.8	15-316		%Rec	1	6/13/2018 10:13:17 PM	38605
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/13/2018 10:13:17 PM	38605
Toluene	ND	0.049		mg/Kg	1	6/13/2018 10:13:17 PM	38605
Ethylbenzene	ND	0.049		mg/Kg	1	6/13/2018 10:13:17 PM	38605
Xylenes, Total	ND	0.097		mg/Kg	1	6/13/2018 10:13:17 PM	38605
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	6/13/2018 10:13:17 PM	38605

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-021 **Matrix:** SOIL

Client Sample ID: BH14 8-12'
Collection Date: 6/6/2018 12:25:00 PM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	2000	480		mg/Kg	100	6/13/2018 1:17:45 AM	38595
Surr: BFB	112	70-130		%Rec	100	6/13/2018 1:17:45 AM	38595
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	300	10		mg/Kg	1	6/12/2018 10:56:32 PM	38610
Motor Oil Range Organics (MRO)	680	50		mg/Kg	1	6/12/2018 10:56:32 PM	38610
Surr: DNOP	133	70-130	S	%Rec	1	6/12/2018 10:56:32 PM	38610
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	4.9	2.4		mg/Kg	100	6/13/2018 1:17:45 AM	38595
Toluene	20	4.8		mg/Kg	100	6/13/2018 1:17:45 AM	38595
Ethylbenzene	8.6	4.8		mg/Kg	100	6/13/2018 1:17:45 AM	38595
Xylenes, Total	78	9.6		mg/Kg	100	6/13/2018 1:17:45 AM	38595
Surr: 4-Bromofluorobenzene	116	70-130		%Rec	100	6/13/2018 1:17:45 AM	38595
Surr: Toluene-d8	104	70-130		%Rec	100	6/13/2018 1:17:45 AM	38595

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-022 **Matrix:** SOIL

Client Sample ID: BH14 14-16'
Collection Date: 6/6/2018 12:30:00 PM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/13/2018 1:40:40 AM	38595
Surr: BFB	121	70-130		%Rec	1	6/13/2018 1:40:40 AM	38595
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/12/2018 11:21:02 PM	38610
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/12/2018 11:21:02 PM	38610
Surr: DNOP	74.9	70-130		%Rec	1	6/12/2018 11:21:02 PM	38610
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	6/13/2018 1:40:40 AM	38595
Toluene	ND	0.048		mg/Kg	1	6/13/2018 1:40:40 AM	38595
Ethylbenzene	ND	0.048		mg/Kg	1	6/13/2018 1:40:40 AM	38595
Xylenes, Total	ND	0.096		mg/Kg	1	6/13/2018 1:40:40 AM	38595
Surr: 4-Bromofluorobenzene	126	70-130		%Rec	1	6/13/2018 1:40:40 AM	38595
Surr: Toluene-d8	101	70-130		%Rec	1	6/13/2018 1:40:40 AM	38595

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-023 **Matrix:** SOIL

Client Sample ID: BH15 8-12'
Collection Date: 6/6/2018 1:30:00 PM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	10000	480		mg/Kg	100	6/13/2018 2:26:40 AM	38595
Surr: BFB	106	70-130		%Rec	100	6/13/2018 2:26:40 AM	38595
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	350	10		mg/Kg	1	6/12/2018 11:45:21 PM	38610
Motor Oil Range Organics (MRO)	380	51		mg/Kg	1	6/12/2018 11:45:21 PM	38610
Surr: DNOP	123	70-130		%Rec	1	6/12/2018 11:45:21 PM	38610
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	51	2.4		mg/Kg	100	6/13/2018 2:26:40 AM	38595
Toluene	ND	4.8		mg/Kg	100	6/13/2018 2:26:40 AM	38595
Ethylbenzene	42	4.8		mg/Kg	100	6/13/2018 2:26:40 AM	38595
Xylenes, Total	390	9.6		mg/Kg	100	6/13/2018 2:26:40 AM	38595
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	100	6/13/2018 2:26:40 AM	38595
Surr: Toluene-d8	113	70-130		%Rec	100	6/13/2018 2:26:40 AM	38595

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-024 **Matrix:** SOIL

Client Sample ID: BH15 16-19'
Collection Date: 6/6/2018 1:35:00 PM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	6/13/2018 1:18:03 PM	38595
Surr: BFB	119	70-130		%Rec	1	6/13/2018 1:18:03 PM	38595
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/13/2018 12:09:49 AM	38610
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/13/2018 12:09:49 AM	38610
Surr: DNOP	114	70-130		%Rec	1	6/13/2018 12:09:49 AM	38610
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.023		mg/Kg	1	6/13/2018 1:18:03 PM	38595
Toluene	ND	0.046		mg/Kg	1	6/13/2018 1:18:03 PM	38595
Ethylbenzene	ND	0.046		mg/Kg	1	6/13/2018 1:18:03 PM	38595
Xylenes, Total	ND	0.092		mg/Kg	1	6/13/2018 1:18:03 PM	38595
Surr: 4-Bromofluorobenzene	125	70-130		%Rec	1	6/13/2018 1:18:03 PM	38595
Surr: Toluene-d8	102	70-130		%Rec	1	6/13/2018 1:18:03 PM	38595

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-025 **Matrix:** SOIL

Client Sample ID: BH25 6-8'
Collection Date: 6/7/2018 11:30:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/13/2018 3:12:46 AM	38595
Surr: BFB	124	70-130		%Rec	1	6/13/2018 3:12:46 AM	38595
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/13/2018 12:34:10 AM	38610
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/13/2018 12:34:10 AM	38610
Surr: DNOP	117	70-130		%Rec	1	6/13/2018 12:34:10 AM	38610
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	6/13/2018 3:12:46 AM	38595
Toluene	ND	0.047		mg/Kg	1	6/13/2018 3:12:46 AM	38595
Ethylbenzene	ND	0.047		mg/Kg	1	6/13/2018 3:12:46 AM	38595
Xylenes, Total	ND	0.094		mg/Kg	1	6/13/2018 3:12:46 AM	38595
Surr: 4-Bromofluorobenzene	130	70-130	S	%Rec	1	6/13/2018 3:12:46 AM	38595
Surr: Toluene-d8	104	70-130		%Rec	1	6/13/2018 3:12:46 AM	38595

