OIL CONS. DIV DIST. 3

JAN 26 2018

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

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company **Williams Four Corners LLC**	Contact **Kijun Hong**
Address **1755 Arroyo Drive, Bloomfield, NM 87413**	Telephone No. **505-632-4475**
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.

Describe Cause of Problem and Remedial Action Taken.*
Gas Company of New Mexico (GCNM) encountered what appears to be 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.

12/5/2017 - This is a subsequent report, please see work plan attached.
1/24/2018 - This is a subsequent report, please see Sampling Summary attached.

Describe Area Affected and Cleanup Action Taken.*
12/5/2017 - This is a subsequent report, please see work plan attached.
1/24/2018 - This is a subsequent report, please see Sampling Summary attached.

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:	OIL CONSERVATION DIVISION Approved by Environmental Specialist:	
Printed Name: **Kijun Hong**		
Title: **Environmental Specialist**	Approval Date: 3/6/18	Expiration Date:
E-mail Address: kijun.hong@williams.com	Conditions of Approval:	Attached ☒
Date: **1/24/2018** Phone: **(505) 436-8457**		

* Attach Additional Sheets If Necessary

#nDCS1729626631
3RP-1019

126

Smith, Cory, EMNRD

From: Smith, Cory, EMNRD
Sent: Tuesday, March 6, 2018 9:08 AM
To: 'Hong, Kijun'; Galer, Aaron; l1thomas@blm.gov
Cc: Fields, Vanessa, EMNRD; Powell, Brandon, EMNRD; Webre, Matt; Ruybalid, Tristen
Subject: RE: Kutz Canyon GP Soil Delineation Work Plan

Dear Mr. Hong,

The New Mexico Oil Conservation Division (OCD) received an initial C-141 from Williams Four Corners LLC (Williams) for the delineation at the Kutz Canyon Gas Plant dated January 26, 2018. After review the OCD has approved the delineation report with the following conditions of approval:

- OCD denies Williams request to leave contaminated soils with elevated TPH, and BTEX levels in place. Additional ex-situ and/or in-situ remediation is required.
- OCD denies Williams request to use SP2and SP3 as backfill material.
- As mentioned in the report Williams believes the source of the water is an underground leak from process equipment. Williams will dispose of any fluids encountered as a released liquid to prevent any further soil contamination and the closure standards will be set at 100 mg/kg TPH, 50 mg/kg BTEX and 10 mg/kg Benzene until Williams can determine the source of the water.
- Williams will provide the OCD with a work plan by April 16,2018 that includes the results of the "Engineering analysis of potential leaking process equipment" a remediation plan for contaminated soils, and a delineation plan for additional groundwater investigation. Please include time limes for implementation of all plans.
- Williams will schedule with the OCD District III Environmental staff at least 24 hours prior to the collection of any confirmation sample.

If you have any questions please feel free to contact me at your leisure.

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: Hong, Kijun [mailto:Kijun.Hong@williams.com]
Sent: Wednesday, January 24, 2018 9:45 AM
To: Galer, Aaron <Aaron.Galer@Williams.com>; Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; l1thomas@blm.gov
Cc: Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>; Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>; Webre, Matt <Matt.Webre@Williams.com>; Ruybalid, Tristen <Tristen.Ruybalid@Williams.com>
Subject: RE: Kutz Canyon GP Soil Delineation Work Plan

Including Whitney.

LT Environmental, Inc.
848 East 2nd Avenue
Durango, Colorado 81301
970.385.1096

January 18, 2017

Mr. Cory Smith
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

RE: Excavation, Delineation, and Stockpile Sampling Summary Report
Williams Four Corners LLC
Kutz Canyon Gas Plant – GCNM Right-of-Way
Order # 3RP-1019
San Juan County, New Mexico

Dear Mr. Smith:

LT Environmental, Inc. (LTE), on behalf of Williams Four Corners LLC (Williams), presents this report documenting the investigative soil and water sampling results following the discovery of suspected petroleum hydrocarbon impacts during the construction and installation of a natural gas pipeline at the Kutz Canyon Gas Plant. While excavating a trench to install a natural gas gathering pipeline owned and operated by the Gas Company of New Mexico (GCNM), the construction crew encountered soil suspected of petroleum hydrocarbon impacts. As this section of the pipeline right-of-way (ROW) was located within the Kutz Canyon Gas Plant (Site) operated by Williams, GCNM notified Williams environmental personnel, which subsequently reported the release on a Form C-141 dated October 5, 2017, and coordinated an initial investigative sampling event with the New Mexico Oil Conservation Division (NMOCD).

Following the positive identification of petroleum hydrocarbon impact to soil in the pipeline trench, a soil delineation workplan was implemented to laterally and vertically define the extent of impact in the subsurface. The vertical investigation of the subsurface was also conducted to attempt to identify and define the source of water that was observed in the base of the pipeline trench during the initial investigation. This report describes multiple on-site sampling events and proposes closure based on the laboratory analytical results and site setting.

SITE RANKING CRITERIA

The Site is located in the northwest quarter of the northwest quarter, Section 13, Township 28 North, Range 11 West, in San Juan County, New Mexico (Figure 1). The nearest surface water is approximately 1,090 feet southwest of the trench. The closest groundwater wells are located approximately 2 miles northwest of the Site. Although water was encountered in the pipeline trench excavation on November 9, 2017 at approximately 10 feet below ground surface (bgs), the water is likely the result of a waterline leak in the Kutz Canyon Gas Plant. Groundwater at the Site is estimated to be greater than 100 feet bgs based on available hydrogeologic data and a variety of other sources.

The closest groundwater wells are near the San Juan River. The wells are greater than 200 feet lower in elevation than the Site and tap shallow groundwater aquifers associated with the San Juan River. Kutz Wash, where the nearest shallow groundwater aquifer is expected, is located approximately 1.45 miles southwest of the Site and is approximately 275 feet lower in elevation.

Local aquifers include sandstones within the Nacimiento Formation, which can be up to 1,000 feet bgs in the San Juan Basin; although, depth to aquifers decreases toward this Site due to its position on the margin of the Basin. Published studies of aquifers in the region suggest depth to groundwater within Nacimiento Formation aquifers near the Site is 200 feet bgs (Stone et al., 1983; and Tansey, 1984).

