OIL CONS. DIV DIST. 3

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

JAN 26-2018

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 Pro	cessing 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 <u>36.666589</u> Longitude <u>-107.962877</u> 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?	If YES, To Whom?	
Yes No Not Required	Cory Smith (OCD) and Whitney	Thomas (BLM)
By Whom? Matt Webre	Date and Hour OCD 10/5/2017 @ 2	2:45 PM; BLM 10/5/2017 @ 3:20 PM
Was a Watercourse Reached?	If YES, Volume Impacting the Wat	ercourse.
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 h new pipeline ROW. The ROW excavation is located on the western portion 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 Describe Area Affected and Cleanup Action Taken.* 12/5/2017 - This is a subsequent report, please see work plan attached.	nydrocarbon impacted soils while perfo on of the Kutz Canyon Gas Plant betwo y attached.	orming excavation activities along their een the condensate tank and the west plant
1/24/2018 - This is a subsequent report, please see Sampling Summary	y attached.	
I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release in public health or the environment. The acceptance of a C-141 report by the should their operations have failed to adequately investigate and remediate or the environment. In addition, NMOCD acceptance of a C-141 report defederal, state, or local laws and/or regulations.	he best of my knowledge and understa otifications and perform corrective act e NMOCD marked as "Final Report" of e contamination that pose a threat to g oes not relieve the operator of respons	nd that pursuant to NMOCD rules and tions for releases which may endanger does not relieve the operator of liability round water, surface water, human health ibility for compliance with any other
Signature: Kir K	OIL CONSERV	VATION DIVISION
Printed Name: Kijun Hong	Approved by Environmental Specialis	
Title: Environmental Specialist	Approval Date: 3/6/18	Expiration Pate:
E-mail Address: <u>kijun.hong@williams.com</u> Date: 1/24/2018 Phone: (505) 436-8457	Conditions of Approval:	Attached X
Attach Additional Sheets If Necessary	01.01/21	
HNUSICA	7606601	
3RP-10	019	(26)

Smith, Cory, EMNRD

From:Smith, Cory, EMNRDSent:Tuesday, March 6, 2018 9:08 AMTo:'Hong, Kijun'; Galer, Aaron; I1thomas@blm.govCc:Fields, Vanessa, EMNRD; Powell, Brandon, EMNRD; Webre, Matt; Ruybalid, TristenSubject: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 photoionization 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.





Smith, C. Page 5

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 L. ager

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







BGS: BELOW GROUND SURFACE

WILLIAMS FOUR CORNERS, LLC P:Williams Four Comers/GIS/MXD/034017003_KUTZ/0303_KUTZ_FIG02_SITE_180118.mtm