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-026 **Matrix:** SOIL

Client Sample ID: BH26 4-6'
Collection Date: 6/7/2018 11:55:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	1000	95		mg/Kg	20	6/13/2018 1:41:09 PM	38595
Surr: BFB	107	70-130		%Rec	20	6/13/2018 1:41:09 PM	38595
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	26	10		mg/Kg	1	6/13/2018 12:58:27 AM	38610
Motor Oil Range Organics (MRO)	82	50		mg/Kg	1	6/13/2018 12:58:27 AM	38610
Surr: DNOP	121	70-130		%Rec	1	6/13/2018 12:58:27 AM	38610
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	0.54	0.47		mg/Kg	20	6/13/2018 1:41:09 PM	38595
Toluene	4.3	0.95		mg/Kg	20	6/13/2018 1:41:09 PM	38595
Ethylbenzene	1.8	0.95		mg/Kg	20	6/13/2018 1:41:09 PM	38595
Xylenes, Total	19	1.9		mg/Kg	20	6/13/2018 1:41:09 PM	38595
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	20	6/13/2018 1:41:09 PM	38595
Surr: Toluene-d8	106	70-130		%Rec	20	6/13/2018 1:41:09 PM	38595

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-027 **Matrix:** SOIL

Client Sample ID: BH26 10-12'
Collection Date: 6/7/2018 12:00:00 PM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/13/2018 3:58:43 AM	38595
Surr: BFB	121	70-130		%Rec	1	6/13/2018 3:58:43 AM	38595
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/13/2018 1:22:46 AM	38610
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/13/2018 1:22:46 AM	38610
Surr: DNOP	114	70-130		%Rec	1	6/13/2018 1:22:46 AM	38610
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.023		mg/Kg	1	6/13/2018 3:58:43 AM	38595
Toluene	ND	0.047		mg/Kg	1	6/13/2018 3:58:43 AM	38595
Ethylbenzene	ND	0.047		mg/Kg	1	6/13/2018 3:58:43 AM	38595
Xylenes, Total	ND	0.094		mg/Kg	1	6/13/2018 3:58:43 AM	38595
Surr: 4-Bromofluorobenzene	127	70-130		%Rec	1	6/13/2018 3:58:43 AM	38595
Surr: Toluene-d8	104	70-130		%Rec	1	6/13/2018 3:58:43 AM	38595

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806560-028 **Matrix:** SOIL

Client Sample ID: BH20 10-12'
Collection Date: 6/7/2018 10:40:00 AM
Received Date: 6/9/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	7.4	4.9		mg/Kg	1	6/13/2018 4:21:40 AM	38595
Surr: BFB	128	70-130		%Rec	1	6/13/2018 4:21:40 AM	38595
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	2000	99		mg/Kg	10	6/14/2018 1:07:48 PM	38610
Motor Oil Range Organics (MRO)	ND	490		mg/Kg	10	6/14/2018 1:07:48 PM	38610
Surr: DNOP	0	70-130	S	%Rec	10	6/14/2018 1:07:48 PM	38610
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	6/13/2018 4:21:40 AM	38595
Toluene	ND	0.049		mg/Kg	1	6/13/2018 4:21:40 AM	38595
Ethylbenzene	ND	0.049		mg/Kg	1	6/13/2018 4:21:40 AM	38595
Xylenes, Total	ND	0.097		mg/Kg	1	6/13/2018 4:21:40 AM	38595
Surr: 4-Bromofluorobenzene	132	70-130	S	%Rec	1	6/13/2018 4:21:40 AM	38595
Surr: Toluene-d8	104	70-130		%Rec	1	6/13/2018 4:21:40 AM	38595

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806560**

15-Jun-18

Client: Williams Four Corners
Project: Kutz Canyon GP

Sample ID **LCS-38610**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **38610**	RunNo: **51898**
Prep Date: **6/11/2018**	Analysis Date: **6/12/2018**	SeqNo: **1696744** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.4	70	130			
Surr: DNOP	4.4		5.000		87.6	70	130			

Sample ID **MB-38610**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **38610**	RunNo: **51898**
Prep Date: **6/11/2018**	Analysis Date: **6/12/2018**	SeqNo: **1696745** 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	9.9		10.00		99.4	70	130			

Sample ID **1806560-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH16 8-12'**	Batch ID: **38631**	RunNo: **51922**
Prep Date: **6/12/2018**	Analysis Date: **6/13/2018**	SeqNo: **1698863** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	190	10	50.15	418.1	-455	62	120			S
Surr: DNOP	5.8		5.015		116	70	130			

Sample ID **1806560-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH16 8-12'**	Batch ID: **38631**	RunNo: **51922**
Prep Date: **6/12/2018**	Analysis Date: **6/14/2018**	SeqNo: **1698864** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	150	9.8	49.21	418.1	-552	62	120	25.9	20	SR
Surr: DNOP	5.6		4.921		115	70	130	0	0	

Sample ID **LCS-38631**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **38631**	RunNo: **51922**
Prep Date: **6/12/2018**	Analysis Date: **6/13/2018**	SeqNo: **1698884** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.0	70	130			
Surr: DNOP	4.6		5.000		92.7	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit
- S % Recovery outside of range due to dilution or matrix
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806560**

15-Jun-18

Client: Williams Four Corners
Project: Kutz Canyon GP

Sample ID **MB-38631**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **38631**	RunNo: **51922**
Prep Date: **6/12/2018**	Analysis Date: **6/13/2018**	SeqNo: **1698885** 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	10		10.00		100	70	130			

Sample ID **LCS-38673**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **38673**	RunNo: **51922**
Prep Date: **6/14/2018**	Analysis Date: **6/14/2018**	SeqNo: **1699512** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		5.000		89.4	70	130			

Sample ID **MB-38673**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **38673**	RunNo: **51922**
Prep Date: **6/14/2018**	Analysis Date: **6/14/2018**	SeqNo: **1699514** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.5		10.00		94.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806560**

15-Jun-18

Client: Williams Four Corners
Project: Kutz Canyon GP

Sample ID **MB-38605**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **38605**	RunNo: **51914**
Prep Date: **6/11/2018**	Analysis Date: **6/12/2018**	SeqNo: **1696577** 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	840		1000		84.1	15	316			