An investigation of documentation available in the NMOCD database indicates previous compliance activities within and near Kutz Canyon Gas Plant have assigned a depth to groundwater of greater than 100 feet bgs. Subsurface investigations associated with remediation or closure activities did not document shallow groundwater. These activities include:

- Discharge permits and subsequent discharge permit renewals for the Kutz Canyon Gas Plant (GW-045);
- NMOCD-approved remediation at a GCNM pipeline release (3RP-361) included excavation to 10 feet bgs and additional soil borings that were advanced to a maximum of 20 feet bgs. No groundwater was detected in the excavation or boreholes. This site is approximately 1 mile east of Kutz Canyon Gas Plant, but similar in elevation and setting. It should be noted that different siting criteria were applied to the remediation, but this was based on proximity (less than 200 feet) to a surface water feature, not shallow groundwater.
- In May 2012, Williams advanced a borehole to 17 feet bgs at the Kutz Canyon Gas Plant and did not encounter groundwater as documented in a report submitted to the NMOCD titled *Soil Sampling Report-Wastewater Vault Removal - Kutz II Drain Sump, June 22, 2012*. The location of the borehole is depicted on Figure 2.
- During subsurface delineation activities documented in this report, saturated soil was only encountered in one borehole (BH-3) at approximately 8 feet to 10 feet bgs, similar to that observed in the pipeline trench. All borings were advanced to 20 to 25 feet bgs. The locations of the boreholes are shown on Figure 3. Lithology in BH-3 did not differ significantly from other boreholes and there does not appear to be a confining unit specific to BH-3 or the trench that would store groundwater in that limited area.

Previous installation of corrosion control/cathodic protection wells at the Site by Williams did not document presence of shallow groundwater. Logs for CPS 1718 #1 and CPS 1718 #2 (locations shown on Figure 2) do not reference the presence of water and have a total depth of 300 feet bgs. The cathodic protection drilling log for CPS 1701 could not be located, but the inspector's field notes state that water was encountered at 260 feet bgs. The logs and field notes are included as Attachment 1.

Based on the NMOCD site ranking criteria determined for the Site: (1) depth to water greater than 100 feet below ground surface, (2) no private, domestic, or water sources located within 1,000 feet, and (3) no surface water bodies located within 1,000 feet, the recommended remediation action levels were determined to be 10 milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for total benzene, toluene, ethylbenzene, and total xylenes (BTEX) and 5,000 mg/kg for total petroleum hydrocarbons (TPH).

SOIL AND WATER SAMPLING

LTE collected soil samples from the pipeline trench, subsequent delineation boreholes, and from the excavated pipeline trench material. Water samples were collected from the pipeline trench, borehole BH-3, and potential sources within the Kutz Canyon Gas Plant.

Pipeline Trench Excavation Soil Sampling

On November 9, 2017, LTE collected three composite soil samples from within the pipeline trench excavation. Soil samples were field screened for volatile organic compounds (VOCs) with a photo-ionization detector (PID) equipped with a 10.6 electron volt lamp per methods in accordance with the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases*, dated August 13, 1993. All samples were collected directly into a pre-cleaned glass jar, labeled with location, date, time, sample collector's name, and method of analysis and immediately placed on ice. The samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Hall Environmental Analytical Laboratory Sciences (Hall) in Albuquerque, New Mexico, for analysis of BTEX via United States Environmental Protection Agency (USEPA) Method 8021, TPH as gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO) per USEPA Method 8015, and chloride by USEPA Method 300.1. A site map with composite soil sample locations is depicted on Figure 3.

Subsurface Sampling

On November 29, 30, and December 1, 2017, LTE advanced soil borings BH-1 through BH-9 on both sides of the existing pipeline trench. Soil borings BH-1 through BH-9 were advanced first with a hand auger to a depth of eight feet to ten feet bgs to identify any impacts in the shallow subsurface. Hydrovac excavation was then used to clear all soil borings of underground utilities to a depth of ten feet bgs. Soil borings were then advanced using a CME 55 truck-mounted drill rig with hollow stem auger. Samples were collected using continuous drilling method at 5-foot intervals and field screened for VOCs. The samples with the highest field screening value were submitted for confirmation laboratory analysis, as well as samples from the bottom of each soil boring to document vertical delineation. All soil borings were advanced to a total depth between 20 feet and 25 feet bgs, where no impacts were observed.

Soil boring samples were submitted to Hall for analysis of BTEX and TPH-GRO, DRO, and MRO under the same preparation guidelines and laboratory protocol listed above. Samples were not

analyzed for chloride since chloride was not identified as a contaminant of concern in the trench excavation samples. A site map with soil boring locations is depicted on Figure 3 and soil boring logs are included as Attachment 2.

Water Sampling

On November 9, 2017, water samples were collected from potential sources within the Kutz Canyon Gas Plant (API Water Outlet and Seep North of Flare), and analytical results were compared to those detected in a grab sample of the standing water in the open pipeline trench (Pipeline Trench). Samples were collected by filling six 40-milliliter (ml) pre-cleaned glass vials. The laboratory-supplied vials were filled and capped with no air inside to prevent degradation of the sample. Samples were labeled with the date and time of collection, sample name, project name, sample collector's name, and parameters to be analyzed. They were immediately sealed and packed on ice. The samples were transferred to Hall for analysis of BTEX by USEPA Method 8260, TPH by USEPA Method 8015, anions by USEPA Method 300.0, metals by USEPA Method 200.7, and VOCs by USEPA Method 8260.

On November 21, 2017, additional water samples were collected from the Main Cooling Tower and from the City Water held onsite for fire suppression as additional potential sources of leaking water at the Site. These samples were analyzed for anions and metals. On November 30, 2017, water was encountered in soil boring BH-3 and a water sample was collected from the open borehole with a peristaltic pump. The sample was analyzed for BTEX and TPH.

Stockpile Sampling

On December 1, 2017, LTE collected 5-point composite samples for every 100 cubic yards of stockpiled soil along the pipeline trench to be used as backfill. A total of four composite samples were collected using a hand auger for field screening as observed by NMOCD personnel. The stockpile samples were submitted to Hall for analysis of BTEX and TPH under the same preparation guidelines and laboratory protocol listed above. A site map with stockpile locations is depicted on Figure 3.

RESULTS

Laboratory analytical results collected from the pipeline trench excavation on November 9, 2017 for soil samples EX-South @ 10' and TR01 @ 8' exhibit total BTEX concentrations of 156.2 mg/kg and 93.7 mg/kg, respectively, which exceed the NMOCD recommended remediation standards for this Site. All 18 borehole samples and four stockpile soil samples were compliant with the NMOCD recommended remediation standards for benzene, total BTEX and TPH. Soil analytical results are summarized in Tables 1 through 3 and complete laboratory analytical reports are included as Attachment 3.

Laboratory analytical results for water sample collected in the pipeline trench contained a trace of DRO and acetone and exceeded New Mexico Water Quality Control Commission (NMWQCC) standards for chloride and sulfate. The water sample collected from soil boring BH-3 contained traces of DRO, benzene, toluene, and total xylenes, but did not exceed NMWQCC standards for the hydrocarbon constituents.

Water samples collected from potential point sources at the Site exceed some NMWQCC standards as expected, but are inconclusive for fingerprinting the source of the water in the trench and in BH-3. Chloride and sulfate are present in elevated concentrations in the main cooling tower water, but it is difficult to confirm that is the source of the water from these data alone. Williams believes the source is a waterline in the Kutz Canyon Gas Plant and is conducting an engineering analysis to evaluate potential leaks. Additionally, Williams is preparing a limited work plan to investigate and delineate potential surface impact near the flare as a result of the elevated benzene concentration detected in the water sample collected from the seep. Water analytical results are summarized in Table 4 and complete laboratory analytical reports are included as Attachment 3.