NWNW SEC 13 T28N R11W SAN JUAN COUNTY, NEW MEXICO



P:\Williams Four Comers\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 2SOIL 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 (10CD Closure Criteria			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	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	ВН-3
	Standard		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	Barrene ren er		NER CELEVICE	The second second	Manual Con	1973年1月4月1日		
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	36	<1.0	<1.0	NM
Metals by US EPA Method 200 7			Sector States of the			CONTRACTOR OF THE		
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	23	11	3.2	21.0	19	NM
Sodium	NE	mg/L	81	2 900	2 800	420	19	NM
Total Petroleum Hydrogarhons by US	EDA Method S	mg/L	51	2,900	2,800	420	Edical Contraction in a state	
GPO	NE	ma/I	240	5.2	<0.050	NM	NM	<0.10
DRO	NE	mg/L	240	<1.0	1.3	NIM	NIM	31
DRO	NE	mg/L	20	<1.0	1.5	NIM	NIM	-50
MRO Malatila Organia Companya da ha US I	INE TDA Mathad 97	Ing/L	0.5	~5.0	< 3.0	INIMI	INIMI	~3.0
Pointie Organic Compounds by US I	10	.00.	24.000	E1	<1.0	NIM	NIM	1.2
Benzene	10	µg/L	24,000	51	<1.0	INIM	NIM	1.2
Toluene	750	μg/L	40,000	<1.0	<1.0	INIM	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	INIM	NIM	INIVI NIM
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	$\mu g/L$	6 100	<10	<10	NM	NM	NM
Carbon disulfide	NE	ug/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	< 100	<1.0	<1.0	INIMI NIM	NIM	NIM
Dibromochloromethane	NE	µg/L	<50	<2.0	<1.0	NIM	NM	NM
Dibromomethane	NE	µg/L	<50	<1.0	<1.0	NM	NM	NM
1.2-Dichlorobenzene	NE	Hg/L	<50	<1.0	<1.0	NM	NM	NM
1.3-Dichlorobenzene	NE	Hg/L	<50	<1.0	<1.0	NM	NM	NM
1 4-Dichlorobenzene	NE	ug/L	<50	<1.0	<1.0	NM	NM	NM
Dichlorodifluoromethane	NE	ug/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	ВН-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: 77/8 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		ANODE #	DEPTH	NO COKE	COKE
20	Casing		310				1	275	2.4	6.2
25	Shale		315				2	265	2.8	3.8
30			320				2	255	2.0	3.6
35			325				3	200	2.4	0.0
40		2.7	330				4	225	2.1	9.0
45		5.5	335				5	215	2.6	11.1
50		4.2	340				6	205	3.1	13.1
55		3.1	345				7	195	3.1	14.0
60		4.0	350				8	185	3.8	14.2
65		5.4	355				9	175	3.8	13.7
70		5.4	360				10	165	3.0	13.2
75		5.5	365				11	155	2.8	13.7
80		4.5	370				12	145	3.8	15.3
85		3.1	375				13	135	4.0	16.2
90		2.5	380				14	105	4.0	15.2
95	Sandstone	1.9	385				14	125	4.1	15.5
100		2.0	390				15	115	2.3	12.2
105		2.2	395				16			
110		1.7	400				17			
115		1.6	405				18			
120	Shale	2.0	410				19			
125		2.7	415				20			
130		3.7	420				21			
135		3.7	425				22		-	
140		3.4	430				22			
145		3.3	435				23			
150		3.3	440				24			
155		2.7	445				25			
160		3.0	450				26	- C		
165		3.3	455				27			
170		3.3	460				28			
1/5		35	465				29			
180		3.0	470				30			
100		3.4	4/5							
190		3.4	480			1	CONTRACTOR OF A DAMA SCORE			Service and the service of the
200		3.5	400			Г		DTU		
200		3.5	490				WATER DE	PIH:		
210		3.4	500				ISOLATION	N PLUGS:		
215		2.6	505				LOGING V	OLTS: 12.9	9	
220		2.0	510				VOLT SOU	RCE: Auto	Battery	
225		21	515		+		TOTAL AM	PS: 48.4	and the second second	
230	Sandstone	1.8	520			1	TOTAL GB	RESISTAN	ICE: 0.26	
235	Cundotonio	1.5	525				VAC. SERV	VICES:		
240		1.5	530				CEMENT:			
245		1.3	535				REMARKS	:		
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		1 1					
285		1.8	575							
290		1.0	580							
295			585							
300			590							
305			595							