Sample ID **LCS-38605**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **38605**	RunNo: **51914**
Prep Date: **6/11/2018**	Analysis Date: **6/12/2018**	SeqNo: **1696578** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	107	75.9	131			
Surr: BFB	980		1000		97.9	15	316			

Sample ID **1806560-002AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH16 12-15'**	Batch ID: **38605**	RunNo: **51914**
Prep Date: **6/11/2018**	Analysis Date: **6/12/2018**	SeqNo: **1696581** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	33	4.9	24.61	0	133	77.8	128			S
Surr: BFB	970		984.3		98.8	15	316			

Sample ID **1806560-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH16 12-15'**	Batch ID: **38605**	RunNo: **51914**
Prep Date: **6/11/2018**	Analysis Date: **6/12/2018**	SeqNo: **1696582** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	33	4.9	24.53	0	133	77.8	128	0.277	20	S
Surr: BFB	990		981.4		100	15	316	0	0	

Sample ID **MB-38635**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **38635**	RunNo: **51956**
Prep Date: **6/12/2018**	Analysis Date: **6/13/2018**	SeqNo: **1698126** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	890		1000		88.8	15	316			

Sample ID **LCS-38635**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **38635**	RunNo: **51956**
Prep Date: **6/12/2018**	Analysis Date: **6/13/2018**	SeqNo: **1698127** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	980		1000		97.6	15	316			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806560**

15-Jun-18

Client: Williams Four Corners

Project: Kutz Canyon GP

Sample ID **MB-38605**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **38605**	RunNo: **51914**
Prep Date: **6/11/2018**	Analysis Date: **6/12/2018**	SeqNo: **1696619** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID **LCS-38605**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **38605**	RunNo: **51914**
Prep Date: **6/11/2018**	Analysis Date: **6/12/2018**	SeqNo: **1696620** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.7	77.3	128			
Toluene	0.95	0.050	1.000	0	94.7	79.2	125			
Ethylbenzene	0.94	0.050	1.000	0	93.5	80.7	127			
Xylenes, Total	2.9	0.10	3.000	0	95.4	81.6	129			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID **MB-38635**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **38635**	RunNo: **51956**
Prep Date: **6/12/2018**	Analysis Date: **6/13/2018**	SeqNo: **1698170** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID **LCS-38635**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **38635**	RunNo: **51956**
Prep Date: **6/12/2018**	Analysis Date: **6/13/2018**	SeqNo: **1698171** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806560**

15-Jun-18

Client: Williams Four Corners

Project: Kutz Canyon GP

Sample ID **lcs-38595**	SampType: **LCS4**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **38595**	RunNo: **51906**
Prep Date: **6/11/2018**	Analysis Date: **6/12/2018**	SeqNo: **1697066** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.5	80	120			
Toluene	0.91	0.050	1.000	0	90.6	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.6	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.8	80	120			
Surr: 4-Bromofluorobenzene	0.53		0.5000		106	70	130			
Surr: Toluene-d8	0.49		0.5000		98.5	70	130			

Sample ID **mb-38595**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **38595**	RunNo: **51906**
Prep Date: **6/11/2018**	Analysis Date: **6/12/2018**	SeqNo: **1697067** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.62		0.5000		124	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806560**

15-Jun-18

Client: Williams Four Corners
Project: Kutz Canyon GP

Sample ID **lcs-38595**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **38595**	RunNo: **51906**
Prep Date: **6/11/2018**	Analysis Date: **6/12/2018**	SeqNo: **1696931** 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	100	70	130			
Surr: BFB	550		500.0		110	70	130			

Sample ID **mb-38595**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **38595**	RunNo: **51906**
Prep Date: **6/11/2018**	Analysis Date: **6/12/2018**	SeqNo: **1696932** 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	590		500.0		119	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN | Work Order Number: 1806560 | RcptNo: 1

Received By: Ashley Gallegos | 6/9/2018 9:00:00 AM

Completed By: Erin Melendrez | 6/11/2018 8:29:08 AM

Reviewed By: ENM 6/11/18

LB: 10

Chain of Custody

		Yes	No	Not Present
1	Is Chain of Custody complete?	✓		
2	How was the sample delivered?	Courier		

Log In

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

# of preserved bottles checked for pH: 10 (<2 or >12 unless noted)

Adjusted? N/A

Checked by:

Special Handling (if applicable)

		Yes	No	NA
15	Was client notified of all discrepancies with this order?			✓

Person Notified: _____ Date: _____

By Whom: _____ Via: eMail Phone Fax In Person

Regarding: _____

Client Instructions: _____

16 Additional remarks

17 Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Yes			

Chain-of-Custody Record

Client: Williams Four Corners

Aaron Galer

Mailing Address:

Phone #: 801-554-6746

email or Fax#: aaron.galer@itenv.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☒ EDD (Type) PDF

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Kutz canyon GP

Project #:

Project Manager: Aaron Galer (Williams) Danny Burns (LTE)

Sampler: Eric Carroll

On Ice: ☒ Yes ☐ No

Sample Temperature: 36-0.3(CF)=3.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1806560	~~BTEX + MTBE + TMBs~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
6/6/18	1430	S	BH16 8-12'	1 4oz	Cool	-001	X		X													
6/6/18	1435		BH16 12-15'			-002																
6/6/18	1400		BH17 14-16'			-003																
6/6/18	1405		BH17 20-23'			-004																
6/6/18	1500		BH18 10-12'			-005																
6/7/18	0940		BH19 14-16'			-006																
6/7/18	0950		BH19 20-24'			-007																
6/7/18	1645		BH20 14-16'			-008																
6/5/18	1000		BH21 5'			-009																
6/4/18	0930		BH22 4'			-010																
6/4/18	1040		BH23 7'			-011																
6/4/18	1115	↓	BH24 8'	↓	↓	-012	↓		↓													

Date:	Time:	Relinquished by:	Received by:	Date	Time
6/6/18	1830			6/8/18	1730
6/8/18	1844			06/09/18	0900

Remarks:

Please cc: dburns@itenv.com

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

Chain-of-Custody Record

Client: Williams Four Corners

Aaron Galer

Mailing Address:

Phone #: 801-554-6746

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☒ EDD (Type) PDF

Turn-Around Time:
☒ Standard ☐ Rush

Project Name:
Kutz Canyon GP

Project #:

Project Manager:
Aaron Galer (Williams)
Danny Burns (LTE)

Sampler: Eric Carroll
On Ice: ☒ Yes ☐ No
Sample Temperature: 3.1+0.3(CF)=3.3

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1806560	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO$_3$,NO$_2$,PO$_4$,SO$_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
6/6/18	0930	S	BH 10 12-16'	1 4oz	Cool	-013	X		X													
6/6/18	0945		BH 10 20-24'			-014																
6/4/18	0945		BH 11 8'			-015																
6/6/18	1040		BH 11 16-18'			-016																
6/6/18	1100		BH 12 8-12'			-017																
6/6/18	1105		BH 12 12-16'			-018																
6/6/18	1145		BH 13 8'-12'			-019																
6/6/18	1150		BH 13 16'-18'			-020																
6/6/18	1225		BH 14 8-12'			-021																
6/6/18	1230		BH 14 14-16'			-022																
6/6/18	1330		BH 15 8-12'			-023																
6/6/18	1335		BH 15 16-19'			-024																

Date:	Time:	Relinquished by:	Received by:	Date	Time
6/8/18	1530			6/8/18	1730
6/8/18	1844			06/09/18	0900

Remarks:
Please cc: dburns@ltenv.com

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

Chain-of-Custody Record

Client: Williams Four corners

Aaron Goler

Mailing Address:

Phone #: 801-554-6746

email or Fax#.

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

Accreditation
☐ NELAP ☐ Other

☒ EDD (Type) PDF

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Kutz Canyon GP

Project #:

Project Manager:
Aaron Goler (Williams)
Danny Burns (LTE)

Sampler: Evil Carroll

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.6-0.3(CF)=3.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1806560	BTEX + ~~MTBE~~ + ~~TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	IPH 8015B (GRO / DRO / MRO)	~~TPH (Method 418.1)~~ CJ	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
5/7/18	1130	S	BH 25 6-8'	1 4oz	Cool	-025	X		X	X												
↓	1155	↓	BH 26 4-6'	↓	↓	-026	↓		↓	↓												
↓	1200	↓	BH 26 10-12'	↓	↓	-027	↓		↓	↓												
5/7/18	1040	S	BH 20 10-12'	1 4oz	Cool	-028	X		X	X												

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/8/18	1830			6/8/18	1738
Date:	Time:	Relinquished by:	Received by:	Date	Time
5/8/18	1844			06/09/18	0900

Remarks: Please add COC cc: dburns@ltenv.com

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 25, 2018

Aaron Galer
Williams Four Corners
188 CR 4900
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Kutz Canyon GP OrderNo.: 1806A96

Dear Aaron Galer:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/19/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. 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 qualifiers 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806A96-001

Client Sample ID: BH 19
Collection Date: 6/18/2018 1:20:00 PM
Matrix: GROUNDWA **Received Date:** 6/19/2018 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	940	10		µg/L	10	6/20/2018 5:24:12 AM	B52084
Toluene	320	10		µg/L	10	6/20/2018 5:24:12 AM	B52084
Ethylbenzene	64	10		µg/L	10	6/20/2018 5:24:12 AM	B52084
Xylenes, Total	400	15		µg/L	10	6/20/2018 5:24:12 AM	B52084
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	10	6/20/2018 5:24:12 AM	B52084
Surr: Toluene-d8	101	70-130		%Rec	10	6/20/2018 5:24:12 AM	B52084

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1806A96-002

Client Sample ID: BH 18
Collection Date: 6/18/2018 1:30:00 PM
Matrix: GROUNDWA **Received Date:** 6/19/2018 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	6200	100		µg/L	100	6/20/2018 12:21:32 PM	B52124
Toluene	1200	100		µg/L	100	6/20/2018 12:21:32 PM	B52124
Ethylbenzene	170	10		µg/L	10	6/20/2018 5:47:12 AM	B52084
Xylenes, Total	4100	150		µg/L	100	6/20/2018 12:21:32 PM	B52124
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	10	6/20/2018 5:47:12 AM	B52084
Surr: Toluene-d8	101	70-130		%Rec	10	6/20/2018 5:47:12 AM	B52084

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806A96**

25-Jun-18

Client: Williams Four Corners

Project: Kutz Canyon GP

Sample ID **RB2**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **B52084**	RunNo: **52084**
Prep Date:	Analysis Date: **6/19/2018**	SeqNo: **1705076** 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: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID **100ng btex lcs2**	SampType: **LCS4**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **B52084**	RunNo: **52084**
Prep Date:	Analysis Date: **6/19/2018**	SeqNo: **1705179** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	80	120			
Toluene	20	1.0	20.00	0	102	80	120			
Ethylbenzene	21	1.0	20.00	0	104	80	120			
Xylenes, Total	61	1.5	60.00	0	102	80	120			
Surr: 4-Bromofluorobenzene	10		10.00		99.6	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID **100ng btex lcs**	SampType: **LCS4**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **B52124**	RunNo: **52124**
Prep Date:	Analysis Date: **6/20/2018**	SeqNo: **1706505** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	80	120			
Toluene	21	1.0	20.00	0	103	80	120			
Xylenes, Total	61	1.5	60.00	0	101	80	120			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.6	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **B52124**	RunNo: **52124**
Prep Date:	Analysis Date: **6/20/2018**	SeqNo: **1706536** 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								
Xylenes, Total	ND	1.5								
Surr: 4-Bromofluorobenzene	12		10.00		115	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN Work Order Number: 1806A95 RcptNo: 1

Received By: Isaiah Ortiz 6/19/2018 7:20:00 AM IO

Completed By: Isaiah Ortiz 6/19/2018 8:02:01 AM IO

Reviewed By: ENM 6/19/18 JB 06/19/18 Cb: JB 06/18/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: JB 06/19/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.1	Good	Yes			

Chain-of-Custody Record

Client: Williams Four Corners

Aaron Galer

Mailing Address:

Phone #: 801-344-1219

email or Fax#: aaron.galer@williams.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☒ EDD (Type) PDF

Turn-Around Time:

☐ Standard ☒ Rush 6/22/18

Project Name:

Kutz Canyon GP

Project #:

Project Manager:

Aaron Galer-Williams

Danny Burns - LTE

Sampler: Eric Carroll

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.1 - 1.0 (cf) 0.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1806A96	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
6/18/18	1320	GW	BH 19	3 VOA	Cool	001	X											
6/18/18	1330	GW	BH 18	3 VOA	Cool	002	X											

Date	Time	Relinquished by:	Received by:	Date	Time
6/18/18	1430			6/14/18	1430
6/18/18	1830	Christine Walker		6/14/18	730

Remarks:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 18, 2018

Danny Burns
Williams Four Corners
188 CR 4900
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Kutz GP OrderNo.: 1806791

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/13/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. 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 qualifiers 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1806791**
Date Reported: **6/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz GP
Lab ID: 1806791-001 **Matrix:** AQUEOUS

Client Sample ID: BH-26
Collection Date: 6/12/2018 2:50:00 PM
Received Date: 6/13/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	810	20		µg/L	20	6/15/2018 3:40:11 PM	C52018
Toluene	2.6	1.0		µg/L	1	6/14/2018 4:30:32 PM	D51966
Ethylbenzene	3.5	1.0		µg/L	1	6/14/2018 4:30:32 PM	D51966
Xylenes, Total	160	1.5		µg/L	1	6/14/2018 4:30:32 PM	D51966
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	6/14/2018 4:30:32 PM	D51966
Surr: Toluene-d8	106	70-130		%Rec	1	6/14/2018 4:30:32 PM	D51966

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz GP
Lab ID: 1806791-002 **Matrix:** AQUEOUS

Client Sample ID: BH-20
Collection Date: 6/12/2018 3:25:00 PM
Received Date: 6/13/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	2.3	1.0		µg/L	1	6/15/2018 4:03:28 PM	C52018
Toluene	6.5	1.0		µg/L	1	6/15/2018 4:03:28 PM	C52018
Ethylbenzene	1.9	1.0		µg/L	1	6/15/2018 4:03:28 PM	C52018
Xylenes, Total	13	1.5		µg/L	1	6/15/2018 4:03:28 PM	C52018
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	6/15/2018 4:03:28 PM	C52018
Surr: Toluene-d8	105	70-130		%Rec	1	6/15/2018 4:03:28 PM	C52018

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz GP
Lab ID: 1806791-003 **Matrix:** AQUEOUS

Client Sample ID: BH-22
Collection Date: 6/12/2018 3:30:00 PM
Received Date: 6/13/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	12000	500		µg/L	500	6/15/2018 4:26:48 PM	C52018
Toluene	11000	500		µg/L	500	6/15/2018 4:26:48 PM	C52018
Ethylbenzene	670	500		µg/L	500	6/15/2018 4:26:48 PM	C52018
Xylenes, Total	6400	750		µg/L	500	6/15/2018 4:26:48 PM	C52018
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	500	6/15/2018 4:26:48 PM	C52018
Surr: Toluene-d8	107	70-130		%Rec	500	6/15/2018 4:26:48 PM	C52018

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz GP
Lab ID: 1806791-004 **Matrix:** AQUEOUS

Client Sample ID: BH-27
Collection Date: 6/12/2018 4:00:00 PM
Received Date: 6/13/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/15/2018 9:53:25 AM	C52018
Toluene	ND	1.0		µg/L	1	6/15/2018 9:53:25 AM	C52018
Ethylbenzene	ND	1.0		µg/L	1	6/15/2018 9:53:25 AM	C52018
Xylenes, Total	ND	1.5		µg/L	1	6/15/2018 9:53:25 AM	C52018
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	6/15/2018 9:53:25 AM	C52018
Surr: Toluene-d8	102	70-130		%Rec	1	6/15/2018 9:53:25 AM	C52018

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806791**

18-Jun-18

Client: Williams Four Corners
Project: Kutz GP

Sample ID **100NG BTEX LCS** SampType: **LCS4** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **D51966** RunNo: **51966**
Prep Date: Analysis Date: **6/14/2018** SeqNo: **1700193** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	21	1.0	20.00	0	106	80	120			
Ethylbenzene	21	1.0	20.00	0	105	80	120			
Xylenes, Total	62	1.5	60.00	0	103	80	120			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.5	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID **1806791-001ams** SampType: **MS4** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **BH-26** Batch ID: **D51966** RunNo: **51966**
Prep Date: Analysis Date: **6/14/2018** SeqNo: **1700202** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	23	1.0	20.00	2.626	99.5	80	120			
Ethylbenzene	23	1.0	20.00	3.496	99.3	80	120			
Xylenes, Total	220	1.5	60.00	163.0	97.4	80	120			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.6	70	130			
Surr: Toluene-d8	11		10.00		108	70	130			

Sample ID **1806791-001amsd** SampType: **MSD4** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **BH-26** Batch ID: **D51966** RunNo: **51966**
Prep Date: Analysis Date: **6/14/2018** SeqNo: **1700203** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	22	1.0	20.00	2.626	96.6	80	120	2.56	20	
Ethylbenzene	23	1.0	20.00	3.496	99.2	80	120	0.139	20	
Xylenes, Total	220	1.5	60.00	163.0	97.2	80	120	0.0337	20	
Surr: 4-Bromofluorobenzene	9.9		10.00		98.6	70	130	0	0	
Surr: Toluene-d8	10		10.00		103	70	130	0	0	

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW** Batch ID: **D51966** RunNo: **51966**
Prep Date: Analysis Date: **6/14/2018** SeqNo: **1700208** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806791**