Conclusions

Impacted soil characterized by elevated total BTEX concentrations that exceed the NMOCD recommended remediation standards for the Site are confined to the central portion of the pipeline trench northeast of aboveground storage tanks (samples EX-South @ 10' and TR01 @ 8' on Figure 3). The soil samples represent an area within a highly congested pipeline corridor containing multiple utilities at varying depths (Figure 3). The extent of soil impact has been defined laterally and vertically around the pipeline trench. Soil samples from boreholes between the aboveground storage tanks and the pipeline trench, as well as north and east of the trench indicate no impact exceeding NMOCD recommended remediation standards. The soil that is retrievable without compromising the existing subsurface pipelines has been excavated. Because the residual impact to soil is restricted to a limited subsurface area that is estimated to be 300 feet in area by less than 2 feet thick and 8 feet to 10 feet deep within an active gas plant, Williams respectfully requests the NMOCD grant a No Further Action status for this Site and permission to use the stockpiled soil as backfill.

Based on existing subsurface and hydrogeologic data for the region and at the Site, the water observed in the pipeline trench and soil boring BH-3 does not appear to be groundwater and is attributed to a potential waterline leak at the Kutz Canyon Gas Plant that Williams is currently attempting to isolate and address. Leaving the residual soil in place would not compromise public health and safety, as the BTEX concentrations will be in the subsurface and are unlikely to migrate laterally or vertically to the extent that groundwater would be affected.

LTE appreciates the opportunity to provide this report on behalf of Williams. If you have any questions or comments, do not hesitate to contact me at (970) 385-1096 or via email at dburns@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.

Danny Burns
Project Geologist

Ashley Ager, M.S., P.G.
Senior Scientist, V.P. of Regional Offices

Attachments:
Figure 1 – Site Location Map
Figure 2 – Site Map
Figure 3 – Sample Location Map
Table 1 – Pipeline Trench Excavation Soil Sample Results
Table 2 – Soil Boring Sample Results
Table 3 – Stockpile Soil Sample Results
Table 4 – Water Sample Results
Attachment 1 – Cathodic Protection Well Logs
Attachment 2 – Soil Boring Logs
Attachment 3 – Laboratory Analytical Reports

References

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

Tansey, M., 1984, *An Integrated Isotopic/Physical Approach to A Numerical Model of Groundwater Flow in the San Juan Basin*: New Mexico Institute of Mining and Technology Masters Thesis, 160 p.

FIGURES

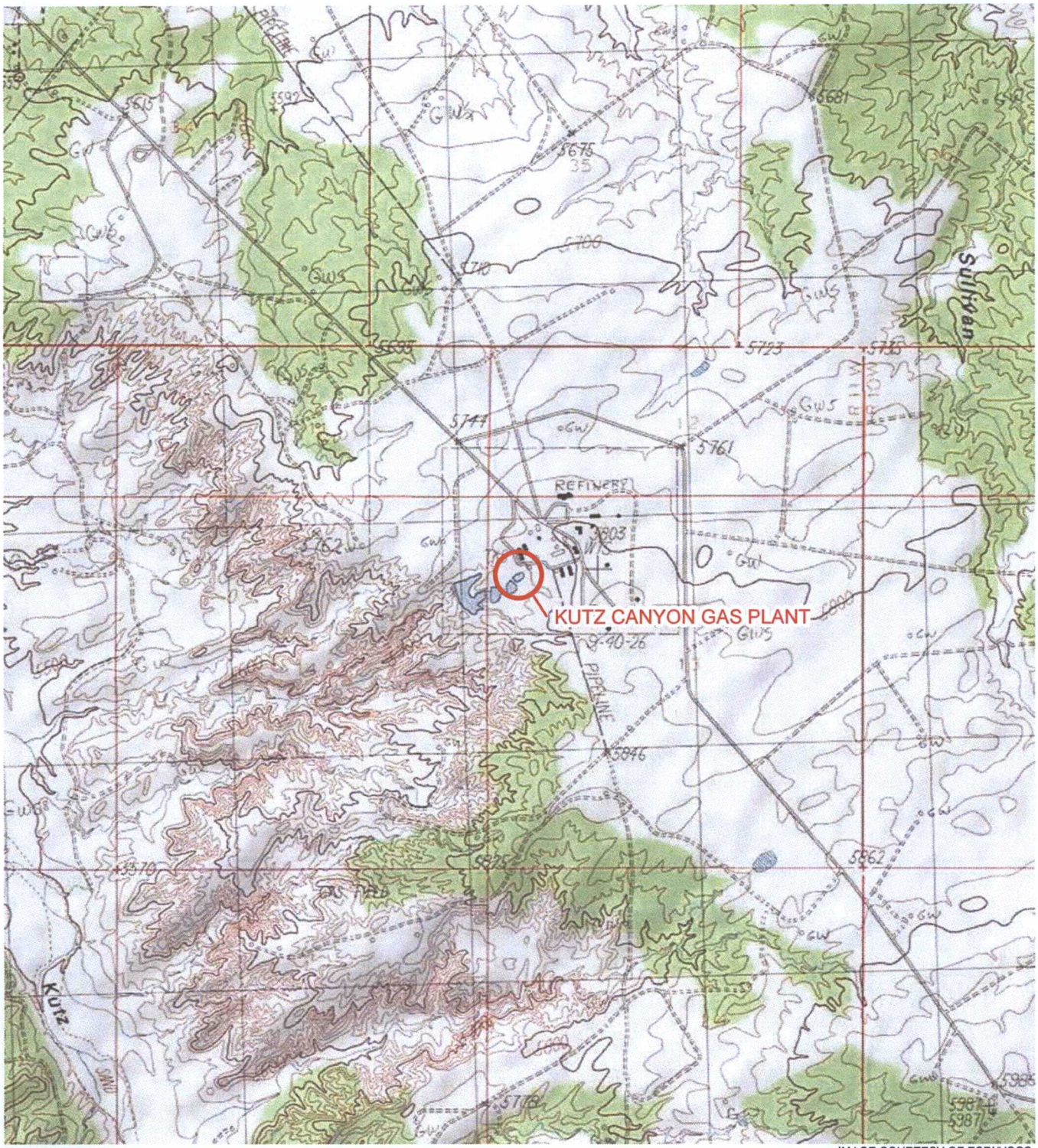

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

FIGURE 1
SITE LOCATION MAP
KUTZ CANYON GAS PLANT
NWNW SEC 13 T28N R11W
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FOUR CORNERS LLC