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: 77/8 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		ANODE #	DEPTH	NO COKE	COKE
20	Casing		310				1	280	3.0	10.0
25	Shale		315				2	270	4.0	10.0
30			320				2	260	4.0	10.4
35			325				3	200	4.1	10.0
40		-	330				4	240	3.0	9.6
45			335				5	230	3.3	9.9
50		4.1	340				6	220	3.8	10.9
55		6.8	345				7	210	5.2	12.2
60		7.5	350				8	200	6.4	14.1
65		7.8	355				9	190	6.9	14.3
70		7.7	360				10	180	7.3	14.6
75		7.9	365				11	170	7.0	14.3
80		7.8	370				12	160	6.6	13.7
85		5.4	375				12	100	0.0	10.7
90		3.7	380				13	150	6.9	13.7
95		3.1	385				14	140	6.7	14.1
100		3.3	390				15	130	7.3	13.1
105		3.6	395				16			
110		3.9	400				17			
115		4.1	405				18			
120		3.6	410				19			
125		6.6	415				20			
130		7.2	420				21			
135		7.2	425				22			
140		6.9	430				22	- to - a de de se sede statement		
145		6.5	435				23			
150		7.0	440				24			
155		6.6	445				25			
160		6.0	450				26			
165		6.5	455				27			
170		6.6	460				28			_
175		6.7	465				29			
180		6.9	470				30			
185		7.0	475							L
190		6.7	480							
195		6.9	485			r				
200		6.3	490				WATER DE	EPTH:		
205		6.1	495				ISOLATION	N PLUGS:		
210		5.2	500				LOGING V	OLTS: 13.1	1	
215		4.9	505				VOLT SOU	RCE: Auto	Battery	
220		4.2	515				TOTAL AM	PS: 48.8		
220		2.8	520				TOTAL GB	RESISTAN	ICE: 0.27	
235		3.5	525				VAC. SERV	/ICES:		
240		3.3	530				CEMENT:			
245		2.6	535				REMARKS	:		
250		2.0	540							
255		33	545							
260		4.1	550							
265		42	555							
270		4.2	560							
275		31	565							
280		33	570							
285		2.6	575							
200		2.0	580							
295		2.0	585							
300		2.1	590							
305	****		595							
000 1			000			1				

11-24-15 Office: Reople) Electric 8000 1 them going 311 rd Showedup they Said 8 Am 1 chaust Bloken 1030 2 de Det & Comment 205t of 10" Casing Charlie Sent E-mell that we can 0 4 leave @ Noon Tomoriow (") TPM Shoot -CASING is set 1230 2 Rigdown -Dash out phins 行 4 2 BM1112(9) your side Dhe Crew is 1 £ . 101 manor 名 gired 10 R Dolo te 210blimi 200 1 R T 1 Ribey TRuck@ eduled T 600 TRIPPed Dutt & Changel up Ared TO

ATTACHMENT 2

SOIL BORING LOGS



d'un resur	-			N	Ľ	Compliance Eng LT Environment 848 E. 2nd Ave Durango, Color	gineering ∝ Remedia tal, Inc. ado 81301	ation
					BORIN	G LOG/MONITORING W	ELL COMPLETI	ON DIAGRAM
					Boring/Wel	1 Number: Bi-1 - 1	Project: Kutz Ga	s Plant
					Date:	201 + 11=	Project Number: 03401	7003
			1		Logged By:		Drilled By:	7005
Elevation:	Detector:				Drilling Me	thod:	Sampling Method:	
6,511 ft Gravel Pack:		PID			Seal:	Hollow Stem	Grout:	uous
10-20 Silica Sand					Benton Diameter:	ite Chips	Bentonite Slurry	Depth to Liquid:
Schedule 40 PVC	Flot				Diamotor.	2"	Tetal Deaths	Depth to Water
Schedule 40 PVC	5100	0.010"			Diameter:	Length: 2"	lotal Depth:	Deptil to water.
Penetration Resistance Moisture Content Vapor (ppm)	Staining Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Ren	narks	Well Completion
moist 12.3	No Yes 13-15	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14	1			Hand Auger 1005e It Reddish brow NO Stain jodo VO Stain jodo Silty Sund Some Staining Slight odar	iun Sand (15h brown	