18-Jun-18

Client: Williams Four Corners
Project: Kutz GP

Sample ID **100ng btex lcs**	SampType: **LCS4**			TestCode: **EPA Method 8260: Volatiles Short List**					
Client ID: **BatchQC**	Batch ID: **C52018**			RunNo: **52018**					
Prep Date:	Analysis Date: **6/15/2018**			SeqNo: **1701902**		Units: **µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	80	120			
Toluene	22	1.0	20.00	0	108	80	120			
Ethylbenzene	21	1.0	20.00	0	107	80	120			
Xylenes, Total	64	1.5	60.00	0	106	80	120			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.8	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID **rb**	SampType: **MBLK**			TestCode: **EPA Method 8260: Volatiles Short List**					
Client ID: **PBW**	Batch ID: **C52018**			RunNo: **52018**					
Prep Date:	Analysis Date: **6/15/2018**			SeqNo: **1701907**		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	0		10.00		0	70	130			S
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	0		10.00		0	70	130			S
Surr: Toluene-d8	10		10.00		104	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN Work Order Number: 1806791 RcptNo: 1

Received By: Anne Thorne 6/13/2018 7:00:00 AM

Completed By: Erin Melendrez 6/13/2018 1:37:04 PM

Reviewed By: ENM 6/14/18
LB: JB 06/14/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ✓	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ✓	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ✓	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ✓	No ☐	Adjusted? 06/14/18
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ✓	No ☐	Checked by: JB

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ✓

Person Notified: ____ Date: ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Not Present			

Chain-of-Custody Record

Client: Williams Four Corners

Mailing Address: 17755 Arroyo Dr

Phone #:

email or Fax#: aaron.galer@williams.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☒ EDD (Type) EDF

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Kutz GP

Project #:

Project Manager: LTE-Danny Burns

Sampler: D. Burns

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.3-CF0=2.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1806791	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
6-12-18	1450	GW	BH-26	3-40mL VOAS	NONE	-001	X															
↓	1525	↓	BH-20	↓	↓	-002	X															
↓	1530	↓	BH-22	↓	↓	-003	X															
↓	1600	↓	BH-27	↓	↓	-004	X															

Date:	Time:	Relinquished by:	Received by:	Date	Time
6-12-18	1654	[signature]	Christine Walls	6/12/18	1654
6/12/18	1854	Christine Walls	[signature]	06/13/18	0700

Remarks: CC only: dburns@ltenv.com ecarroll@ltenv.com bharb@ltenv.com

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 11, 2018

Aaron Galer
Williams Four Corners
188 CR 4900
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Kutz Canyon GP OrderNo.: 1807273

Dear Aaron Galer:

Hall Environmental Analysis Laboratory received 3 sample(s) on 7/7/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. 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 qualifiers 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1807273**
Date Reported: **7/11/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1807273-001

Client Sample ID: BH 28
Collection Date: 7/6/2018 11:40:00 AM
Matrix: GROUNDWA **Received Date:** 7/7/2018 10:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	2.7	1.0		µg/L	1	7/10/2018 11:46:15 AM	B52594
Toluene	ND	1.0		µg/L	1	7/10/2018 11:46:15 AM	B52594
Ethylbenzene	ND	1.0		µg/L	1	7/10/2018 11:46:15 AM	B52594
Xylenes, Total	ND	1.5		µg/L	1	7/10/2018 11:46:15 AM	B52594
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	7/10/2018 11:46:15 AM	B52594
Surr: Toluene-d8	99.0	70-130		%Rec	1	7/10/2018 11:46:15 AM	B52594

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1807273-002

Client Sample ID: BH 29
Collection Date: 7/6/2018 12:00:00 PM
Matrix: GROUNDWA **Received Date:** 7/7/2018 10:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	5.0		µg/L	5	7/10/2018 12:32:34 PM	B52594
Toluene	ND	5.0		µg/L	5	7/10/2018 12:32:34 PM	B52594
Ethylbenzene	14	5.0		µg/L	5	7/10/2018 12:32:34 PM	B52594
Xylenes, Total	230	7.5		µg/L	5	7/10/2018 12:32:34 PM	B52594
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	5	7/10/2018 12:32:34 PM	B52594
Surr: Toluene-d8	100	70-130		%Rec	5	7/10/2018 12:32:34 PM	B52594

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1807273-003
Matrix: GROUNDWA
Client Sample ID: BH 31
Collection Date: 7/6/2018 12:20:00 PM
Received Date: 7/7/2018 10:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	11000	200		µg/L	200	7/10/2018 12:55:40 PM	B52594
Toluene	110	20		µg/L	20	7/9/2018 3:40:50 PM	R52555
Ethylbenzene	680	20		µg/L	20	7/9/2018 3:40:50 PM	R52555
Xylenes, Total	6600	300		µg/L	200	7/10/2018 12:55:40 PM	B52594
Surr: 4-Bromofluorobenzene	99.0	70-130		%Rec	20	7/9/2018 3:40:50 PM	R52555
Surr: Toluene-d8	102	70-130		%Rec	20	7/9/2018 3:40:50 PM	R52555

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807273**

11-Jul-18

Client: Williams Four Corners
Project: Kutz Canyon GP

Sample ID **100ng btex lcs**	SampType: **LCS4**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **R52555**	RunNo: **52555**
Prep Date:	Analysis Date: **7/9/2018**	SeqNo: **1723888** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	21	1.0	20.00	0	104	80	120			
Ethylbenzene	21	1.0	20.00	0	104	80	120			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.2	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **R52555**	RunNo: **52555**
Prep Date:	Analysis Date: **7/9/2018**	SeqNo: **1723904** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Toluene-d8	10		10.00		99.8	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **B52594**	RunNo: **52594**
Prep Date:	Analysis Date: **7/10/2018**	SeqNo: **1725914** 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: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Toluene-d8	9.9		10.00		99.0	70	130			

Sample ID **100ng btex lcs**	SampType: **LCS4**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **B52594**	RunNo: **52594**
Prep Date:	Analysis Date: **7/10/2018**	SeqNo: **1726156** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	80	120			
Toluene	21	1.0	20.00	0	104	80	120			
Ethylbenzene	21	1.0	20.00	0	106	80	120			
Xylenes, Total	62	1.5	60.00	0	104	80	120			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Toluene-d8	9.8		10.00		98.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN Work Order Number: 1807273 RcptNo: 1

Received By: Anne Thorne 7/7/2018 10:50:00 AM Anne Thorne

Completed By: Isaiah Ortiz 7/9/2018 9:10:30 AM I Ortiz

Reviewed By: IO 7/9/18

UB: ENM 7/9/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

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

EUN 7/9/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

16. Additional remarks

Vos 1 of 3 for sample -001 headspace is present. All voas have headspace present for sample -003.