P:\Williams Four Corners\GIS\MXD\034017003_KUTZ\034017003_KUTZ_FIG01_SL.mxd

IMAGE COURTESY OF ESRI

LEGEND

- BOREHOLE
- WATER SAMPLE LOCATION
- CATHODIC PROTECTION WELL LOG LOCATION
- PROJECT AREA

BGS: BELOW GROUND SURFACE

0 200 400
Feet

N

FIGURE 2
SITE MAP
KUTZ CANYON GAS PLANT
NWNW SEC 13 T28N R11W
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FOUR CORNERS, LLC

P:\Williams Four Corners\GIS\MXD\034017003_KUTZ\034017003_KUTZ_FIG02_SITE_180118.mxd

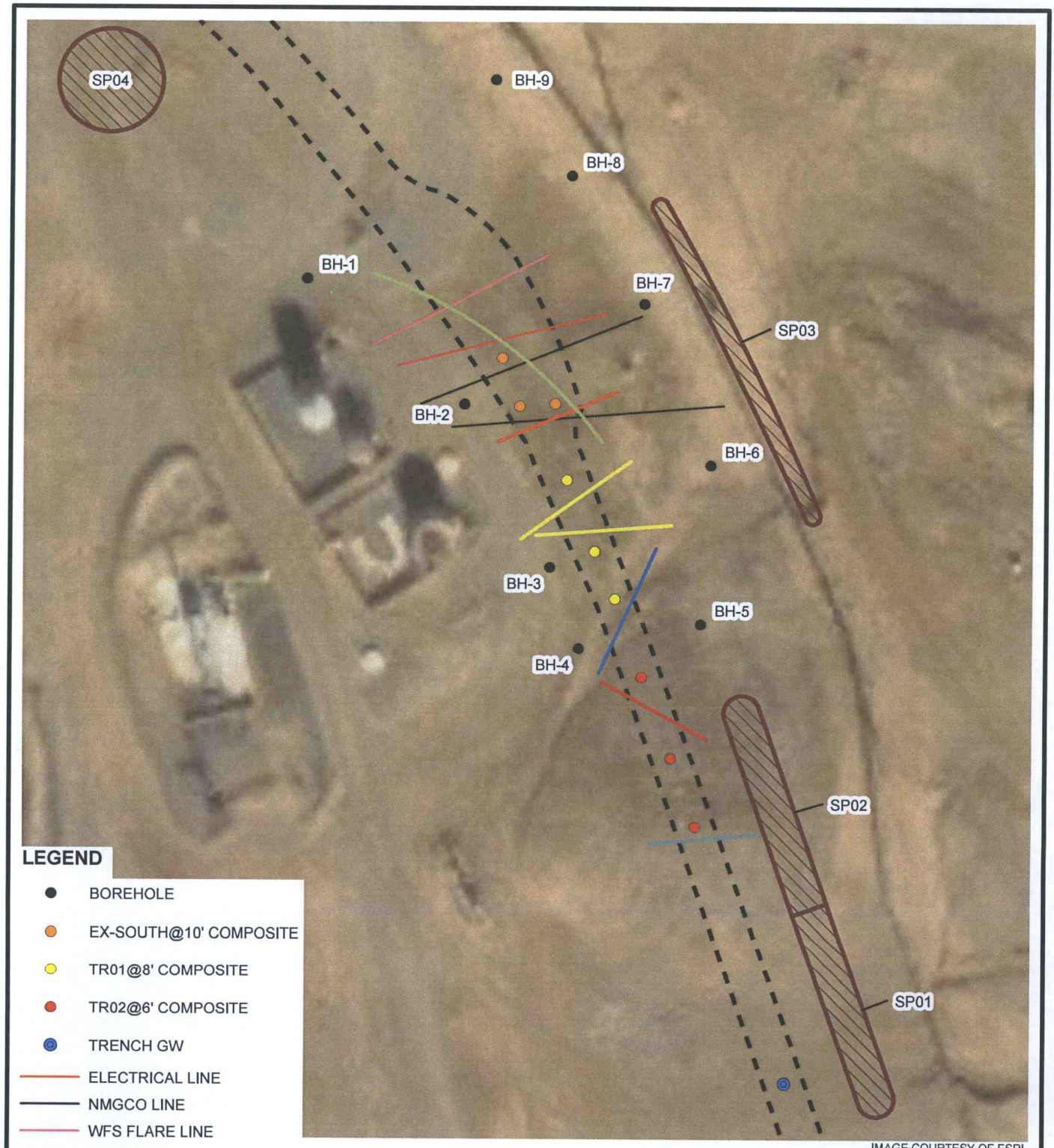

FIGURE 3
SOIL LOCATION MAP
KUTZ CANYON GAS PLANT
NWNW SEC 13 T28N R11W
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FOUR CORNERS LLC

P:\Williams Four Corners\GIS\MXD\034017003_KUTZ\034017003_KUTZ_FIG02_SITE.mxd

TABLES

TABLE 1
PIPELINE TRENCH EXCAVATION SOIL SAMPLE RESULTS

KUTZ CANYON GAS PLANT - GCNM ROW
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)
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
NMOCD Closure Criteria				**10**	**NE**	**NE**	**NE**	**50**	**NE**	**NE**	**NE**	**5,000**

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 2
SOIL BORING SAMPLE RESULTS

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

Sample ID	Sample Date	Vapor (ppm)	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)
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	0.250	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
NMOCD Closure Criteria			**10**	**NE**	**NE**	**NE**	**50**	**NE**	**NE**	**NE**	**5,000**

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

TABLE 3
STOCKPILE SOIL SAMPLE RESULTS

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

Sample ID	Sample Date	Vapor (ppm)	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)
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	1.20	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
NMOCD Closure Criteria			**10**	**NE**	**NE**	**NE**	**50**	**NE**	**NE**	**NE**	**5,000**