	-								Boring/Well #	BH-T	
	F	Complia	ince " Ei	ngineerii	ng " Reme	ediation			Project:	Kutz Gas Plant	
		LT Envi	ronme	ntal, Inc					Project #	34017003.000	
	1	1							Date	11-30	
Penetratior Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Litho	blogy/Remarks	Well Completion
Penetratic	Moisture	(mg) 72. Vapor	Staining	Sample -	Depth (ft. bgs.) 15 16 17 18 19 20 21 22 23 24 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37	Sample Run	Recovery	Soil/Rocl	Lithe Some Silt NO Sta	blogy/Remarks	Well Completion

	l ann a						N	Ľ	Compliance "En LT Environmen 848 E. 2nd Ave Durango, Color	gineering " Remedia tal, inc. rado 81301	ntion
								BORIN	G LOG/MONITORING W	ELL COMPLETI	ON DIAGRAM
								Boring/We	Number: RH-7	Project: Kutz Ga	s Plant
								Date:	DII -	Project Number:	7003
								Logged By:	. 7 1	Drilled By:	1003
Elevation:			Detector:					Drilling Me	Eric Carroll	Geor Sampling Method:	nat
Graval Bac	6,511 f	t			PID			Sealt	Hollow Stem	Contin	uous
10-2	0 Silica	Sand						Benton	ite Chips	Bentonite Slurry	
Casing Type Sche	edule 40	PVC						Diameter:	Length:	Hole Diameter:	Depth to Liquid:
Screen Typ Sche	e: edule 40	PVC		Slot: 0.0	10"			Diameter:	Length: 2"	Total Depth:	Depth to Water:
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Ren	marks	Well Completion
					0				Hand Auger		
	imol'st	3.6	NA	-	12	-		SP	lt reddich brown	sand wlarate	+
					3 4 5	-			No Stain/odov		
	Moi St	\$35	Yes	131-15	6 7 8 9 10 11 12 13 14 15			5 M	Compact Dark grey green Book Stain/odor	Silby Sund	

Project iii Kure Gas Plant IT Environmental, Inc. Project ii Notice iii It Finite It Finite iii It Finite iii It Finite It		-						_		Boring/Well #	BH-2	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	17		Complia	ince 🖩 Ei	ngineeri	ng "Rem	ediation			Project:	Kutz Gas Plant	
$\frac{1}{1000} \frac{1}{1000} \frac{1}{1000} \frac{1}{1000} \frac{1}{10000} \frac{1}{10000000000000000000000000000000000$	0		LT Envi	ronme	ntal, Inc					Project #	34017003.000	
maist 35.7 Yes maist 35.7 Yes 15 16 17 18 19 20 21 22 22 23 23 23 24 25 25 25 25 25 25 25 25 25 25 25 25 25 26 27 TD = 25' Compace Darkgrey green Silby Sand V Schull Shown Silty Sand V Schull Shown Shown Silty Sand V Schull Shown Shown Silty Sand V Schull Shown Show Shown Show Shown Shown Shown Shown Shown Shown Shown Sho	Penetration Resistance	Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Litho	ology/Remarks	Well Completion
		oist	35,7	Yes	23'-25'	15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36			5.M	Kompace D Silby Sand Staining S It reddish by Somall and No odo	ark grey green light Odne rown Silty Sund rownt of Staining	

							N	Ľ	Compliance Eng LT Environment 848 E. 2nd Ave Durango, Color	gineering ∝ Remedia tal, Inc. ado 81301	tion
								BORIN	NG LOG/MONITORING W	ELL COMPLETIC	ON DIAGRAM
								Boring/We	II Number: BH - 3	Project: Kutz Gas	Plant
								Date:	11-29 to 11-30	Project Number: 034017	/003
								Logged By:	Fric Carroll	Drilled By: Geor	nat
Elevation:	6 511 f)	Detector:		PID			Drilling Me	thod: Hollow Stem	Sampling Method: 5 P11	E Sperin
Gravel Pac	k:	Sand	1		110			Seal:	ite Chine	Grout: Bentonite Slurry	
Casing Typ	pe:	DVC						Diameter:	Length:	Hole Diameter:	Depth to Liquid:
Screen Typ	dule 40	PVC		Slot:	10"			Diameter:	Length:	Total Depth:	Depth to Water:
Ee		Ê		0.0				~			
Penetratic Resistanc	Moisture Content	Vapor (pp	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recover	Soil/Roci Type	Lithology/Ren	narks	Well Completion
					0				Hand Auger		
	Moise	575	Yes	21-41	1 2 3	-		SP	loose reddish brown Gravel Staining from 3	alown	
	1.44	205			4 5 6 7				Strong odor biach organic Masser	, sand	
	wer	305	IVO					06	Saburabed		-
	maise	295	Yes		8 9 10 11 12 13 14 15	1		SM	55 Compact dark grey Silty Sand Scaining No od	green Cr	