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.4	Good	Yes			

Chain-of-Custody Record

Client: Williams Four Corners

Aaron Gaier

Mailing Address:

Phone #: 801-244-1219

email or Fax#: aaron.gaier@williams.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☒ EDD (Type) PDF

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Kutz canyon GP

Project #:

Project Manager: Aaron Gaier - Williams

Danny Burns ~~Eric Carroll~~ - LTE

Sampler: Eric Carroll

On Ice: ☒ Yes ☐ No

Sample Temperature: 5.4-CF-1.0=4.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	~~A-07/10/19~~ HEAL No. 1907273	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
7/6/19	1140	GW	BH 28	3 voa	HCl	001	X															
↓	1200	↓	BH 29	↓	↓	002	X															
↓	1220	↓	BH 31	↓	↓	003	X															

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/6/19	1530			07/10/19	1050
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Please cc: dburns@ltenv.com

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 27, 2018

Aaron Galer
Williams Four Corners
188 CR 4900
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Kutz Canyon GP

OrderNo.: 1807C97

Dear Aaron Galer:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/25/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. 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 qualifiers 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1807C97**
Date Reported: **7/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1807C97-001 **Matrix:** AQUEOUS

Client Sample ID: BH 34
Collection Date: 7/24/2018 11:30:00 AM
Received Date: 7/25/2018 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	17000	1000		µg/L	1E	7/26/2018 4:04:45 PM	C53000
Toluene	26000	1000		µg/L	1E	7/26/2018 4:04:45 PM	C53000
Ethylbenzene	1400	1000		µg/L	1E	7/26/2018 4:04:45 PM	C53000
Xylenes, Total	13000	1500		µg/L	1E	7/26/2018 4:04:45 PM	C53000
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1E	7/26/2018 4:04:45 PM	C53000
Surr: Toluene-d8	91.9	70-130		%Rec	1E	7/26/2018 4:04:45 PM	C53000

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab ID: 1807C97-002 **Matrix:** AQUEOUS

Client Sample ID: BH 35
Collection Date: 7/24/2018 12:00:00 PM
Received Date: 7/25/2018 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	4800	100		µg/L	100	7/26/2018 4:28:26 PM	C53000
Toluene	78	50		µg/L	100	7/26/2018 4:28:26 PM	C53000
Ethylbenzene	810	100		µg/L	100	7/26/2018 4:28:26 PM	C53000
Xylenes, Total	7600	150		µg/L	100	7/26/2018 4:28:26 PM	C53000
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	100	7/26/2018 4:28:26 PM	C53000
Surr: Toluene-d8	94.3	70-130		%Rec	100	7/26/2018 4:28:26 PM	C53000

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807C97**

27-Jul-18

Client: Williams Four Corners
Project: Kutz Canyon GP

Sample ID **100ng btex lcs** SampType: **LCS4** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **C53000** RunNo: **53000**
Prep Date: Analysis Date: **7/26/2018** SeqNo: **1742978** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	80	120			
Toluene	22	1.0	20.00	0	110	80	120			
Ethylbenzene	22	1.0	20.00	0	111	80	120			
Xylenes, Total	64	1.5	60.00	0	107	80	120			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.1	70	130			
Surr: Toluene-d8	9.1		10.00		91.3	70	130			

Sample ID **1807c97-001ams** SampType: **MS4** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **BH 34** Batch ID: **C53000** RunNo: **53000**
Prep Date: Analysis Date: **7/26/2018** SeqNo: **1742981** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	40000	1000	20000	16820	118	80	120			
Toluene	58000	1000	20000	25850	162	80	120			S
Ethylbenzene	24000	1000	20000	1356	112	80	120			
Xylenes, Total	92000	1500	60000	13140	132	80	120			S
Surr: 4-Bromofluorobenzene	9700		10000		97.5	70	130			
Surr: Toluene-d8	9400		10000		94.4	70	130			

Sample ID **1807c97-001amsd** SampType: **MSD4** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **BH 34** Batch ID: **C53000** RunNo: **53000**
Prep Date: Analysis Date: **7/26/2018** SeqNo: **1742982** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	40000	1000	20000	16820	116	80	120	1.32	20	
Toluene	59000	1000	20000	25850	165	80	120	0.855	20	S
Ethylbenzene	23000	1000	20000	1356	109	80	120	2.56	20	
Xylenes, Total	86000	1500	60000	13140	121	80	120	7.28	20	S
Surr: 4-Bromofluorobenzene	9500		10000		94.9	70	130	0	0	
Surr: Toluene-d8	9400		10000		93.6	70	130	0	0	

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW** Batch ID: **C53000** RunNo: **53000**
Prep Date: Analysis Date: **7/26/2018** SeqNo: **1742985** 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								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807C97**

27-Jul-18

Client: Williams Four Corners

Project: Kutz Canyon GP

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **C53000**	RunNo: **53000**
Prep Date:	Analysis Date: **7/26/2018**	SeqNo: **1742985** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Toluene-d8	9.3		10.00		93.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN Work Order Number: 1807C97 RcptNo. 1

Received By: Isaiah Ortiz 7/25/2018 7:20:00 AM

Completed By: Ashley Gallegos 7/25/2018 7:25:27 AM

Reviewed By: JTO 7/25/18 labeled by: JAB 07/25/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ✓	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ✓	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ✓	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ✓	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes	No ✓	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted) Adjusted?
12. Are matrices correctly identified on Chain of Custody?	Yes ✓	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ✓	No ☐	Checked by: JAB 07/25/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: ____ Date: ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			

Chain-of-Custody Record

Client: Williams Four Corners

Aaron Galer

Mailing Address:

Phone #: 801-244-1219

email or Fax#: aaron.galer@ltenv.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other ______

☒ EDD (Type) PDF

Turn-Around Time:

☒ Standard ☐ Rush ______

Project Name: Kutz Canyon GP

Project #:

Project Manager: Aaron Galer - Williams; Danny Burns - LTE

Sampler: Eric carroll

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.3 - 1.0 (CF) 2.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1807C97	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
7/24/18	1130	GW	BH 34	3 VOA	HCl	-001	X															
7/24/18	1200	GW	BH 35	3 VOA	HCl	-002	X															