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

TABLE 4
WATER SAMPLE RESULTS

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

Analyte	NMWQCC Standard	Unit	API Water Outlet	Seep North of Flare	Pipeline Trench Water	Main Cooling Tower	City Water	BH-3
			11/9/2017	11/9/2017	11/9/2017	11/21/2017	11/21/2017	11/30/2017
Anions by US EPA Method 300.0								
Fluoride	1.6	mg/L	<0.50	0.65	<0.50	1.1	0.13	NM
Chloride	250	mg/L	95	**1,100**	**450**	**400**	11	NM
Bromide	NE	mg/L	<0.50	13	8	<0.10	<0.10	NM
Phosphorus	NE	mg/L	<2.5	<2.5	<10	<10	<0.50	NM
Sulfate	600	mg/L	74	71	**6,900**	**1,200**	46	NM
Nitrate + Nitrite	NE	mg/L	<1.0	3.8	3.6	<1.0	<1.0	NM
Metals by US EPA Method 200.7								
Calcium	NE	mg/L	28	130	490	300	30	NM
Magnesium	NE	mg/L	3.9	80	140	60	6	NM
Potassium	NE	mg/L	2.3	11	3.2	21.0	1.9	NM
Sodium	NE	mg/L	81	2,900	2,800	420	19	NM
Total Petroleum Hydrocarbons by US EPA Method 8015								
GRO	NE	mg/L	240	5.2	<0.050	NM	NM	<0.10
DRO	NE	mg/L	20	<1.0	1.3	NM	NM	31
MRO	NE	mg/L	6.5	<5.0	<5.0	NM	NM	<5.0
Volatile Organic Compounds by US EPA Method 8260								
Benzene	10	µg/L	**24,000**	**51**	<1.0	NM	NM	1.2
Toluene	750	µg/L	**40,000**	<1.0	<1.0	NM	NM	1.9
Ethylbenzene	750	µg/L	**1,200**	<1.0	<1.0	NM	NM	<1.0
Xylenes, Total	620	µg/L	**11,000**	210	<1.5	NM	NM	6.5
Methyl tert-butyl ether (MTBE)	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
1,2,4-Trimethylbenzene	620	µg/L	440	11	<1.0	NM	NM	NM
1,3,5-Trimethylbenzene	NE	µg/L	190	10	<1.0	NM	NM	NM
1,2-Dichloroethane (EDC)	10	µg/L	<50	<1.0	<1.0	NM	NM	NM
1,2-Dibromoethane (EDB)	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
Napthalene	NE	µg/L	<100	<2.0	<2.0	NM	NM	NM
1-Methylnapthalene	NE	µg/L	<200	<4.0	<4.0	NM	NM	NM
2-Methylnapthalene	NE	µg/L	<200	<4.0	<4.0	NM	NM	NM
Acetone	NE	µg/L	32,000	25	23	NM	NM	NM
Bromobenzene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
Bromodichloromethane	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
Bromoform	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
Bromomethane	NE	µg/L	<150	<3.0	<3.0	NM	NM	NM
2-Butanone	NE	µg/L	6,100	<10	<10	NM	NM	NM
Carbon disulfide	NE	µg/L	1,400	<10	<10	NM	NM	NM
Carbon Tetrachloride	10	µg/L	<50	<1.0	<1.0	NM	NM	NM
Chlorobenzene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
Chloroethane	NE	µg/L	<100	<2.0	<2.0	NM	NM	NM
Chloroform	100	µg/L	<50	<1.0	<1.0	NM	NM	NM
Chloromethane	NE	µg/L	<150	<3.0	<3.0	NM	NM	NM
2-Chlorotoluene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
4-Chlorotoluene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
cis-1,2-DCE	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
cis-1,3-Dichloropropene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
1,2-Dibromo-3-chloropropane	NE	µg/L	<100	<2.0	<2.0	NM	NM	NM
Dibromochloromethane	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
Dibromomethane	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
1,2-Dichlorobenzene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
1,3-Dichlorobenzene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
1,4-Dichlorobenzene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
Dichlorodifluoromethane	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
1,1-Dichloroethane	25	µg/L	<50	<1.0	<1.0	NM	NM	NM
1,1-Dichloroethene	5	µg/L	<50	<1.0	<1.0	NM	NM	NM

TABLE 4
WATER SAMPLE RESULTS

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

Analyte	NMWQCC Standard	Unit	API Water Outlet	Seep North of Flare	Pipeline Trench Water	Main Cooling Tower	City Water	BH-3
			11/9/2017	11/9/2017	11/9/2017	11/21/2017	11/21/2017	11/30/2017
1,2-Dichloropropane	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
1,3-Dichloropropane	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
2,2-Dichloropropane	NE	µg/L	<100	<2.0	<2.0	NM	NM	NM
1,1-Dichloropropene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
Hexachlorobutadiene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
2-Hexanone	NE	µg/L	<500	<10	<10	NM	NM	NM
Isopropylbenzene	NE	µg/L	64	<1.0	<1.0	NM	NM	NM
4-Isopropyltoluene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
4-Methyl-2-pentanone	NE	µg/L	500	<10	<10	NM	NM	NM
Methylene Chloride	100	µg/L	<150	<3.0	<3.0	NM	NM	NM
n-Butylbenzene	NE	µg/L	<150	<3.0	<3.0	NM	NM	NM
n-Propylbenzene	NE	µg/L	66	<1.0	<1.0	NM	NM	NM
sec-Butylbenzene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
Styrene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
tert-Butylbenzene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
1,1,1,2-Tetrachloroethane	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
1,1,2,2-Tetrachloroethane	10	µg/L	<100	<2.0	<2.0	NM	NM	NM
Tetrachloroethene (PCE)	20	µg/L	<50	<1.0	<1.0	NM	NM	NM
trans-1,2-DCE	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
trans-1,3-Dichloropropene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
1,2,3-Trichlorobenzene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
1,2,4-Trichlorobenzene	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
1,1,1-Trichloroethane	60	µg/L	<50	<1.0	<1.0	NM	NM	NM
1,1,2-Trichloroethane	10	µg/L	<50	<1.0	<1.0	NM	NM	NM
Trichloroethene (TCE)	100	µg/L	<50	<1.0	<1.0	NM	NM	NM
Trichlorofluoromethane	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
1,2,3-Trichloropropane	NE	µg/L	<100	<2.0	<2.0	NM	NM	NM
Vinyl chloride	1	µg/L	<50	<1.0	<1.0	NM	NM	NM

Notes:
µg/L - micrograms per liter
mg/L - milligrams per liter
NMWQCC - New Mexico Water Quality Control Commission
NE - not established
NM - Not Measured
< - indicates result is below laboratory detection limit
BOLD indicates result exceeds the NMWQCC standard

ATTACHMENT 1

CATHODIC WELL PROTECTION LOGS

TIERRA CORROSION CONTROL, INC.
DRILLING LOG

DATE: 12/2/2015
COMPANY: Williams
LOCATION: CPS 1718 GB
LEGALS:
COUNTY: San Juan
STATE: NM

DRILLER: Lemuel Willie
BIT SIZE: 7 7/8
CASING SIZE/TYPE: 8"x20' PVC
DEPTH: 300'
VENT PIPE 120'
PERF PIPE: 200'