		- 1	Boring/Well #	Вн-3_	
Compliance Engineerin	ng "Remediation		Project:	Kutz Gas Plant	
LT Environmental, Inc			Date	11- 30	
Penetration Resistance Moisture Content Vapor (ppm) Staining Staining	Depth (ft. bgs.) Run	Recovery, Soil/Rock Type	Litho	ology/Remarks	Well Completion
Moisture O.A No Staining Content (ppm)	Depth (ft. bgs.) Sample Run 15 I 16 2 17 2 18 2 19 2 20 2 21 2 23 3 24 3 25 3 26 3 27 3 28 3 29 3 30 3 31 3	Recovery, Soil/Rock Type	Lithe Dark green No Stain Compact 18 Saturated No Sta TD = 25 Water a	n, Silby Sand lodor brown: Silby Sand inn/odor Sample grabbed	Well Completion
	34 34 35 36 37			- - - - - - - - - - - - - - - - - - -	

				N	Ľ	Compliance Eng LT Environment 848 E. 2nd Ave Durango, Color	gineering " Remedia tal, Inc. ado 81301	tion
					BORIN	G LOG/MONITORING W	ELL COMPLETIC	ON DIAGRAM
					Boring/Wel	BH-4	Project: Kutz Gas	Plant
					Date:	11-29	Project Number: 034017	003
					Logged By:	Eric Carroll	Drilled By: Georr	at
Elevation:	Detector:	PID	1		Drilling Me	thod:	Sampling Method:	
Gravel Pack:		FID			Seal:	Honow Stem	Grout:	ious
Casing Type:					Diameter:	Length:	Hole Diameter:	Depth to Liquid:
Schedule 40 PVC Screen Type:	Slot:			_	Diameter:	2"Length:	Total Depth:	Depth to Water:
Schedule 40 PVC	0.0)10"			:	2"		
Penetration Resistance Moisture Content Vapor (ppm	Staining Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Ren	narks	Well Completion
moise 436	Yes 3'-5'	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14			SP SM	Mand Auger Ht reddish brown Staining 3' dou Strong odor Dark grey green Staining, Slight d	Sand Silty Sand Silty Sand	

				10-10-10-10-10-10-10-10-10-10-10-10-10-1					Boring/Well #	BH-4	
ľ	2	Complia	nce " Er	ngineerii	ng "Rem	ediation			Project:	Kutz Gas Plant	
	1	LT Envi	ronmei	ntal, Inc					Project #	34017003.000	
5.0				,					Date	11-30	
Penetratior Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Litho	logy/Remarks	Well Completion
					15	i i			LOMDAL+ D.	-	
	-				16	-			Compared De	They green	-
					10 -				Siley San	0 -	
	moist	0.0	No	18'-20'	17					_	
					18	·			No Stain	lodor -	-
					19	-				-	_
					20	-				-	-
					21					-	-
					22	-			TD=2	0'	-
					23	-				-	-
					24					-	-
					25	-				-	-
					26					1	-
					27						-
					28					-	-
					29					-	-
					30						-
					31			2			-
					32					4	-
					33					4	-
					34					4	-
					35					4	-
					36					4	-
					37						