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/24/18	1245	Eric Carroll	Christine Walters	7/24/18	1245
7/24/18	1814	Christine Walters	IOS courier	7/25/18	0720

Remarks: Please CC: dburns@ltenv.com ecarroll@ltenv.com

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
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Website: www.hallenvironmental.com

August 10, 2018

Aaron Galer
Williams Four Corners
188 CR 4900
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Kutz Canyon GP OrderNo.: 1808252

Dear Aaron Galer:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/4/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. 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 qualifiers 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP
Lab Order: 1808252

Lab ID: 1808252-001 **Collection Date:** 8/3/2018 12:15:00 PM
Client Sample ID: BH 40 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **RAA**	
Benzene	520	10		µg/L	20	8/8/2018 11:50:00 AM	SL532
Toluene	ND	10		µg/L	20	8/8/2018 11:50:00 AM	SL532
Ethylbenzene	550	10		µg/L	20	8/8/2018 11:50:00 AM	SL532
Xylenes, Total	2400	20		µg/L	20	8/8/2018 11:50:00 AM	SL532
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	20	8/8/2018 11:50:00 AM	SL532
Surr: Toluene-d8	99.2	70-130		%Rec	20	8/8/2018 11:50:00 AM	SL532

Lab ID: 1808252-002 **Collection Date:** 8/3/2018 12:25:00 PM
Client Sample ID: BH 41 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **RAA**	
Benzene	ND	1.0	P	µg/L	1	8/8/2018 1:27:00 PM	SL532
Toluene	ND	1.0	P	µg/L	1	8/8/2018 1:27:00 PM	SL532
Ethylbenzene	ND	1.0	P	µg/L	1	8/8/2018 1:27:00 PM	SL532
Xylenes, Total	ND	1.5	P	µg/L	1	8/8/2018 1:27:00 PM	SL532
Surr: 4-Bromofluorobenzene	99.6	70-130	P	%Rec	1	8/8/2018 1:27:00 PM	SL532
Surr: Toluene-d8	94.8	70-130	P	%Rec	1	8/8/2018 1:27:00 PM	SL532

Lab ID: 1808252-003 **Collection Date:** 8/3/2018 12:35:00 PM
Client Sample ID: BH 43 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	8/8/2018 1:52:00 PM	SL532
Toluene	ND	1.0		µg/L	1	8/8/2018 1:52:00 PM	SL532
Ethylbenzene	ND	1.0		µg/L	1	8/8/2018 1:52:00 PM	SL532
Xylenes, Total	ND	1.5		µg/L	1	8/8/2018 1:52:00 PM	SL532
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/8/2018 1:52:00 PM	SL532
Surr: Toluene-d8	91.7	70-130		%Rec	1	8/8/2018 1:52:00 PM	SL532

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon GP

Lab Order: 1808252

Lab ID: 1808252-004
Client Sample ID: BH 42

Collection Date: 8/3/2018 12:45:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **RAA**	
Benzene	ND	1.0	P	µg/L	1	8/8/2018 2:16:00 PM	SL5329
Toluene	ND	1.0	P	µg/L	1	8/8/2018 2:16:00 PM	SL5329
Ethylbenzene	ND	1.0	P	µg/L	1	8/8/2018 2:16:00 PM	SL5329
Xylenes, Total	ND	1.5	P	µg/L	1	8/8/2018 2:16:00 PM	SL5329
Surr: 4-Bromofluorobenzene	103	70-130	P	%Rec	1	8/8/2018 2:16:00 PM	SL5329
Surr: Toluene-d8	92.6	70-130	P	%Rec	1	8/8/2018 2:16:00 PM	SL5329

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808252**

10-Aug-18

Client: Williams Four Corners
Project: Kutz Canyon GP

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW** Batch ID: **SL53292** RunNo: **53292**
Prep Date: Analysis Date: **8/8/2018** SeqNo: **1754168** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	19	1.0	20.00	0	97.1	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.5		10.00		94.7	70	130			

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW** Batch ID: **SL53292** RunNo: **53292**
Prep Date: Analysis Date: **8/8/2018** SeqNo: **1754169** 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	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.1	70	130			
Surr: Toluene-d8	9.4		10.00		94.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN Work Order Number: 1808252 RcptNo: 1

Received By: Erin Melendrez 8/4/2018 10:15:00 AM

Completed By: Ashley Gallegos 8/6/2018 9:08:37 AM

Reviewed By: JAB 08/06/18

labeled by: 08/04/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace? See remarks	Yes ☐	No ☑	~~No VOA Vials~~ ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: 08/04/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ( ) eMail ( ) Phone ( ) Fax ( ) In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: ALL VOAs for -001 have headspace, -002 - 2 VOAs received w/ headspace 08/04/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good	Not Present			
2	4.4	Good	Not Present			
3	1.1	Good	Not Present			
4	0.8	Good	Not Present			

Chain-of-Custody Record

Client: Williams Four Corners

Aaron Galer

Mailing Address:

Phone #: 801-247-1419

email or Fax#: aaron.galer@williams.com

QA/QC Package:

☑ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☑ EDD (Type) PDF

Turn-Around Time:

~~☑ Standard~~ 5 ☒ Rush Results by 8/8

Project Name: Kutz Canyon GP

Project #:

Project Manager: Aaron Galer - Williams
Danny Burns - LTE

Sampler: Eric Carroll

On Ice: ☒ Yes ☐ No

Sample Temperature: See Remarks

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www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808253	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
8/3/18	1215	GW	BH 40	3 VOA	HCl	-001	X															
	1225		BH 41			-002	X															
	1235		BH 43			-003	X															
↓	1245	↓	BH 42	↓	↓	-004	X															

Date	Time	Relinquished by	Received by	Date	Time
8/3/18	1515	Eric Carroll		8/3/18	1515
8/3/18	1810		courier ENM 8/4/18	8/4/18	1015

Remarks: cc: dburns@ltenv.com
cooler 1: 4.9-0.3(CF)=4.6 cooler 4: 1.1-0.3(CF) 0.8
cooler 2: 4.7-0.3(CF)=4.4
cooler 3: 1.4-0.3(CF)=1.1 ENM 8/4/18

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