ANODE TYPE: TA3 Duriron
ANODE AMOUNT: 15
LBS COKE BACKFILL: 5000LBS
COKE TYPE: SC3
BOULDER DRILLING: None

DEPTH	DRILLER'S LOG	AMPS	DEPTH	DRILLER'S LOG	AMPS
20	Casing		310		
25	Shale		315		
30			320		
35			325		
40		2.7	330		
45		5.5	335		
50		4.2	340		
55		3.1	345		
60		4.0	350		
65		5.4	355		
70		5.4	360		
75		5.5	365		
80		4.5	370		
85		3.1	375		
90		2.5	380		
95	Sandstone	1.9	385		
100		2.0	390		
105		2.2	395		
110		1.7	400		
115		1.6	405		
120	Shale	2.0	410		
125		2.7	415		
130		3.7	420		
135		3.7	425		
140		3.4	430		
145		3.3	435		
150		3.3	440		
155		2.7	445		
160		3.0	450		
165		3.3	455		
170		3.3	460		
175		35	465		
180		3.0	470		
185		3.4	475		
190		3.4	480		
195		3.5	485		
200		3.5	490		
205		3.4	495		
210		3.0	500		
215		2.6	505		
220		2.2	510		
225		2.1	515		
230	Sandstone	1.8	520		
235		1.5	525		
240		1.5	530		
245		1.3	535		
250		1.5	540		
255	Shale	2.1	545		
260		3.3	550		
265		2.7	555		
270		2.4	560		
275		2.4	565		
280		2.0	570		
285		1.8	575		
290			580		
295			585		
300			590		
305			595		

ANODE #	DEPTH	NO COKE	COKE
1	275	2.4	6.2
2	265	2.8	3.8
3	255	2.4	3.6
4	225	2.1	9.0
5	215	2.6	11.1
6	205	3.1	13.1
7	195	3.1	14.0
8	185	3.8	14.2
9	175	3.8	13.7
10	165	3.0	13.2
11	155	2.8	13.7
12	145	3.8	15.3
13	135	4.0	16.2
14	125	4.1	15.5
15	115	2.3	12.2
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

WATER DEPTH:
ISOLATION PLUGS:
LOGING VOLTS: 12.9
VOLT SOURCE: Auto Battery
TOTAL AMPS: 48.4
TOTAL GB RESISTANCE: 0.26
VAC. SERVICES:
CEMENT:
REMARKS:

TIERRA CORROSION CONTROL, INC.

DRILLING LOG

DATE: 12/1/2015
COMPANY: Williams
LOCATION: CPS 1718 GB #2
LEGALS:
COUNTY: San Juan
STATE: NM

DRILLER: Lemuel Willie
BIT SIZE: 7 7/8
CASING SIZE/TYPE: 8"x20' PVC
DEPTH: 300'
VENT PIPE 120'
PERF PIPE: 200'

ANODE TYPE: TA-3 Duriron
ANODE AMOUNT: 15
LBS COKE BACKFILL: 5000LBS
COKE TYPE: Loresco SC3
BOULDER DRILLING: None

DEPTH	DRILLER'S LOG	AMPS	DEPTH	DRILLER'S LOG	AMPS
20	Casing		310		
25	Shale		315		
30			320		
35			325		
40			330		
45			335		
50		4.1	340		
55		6.8	345		
60		7.5	350		
65		7.8	355		
70		7.7	360		
75		7.9	365		
80		7.8	370		
85		5.4	375		
90		3.7	380		
95		3.1	385		
100		3.3	390		
105		3.6	395		
110		3.9	400		
115		4.1	405		
120		3.6	410		
125		6.6	415		
130		7.2	420		
135		7.2	425		
140		6.9	430		
145		6.5	435		
150		7.0	440		
155		6.6	445		
160		6.0	450		
165		6.5	455		
170		6.6	460		
175		6.7	465		
180		6.9	470		
185		7.0	475		
190		6.7	480		
195		6.9	485		
200		6.3	490		
205		6.1	495		
210		5.2	500		
215		4.9	505		
220		4.2	510		
225		3.0	515		
230		2.8	520		
235		3.5	525		
240		3.3	530		
245		2.6	535		
250		2.5	540		
255		3.3	545		
260		4.1	550		
265		4.2	555		
270		4.3	560		
275		3.1	565		
280		3.3	570		
285		2.6	575		
290		2.3	580		
295		2.1	585		
300			590		
305			595		

ANODE #	DEPTH	NO COKE	COKE
1	280	3.0	10.0
2	270	4.0	10.4
3	260	4.1	10.8
4	240	3.0	9.6
5	230	3.3	9.9
6	220	3.8	10.9
7	210	5.2	12.2
8	200	6.4	14.1
9	190	6.9	14.3
10	180	7.3	14.6
11	170	7.0	14.3
12	160	6.6	13.7
13	150	6.9	13.7
14	140	6.7	14.1
15	130	7.3	13.1
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

WATER DEPTH:
ISOLATION PLUGS:
LOGING VOLTS: 13.1
VOLT SOURCE: Auto Battery
TOTAL AMPS: 48.8
TOTAL GB RESISTANCE: 0.27
VAC. SERVICES:
CEMENT:
REMARKS:

11-24-15

@ TCA Office - Copies

800 MW Electric (4) people got them going

915 Triad Showed up, yesterday they said 8 AM

Rig Exhaust Broken

1030 Move to La Cosa

Set & Cement 20 ft of 10" casing

Charlie Sent E-mail that we can leave @ Noon tomorrow "

Time shoot

1230 Casing is Set

Rig down

wash out pump

205 Arrive @ Kuhs

Miguel said the Crew is waiting on you I said NO Miguel they went to get the backhoe. Plus they didn't get here till 9:15 this morning - Not my problem

245 Rigged up & staging equipment

440 Hit H_2O @ 260 ft.

Sheduled Riley truck @ 8:30 AM tomorrow

600 Tripped out & Cleaned up Pad

ATTACHMENT 2

SOIL BORING LOGS

N

Compliance » Engineering » Remediation
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 Stain/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					

Compliance » Engineering » Remediation
LT Environmental, Inc.

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					

Compliance » Engineering » Remediation
LT Environmental, Inc.
848 E. 2nd Ave
Durango, Colorado 81301

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	NO		2					
					3				No Stain/odor	
					4					
					5					
					6					
					7					
					8				Compact	
					9			SM	Dark grey green silty sand	
					10					
	moist	835	YES	13'-15'	11				Stain/odor	
					12					
					13					
					14					
					15					

Compliance » Engineering » Remediation
LT Environmental, Inc.

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
					15					
	moist	35.7	Yes		16				Compact Dark grey green silty sand	
					17			SM		
					18				staining slight odor	
					19					
					20					
					21				It reddish brown silty sand	
	moist	151	Yes	23'-25'	22			SM	small amount of staining	
					23				No odor	
					24					
					25					
					26					
					27				TD = 25'	
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

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

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: NA
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 matter, 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					

Compliance » Engineering » Remediation
LT Environmental, Inc.