	Hereiter						N	Ľ	Compliance MER LT Environmer 848 E. 2nd Ave Durango, Colo	ngineering "Remedia ntal, Inc. rado 81301	tion
								BORIN	G LOG/MONITORING V	VELL COMPLETIO	ON DIAGRAM
								Boring/Wel	BH-5	Project: Kutz Gas	Plant
								Date:	-29	Project Number: 034017	/003
								Logged By:	Eric Carroll	Drilled By: Geon	nat
Elevation:	6 511 f	 }	Detector:		PID	1		Drilling Me	thod: Hollow Stem	Sampling Method: 5PIIC	Sparn
Gravel Paci	k: 0 Silica	Sand					_	Seal:	ite Chins	Grout:	
Casing Typ	e: dulo 40	DVC						Diameter:	Length:	Hole Diameter:	Depth to Liquid:
Screen Type	e: dule 40	PVC		Slot:	10"			Diameter:	Length:	Total Depth:	Depth to Water:
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Re	marks	Well Completion
	moist Wes	5.4	NP NP YES Hey		0 1 _ 2 _ 3 _ 4 . 5 _ 6 _ 7 _ 8 _ 9 _ 10 _ 11 _ 12 _ 13 _	1		SP OL SM	Hand Auger 1005c 1+ reddish b NO Stain/od wet argunic bu Soit 55 # Compact 1+ redd Silby Sand Some Staining Slight Odor	rown Sand ar ack organic	
				·	15						-

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Interview Compliance Engineering Remediation LT Environmental, Inc. Units of the interview of the int									Boring/Well #	BH-5	
IT Environmental, Inc. Project # 34017003.000 Date IM-1 uit and the second	ITE	Complia	ance " Er	ngineerii	ng "Reme	diation			Project:	Kutz Gas Plant	
Date Jack uigterstand 0.0 Weil Completion Weil Weil Completion Weil Completion Weil Completion Weil Completion Weil Completion Weil <td></td> <td>LT Envi</td> <td>ironmer</td> <td>ntal, Ind</td> <td></td> <td></td> <td></td> <td></td> <td>Project #</td> <td>34017003.000</td> <td></td>		LT Envi	ironmer	ntal, Ind					Project #	34017003.000	
Well Well <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Date</td> <td>12-1</td> <td></td>			-						Date	12-1	
meist 0,0 MB 15 16 17 17 17 18 19 20 21 15 15 15 16 16 17 18 19 20 21 15 15 15 15 15 15 15 15 15 1	Penetration Resistance Moisture	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Litho	logy/Remarks	Well Completion
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		0,0	Stain	Sampl	Depuil (ft. bgs.) 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37		Recov	Soil/R	Litho	logy/Remarks brown Silty Sand cen Matelling hladar	Completion
					34 35 36 37					+	