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
	moist	0.8	NO	1	15 16 17 18	2			Dark green, silty sand No stain/odor	
	wet	0.4	NO	2 23'-25'	19 20 21 22 23 24 25	3			Compact lt brown silty sand saturated. No stain/odor.	
					26 27 28 29 30 31 32 33 34 35 36 37				TD = 25' water sample grabbed	

Compliance » Engineering » Remediation
LT Environmental, Inc.
848 E. 2nd Ave
Durango, Colorado 81301

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					
					2			SP	lt reddish brown sand	
	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					

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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	
					2			SP		
	moist	5.4	NP		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	1		SM		
	moist	0.7	Yes		12				Some Staining	
			grey		13				Slight odor	
					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	Complete 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		
					11				Silty Sand	
	Moist	0.3	No	12'-15	12		100%		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 No Stain Organic swampy odor	
					16					
					17					
					18					
					19					
					20					
					21				TD = 20'	
					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-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	4.2	yes		11		100%		Slight odor	
					12					
					13					
					14					
					15					

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Boring/Well #	BH-7
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					
					16				Compact lt. brown silty sand	
	moist	4.5	NA	18'-20'	17		100%	SM		
					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-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.	
	moist	4.6	No		2			SP	Coal 3'-3.5'	
					3					
					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%	SM	Compact Dark reddish brown	
	moist	0.2	NO		13				silty sand, w/ white mottling	
					14				No Stain/odor	
					15					

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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					
	moist	4.9	NO		17		100%			
					18				NO stain/odor	
					19					
					20					
					21					
					22					
					23				TD=20'	
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

ATTACHMENT 3

LABORATORY ANALYTICAL REPORTS

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
Client Sample ID: TR01@8'
Collection Date: 11/9/2017 3:15:00 PM
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	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
Project: Kutz GCNM ROW
Lab ID: 1711594-003
Matrix: MEOH (SOIL)
Client Sample ID: TR02@6'
Collection Date: 11/9/2017 3:30:00 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	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:

*	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 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:

*	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: 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
Matt Webre
Mailing Address: 1755 Arroyo Dr.
Bloomfield, NM
Phone #: 505-632-4442
email or Fax#: matt.webre@williams.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) PDF

Turn-Around Time:
☐ Standard ☒ Rush same day, EOD 11-10-17
Project Name: Kutz GCNM ROW
Project #:
Project Manager: Williams - Kijun Hong
LTE-Danny Burns 701-570 (cell) -4727
Sampler: D Burns
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,NO3,NO2,PO4,SO4)	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	D-UB	Cindy Waet	11/9/17	1825
11/9/17	2045	Cindy Waet		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

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.
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: 1712109-008 **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
Client Sample ID: BH-5 3'-5'
Project: Kutz Gas Plan
Collection Date: 12/1/2017 9:15:00 AM
Lab ID: 1712109-010
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	12/6/2017 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.	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: 1712109-011 **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.	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: 1712109-012 **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.
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: 1712109-015 **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.
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: 1712109-018 **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.
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: 1712109-019 **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.	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 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 Galer

Mailing Address: 295 Chipeta Way

Salt Lake City, Ut. 84106

Phone #: 801-584-6746

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 Gas Plant

Project #: 034017003

Project Manager:
Williams: Aaron Galer
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)
11/30/17	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 VOAA	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									
	14:20	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
12/1/17	14:40			12/1/17	1440
12/1/17	1958			12/02/17	0830

Remarks: Please CC: aager@ltenv.com
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

Attn. Aaron Galer

Mailing Address: 295 Chipeta Way

Salt Lake City, Ut. 84108

Phone #: 801-584-6746

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 Gas Plant

Project #: 03401 7003

Project Manager: Williams: Aaron Galer
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)	8270 (Semi-VOA)					Air Bubbles (Y or N)
12/1/17	09:15	Soil	BH-5 3'-5'	1 4oz	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													
	11:36		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		SP01				X		X		EC											
	13:20		SP02				X		X			EC										

Date:	Time:	Relinquished by:	Received by:	Date	Time
12/1/17	14:40			12/1/17	1446
12/1/17	1958			12/02/17	0830

Remarks: Please cc: aager@ltenv.com
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
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Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

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

Analytical Report
Lab Order **1712115**
Date Reported: **12/8/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon Gas Plant GCNM ROW
Lab ID: 1712115-001 **Matrix:** SOIL

Client Sample ID: SP01
Collection Date: 12/1/2017 1:15:00 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)	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 ☑	
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 ☐	
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 ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

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: 17755 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 AT folder

Date: 12-1-17

Received by: [signature] Date 12/1/17 Time 1442

Date: 12/1/17

Received by: [signature] Date 12/02/17 Time 0830

Remarks: cc: 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 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

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: 1711647-001
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.

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: 1711647-001 **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
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**	
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
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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:

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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 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

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Qualifiers:

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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**	
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

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Qualifiers:

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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

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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	**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:

*	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
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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 **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:

*	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: **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:

*	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 **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:

*	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 **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
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 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
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 ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
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 ☐	

# of preserved bottles checked for pH: 6
(<2 or >12 unless noted)
Adjusted? YES
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 -001E and 1mL HNO_3 -002E 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 Arroyo 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:
☐ Standard ☒ Rush 2 day 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				
1	17:15	AQ	API Water Outlet	10	↓	-002			X					X		X		X				
1	17:30	AQ	Pipeline Trench Water	10	↓	-003			X					X		X		X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
11-10	0945			11-10-17	0945
11-10-17	1026			11/10/17	1026

Remarks:
cc: Kijun.Hong@williams.com
aaron.galer@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 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
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December 04, 2017

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

RE: Kutz Canyon Gas Plant OrderNo.: 1711B94

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 2 sample(s) on 11/22/2017 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 **1711B94**
Date Reported: **12/4/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Kutz Canyon Gas Plant
Lab ID: 1711B94-001 **Matrix:** AQUEOUS

Client Sample ID: Main Cooling Tower
Collection Date: 11/21/2017 10:55:00 AM
Received Date: 11/22/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Fluoride	1.1	0.10		mg/L	1	11/29/2017 1:46:13 AM	R47366
Chloride	400	10	*	mg/L	20	11/29/2017 2:23:28 AM	R47366
Bromide	ND	0.10		mg/L	1	11/29/2017 1:46:13 AM	R47366
Phosphorus, Orthophosphate (As P)	ND	10	H	mg/L	20	11/29/2017 2:23:28 AM	R47366
Sulfate	1200	25	*	mg/L	50	11/29/2017 5:02:09 PM	R47404
Nitrate+Nitrite as N	ND	1.0		mg/L	5	11/29/2017 3:00:42 AM	R47366
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **MED**	
Calcium	300	5.0		mg/L	5	11/29/2017 8:13:23 AM	35173
Magnesium	60	5.0		mg/L	5	11/29/2017 8:13:23 AM	35173
Potassium	21	1.0		mg/L	1	11/29/2017 8:00:17 AM	35173
Sodium	420	5.0		mg/L	5	11/29/2017 8:13:23 AM	35173

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 Gas Plant
Lab ID: 1711B94-002 **Matrix:** AQUEOUS

Client Sample ID: City Water
Collection Date: 11/21/2017 11:05:00 AM
Received Date: 11/22/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Fluoride	0.13	0.10		mg/L	1	11/29/2017 2:35:53 AM	R47366
Chloride	11	0.50		mg/L	1	11/29/2017 2:35:53 AM	R47366
Bromide	ND	0.10		mg/L	1	11/29/2017 2:35:53 AM	R47366
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	11/29/2017 2:35:53 AM	R47366
Sulfate	46	0.50		mg/L	1	11/29/2017 2:35:53 AM	R47366
Nitrate+Nitrite as N	ND	1.0		mg/L	5	11/29/2017 3:13:07 AM	R47366
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **MED**	
Calcium	30	1.0		mg/L	1	11/29/2017 8:18:17 AM	35173
Magnesium	5.6	1.0		mg/L	1	11/29/2017 8:18:17 AM	35173
Potassium	1.9	1.0		mg/L	1	11/29/2017 8:18:17 AM	35173
Sodium	19	1.0		mg/L	1	11/29/2017 8:18:17 AM	35173

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#: **1711B94**

04-Dec-17

Client: Williams Four Corners

Project: Kutz Canyon Gas Plant

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R47366**	RunNo: **47366**
Prep Date:	Analysis Date: **11/28/2017**	SeqNo: **1512142** 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: **R47366**	RunNo: **47366**
Prep Date:	Analysis Date: **11/28/2017**	SeqNo: **1512143** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.6	0.50	5.000	0	92.8	90	110			
Bromide	2.4	0.10	2.500	0	96.6	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.5	90	110			
Sulfate	9.5	0.50	10.00	0	95.4	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.2	90	110			

Sample ID **1711B94-001AMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **Main Cooling Tower**	Batch ID: **R47366**	RunNo: **47366**
Prep Date:	Analysis Date: **11/29/2017**	SeqNo: **1512184** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5	0.10	0.5000	1.061	85.1	68.4	112			
Bromide	2.2	0.10	2.500	0	87.3	77	108			

Sample ID **1711B94-001AMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **Main Cooling Tower**	Batch ID: **R47366**	RunNo: **47366**
Prep Date:	Analysis Date: **11/29/2017**	SeqNo: **1512185** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5	0.10	0.5000	1.061	93.4	68.4	112	2.74	20	
Bromide	2.3	0.10	2.500	0	92.5	77	108	5.77	20	

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R47404**	RunNo: **47404**
Prep Date:	Analysis Date: **11/29/2017**	SeqNo: **1514013** Units: **mg/L**

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

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#: **1711B94**

04-Dec-17

Client: Williams Four Corners

Project: Kutz Canyon Gas Plant

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R47404**	RunNo: **47404**
Prep Date:	Analysis Date: **11/29/2017**	SeqNo: **1514013** Units: **mg/L**

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

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R47404**	RunNo: **47404**
Prep Date:	Analysis Date: **11/29/2017**	SeqNo: **1514014** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.8	0.50	10.00	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#: **1711B94**

04-Dec-17

Client: Williams Four Corners
Project: Kutz Canyon Gas Plant

Sample ID **MB-35173**	SampType: **MBLK**	TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **PBW**	Batch ID: **35173**	RunNo: **47380**
Prep Date: **11/28/2017**	Analysis Date: **11/29/2017**	SeqNo: **1511701** 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 **LCS-35173**	SampType: **LCS**	TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **LCSW**	Batch ID: **35173**	RunNo: **47380**
Prep Date: **11/28/2017**	Analysis Date: **11/29/2017**	SeqNo: **1511702** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	51	1.0	50.00	0	101	80	120			
Magnesium	50	1.0	50.00	0	100	80	120			
Potassium	49	1.0	50.00	0	97.3	80	120			
Sodium	49	1.0	50.00	0	98.7	80	120			

Sample ID **1711B94-001BMS**	SampType: **MS**	TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **Main Cooling Tower**	Batch ID: **35173**	RunNo: **47380**
Prep Date: **11/28/2017**	Analysis Date: **11/29/2017**	SeqNo: **1511710** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	69	1.0	50.00	20.78	96.7	75	125			

Sample ID **1711B94-001BMSD**	SampType: **MSD**	TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **Main Cooling Tower**	Batch ID: **35173**	RunNo: **47380**
Prep Date: **11/28/2017**	Analysis Date: **11/29/2017**	SeqNo: **1511712** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	68	1.0	50.00	20.78	95.3	75	125	1.02	20	

Sample ID **1711B94-001BMS**	SampType: **MS**	TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **Main Cooling Tower**	Batch ID: **35173**	RunNo: **47380**
Prep Date: **11/28/2017**	Analysis Date: **11/29/2017**	SeqNo: **1511721** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	50.00	302.6	97.2	75	125			
Magnesium	110	5.0	50.00	60.31	106	75	125			
Sodium	460	5.0	50.00	416.3	86.5	75	125			

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#: **1711B94**

04-Dec-17

Client: Williams Four Corners
Project: Kutz Canyon Gas Plant

Sample ID	**1711B94-001BMSD**	SampType: **MSD**		TestCode: **EPA 6010B: Total Recoverable Metals**						
Client ID:	**Main Cooling Tower**	Batch ID: **35173**		RunNo: **47380**						
Prep Date:	**11/28/2017**	Analysis Date: **11/29/2017**		SeqNo: **1511722**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	50.00	302.6	92.6	75	125	0.661	20	
Magnesium	110	5.0	50.00	60.31	103	75	125	1.07	20	
Sodium	460	5.0	50.00	416.3	84.4	75	125	0.222	20	

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: 1711B94 RcptNo: 1

Received By: Anne Thorne 11/22/2017 7:00:00 AM Anne Thorne
Completed By: Anne Thorne 11/27/2017 7:21:48 AM Anne Thorne
Reviewed By: DDS 11/27/17

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 ☐	HNO3, HNO3, H2S04 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 (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? See below
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: AT 11/27/17

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:

11/22/17 CW PRESERVED 1 x 125 H2S04 FOR EACH SAMPLE, 11/27/17 at PRESERVED 1 x 250 HN03 FOR EACH SAMPLE FOR ACCEPTABLE pH/11/27/17

18. Cooler Information

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
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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: 1711B94 RcptNo: 1

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.6	Good	Yes			

Chain-of-Custody Record

Client: Williams Four Corners
Matt.Webre@williams.com
Mailing Address: 17755 Arroyo Dr.
Bloomfield NM
Phone #:
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 Gas Plant
Project #:
Project Manager: LTE - Danny Burns
Sampler: D. Burns
On Ice: ☒ Yes ☐ No
Sample Temperature: +0 2.6

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1711394	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^{3-},SO_4^{2-})	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Cations				Air Bubbles (Y or N)
11-21	1055	AQ	Main Cooling Tower	1-1L	NA	001								X				X				
11-21	1105	AQ	City Water	1-1L	NA	002								X				X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
11-21-17	1730			11/21/17	1830
11/21/17	1815			11/22/17	0700

Remarks:
cc: Kijun.hong@williams.com
aaron.gaier@williams.com
dburns@ltenv.com aagers@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.