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Elevation: 6,511 ft Gravel Pack: 10-20 Silica Sand Casing Type: Schedule 40 PVC Screen Type: Schedule 40 PVC Uitation: Schedule 40 PVC Uitation: Schedule 40 PVC Uitation: Schedule 40 PVC Screen Type: Schedule 40 PVC Screen Type: Sc	PID Slot: 0.010" ** Depth ** Depth ** (ft. bgs.)		BORIN Boring/Wel Date: Logged By: Drilling Met Seal: Benton Diameter:	IG LOG/MONITORING W I Number: RH - G // - 29 Eric Carroll thod: Hollow Stem ite Chips Length: 2"	ELL COMPLETIO Project: Kutz Gas Project Number: 034017 Drilled By: Geom Sampling Method: Continu Grout: Bentonite Slurry Hole Diameter:	Plant 003 at ous
Elevation: 6,511 ft Gravel Pack: 10-20 Silica Sand Casing Type: Schedule 40 PVC Sereen Type: Schedule 40 PVC UU event Schedule 40 PVC UU event Schedule 40 PVC UU event Schedule 40 PVC UU event Schedule 40 PVC Schedule 40 PVC Schedule 40 PVC Schedule 40 PVC Molist Molist O. 3 Me	PID Slot: 0.010" ** Depth ** Depth ** (ft. bgs.)		Boring/Wel Date: Logged By: Drilling Met Seal: Benton Diameter:	I Number: RH-G I/- 79 Eric Carroll thod: Hollow Stem ite Chips Length: 2"	Project: Kutz Gas Project Number: 034017 Drilled By: Geom Sampling Method: Continu Grout: Bentonite Slurry Hole Diameter	Plant
Elevation: 6,511 ft Gravel Pack: 10-20 Silica Sand Casing Type: Schedule 40 PVC Screen Type: Schedule 40 PVC UD 20 Silica Sand Casing Type: Schedule 40 PVC Mol St MO NO MO NO NO NO NO NO NO NO NO NO N	PID Slot: 0.010" ** Depth **		Date: Logged By: Drilling Met Seal: Benton Diameter:	I/~)9 Eric Carroll thod: Hollow Stem ite Chips Length: 2"	Project Number: 034017 Drilled By: Geom Sampling Method: Continu Grout: Bentonite Slurry Hole Diameter	003 at
Elevation: 6,511 ft Gravel Pack: 10-20 Silica Sand Casing Type: Schedule 40 PVC Screen Type: Schedule 40 PVC U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PID Slot: 0.010" ** October Depth ft. bgs.)		Logged By: Drilling Met Seal: Benton Diameter:	Eric Carroll thod: Hollow Stem ite Chips Length: 2"	Drilled By: Geom Sampling Method: Continu Grout: Bentonite Slurry Hole Diameter	at
Elevation: Detector: 6,511 ft Other Gravel Pack: 10-20 Silica Sand Casing Type: Schedule 40 PVC Screen Type: Schedule 40 PVC Screen Type: Schedule 40 PVC W O W O W O Moi/st O.3	Slot: 0.010" ** • • • • • • • • • • • • • • • • • •		Drilling Met Seal: Benton Diameter:	thod: Hollow Stem ite Chips Length: 2"	Sampling Method: Continu Grout: Bentonite Slurry Hole Diameter	lous
Gravel Pack: 10-20 Silica Sand Casing Type: Schedule 40 PVC Screen Type: Schedule 40 PVC United and the series of the seri	Slot: 0.010" # Depth # (ft. bgs.)	2	Seal: Benton Diameter:	ite Chips Length: 2"	Grout: Bentonite Slurry Hole Diameter	
Casing Type: Schedule 40 PVC Sereen Type: Schedule 40 PVC Uniter tration Schedule 40 PVC Uniter tration Uniter tration Schedule 40 PVC Uniter tration Schedule 40 PVC Uniter tration Schedule 40 PVC Uniter tration Schedule 40 PVC Uniter tration Schedule 40 PVC No Schedule 40 PVC Schedule 40 PVC Schedule 40 PVC Schedule 40 PVC No Schedule 40 PVC No Schedule 40 PVC No Schedule 40 PVC Schedule 40 PVC Schedule 40 PVC Schedule 40 PVC No Schedule 40 PVC Schedule 40 PVC	Slot: 0.010" #: Depth Ex. (ft. bgs.)	,	Diameter:	Length: 2."	Hole Diameter	
Schedule 40 PVC Schedule 40 PVC Benetration Content Co	Slot: 0.010" # 					Depth to Liquid:
Moisture Moisture Moisture Content Vapor (ppm) Staining	# ei du Eu O (ft. bgs.)		Diameter:	Length: 2"	Total Depth:	Depth to Water:
moist 0.3 No		n Sample s.) Run	Soil/Rock Type	Lithology/Ren	narks	Well Completion
Moise 0.3 No 1	0 1 2 3 4 5 6 7 8 9 10 11		SP	Hand Auger 100se It. reddish b No Stain/odo Compact Dark 9 Silty Sand No Stain/odor	rown Sand	

									Boring/Well #	BH-G	
	=	Complia	nce " Ei	ngineerii	ng "Rem	ediation			Project:	Kutz Gas Plant	
		LT Envi	ronme	ntal, Inc	2				Project #	34017003.000	
5 0		1	,	T					Date	12-1	
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Litho	ology/Remarks	Well Completion
	Moise	15.9	No	18'- 20'	15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37		100%	5м	Compact I Silty Sand Mottling NO Stain Organic St TD = 20	t.reddish brown Wl greygreen Nampy odar	

gi nus reago			1	N	Ľ	Compliance "Er LT Environmer 848 E. 2nd Ave Durango, Colo	ngineering "Remen ntal, Inc. ? rado 81301	liation
					BORIN Boring/Wel	NG LOG/MONITORING W Number: BH-7 -29	VELL COMPLET Project: Kutz (Project Number: ()34(Gion DIAGRAM
Elevation:	Detector:	RID		_	Logged By: Drilling Me	Eric Carroll	Drilled By: Ge Sampling Method: 54	omat Nj E Sjozen
Gravel Pack: 10-20 Silica Sand Casing Type: Schedule 40 PVC	-1	TID			Seal: Benton Diameter:	ite Chips Length: 2"	Grout: Bentonite Slurr Hole Diameter:	y Depth to Liquid:
Screen Type: Schedule 40 PVC	Slot: 0.	010"			Diameter:	Length: 2"	Total Depth:	Depth to Water:
Penetration Resistance Moisture Content Vapor (ppm)	Staining Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Re	marks	Well Completion
	Yes 4'-C' Ycs	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		j 000 Pro	SP Sm	Hand Auger 100se Itreddish Staining at Sl Sliont odor 65 Dark brown Silby orey staining Stignt Odor	brown sand down Sand	

:
							Boring/Well #	BH-7 Kutz Gas Plant			
	E	Compile I T Envi	ince _M El	ngineerii Intal Inc	ng M Kemi	ealation			Project #	34017003.000	
			- onnie	1001) 1110	·•				Date	12-1	
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Litho	ology/Remarks	Well Completion
					15					-	
					16	-			Compact	16. brown -	_
	moise	4.5	NA	181-201	17	-	62	SM	Silly Sar	10	-
					18	-	100		NO Stain	'ndor -	-
					19					-	_
					20						-
					21					-	
					22				TD=2	o' +	
					23						
					24	. (-	
					25	.				+	-
					20	-				+	
					27	.				+	
					20 -					-	
					30					+	
					31					+	
					32	1 (Ţ	
					33	.				+	
					34					+	
					35					+	
					36					+	
					37					-	6.1.3

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			BORIN	NG LOG/MONITORING W	ELL COMPLETION DIAGRAM		
			Boring/Wel	II Number: BH-8	Project: Kutz Gas Plant		
			Date:	11-29	Project Number: 034017	7003	
			Logged By:	Fric Carroll	Drilled By:	aat	
Elevation: Detector:	BID	_	Drilling Me	thod:	Sampling Method: 50115	512000	
Gravel Pack:	PID		Seal:	Hollow Stem	Grout:	10tIS	
Casing Type:			Benton Diameter:	Length:	Hole Diameter:	Depth to Liquid:	
Screen Type: Slot:			Diameter:	2" Length:	Total Depth:	Depth to Water:	
Schedule 40 PVC	0.010"			2"			
Penetration Resistance Moisture Content Vapor (ppm Staining	Depth Sample (ft. bgs.)	Recovery	Soil/Rock Type	Lithology/Ren	arks	Well Completion	
moise 4.6 No moise 75.8 Yes 7'- moise 13.9 No	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		SP SM	Hand Auger 1005c 18 reddish brow gravel, Zoni 3'-3,5' NO Stain /odof black Staining Strong odor SS Compact Dark grey green sil NO Stain /odor	own Sand W/		

Compliance	-
LT Environmental, Inc. Project # 34017003.000 Date 12~1	
Date 12-1	LZ
Penetration Penetration Resistance Combent Type every Combent Type every Combent Combe	Resistance Moisture Content
$ \begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 $	

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					BORIN	NG LOG/MONITORING W	ELL COMPLETI	ON DIAGRAM
					Boring/Wel	BH-9	Project: Kutz Ga	s Plant
					Date:	11-29	Project Number: 03401	7003
	1				Logged By:	Eric Carroll	Drilled By: Geor	nat
Elevation: 6,511 ft	Detector:	PID			Drilling Me	thod: Hollow Stem	Sampling Method: Split	Speen uous
Gravel Pack: 10-20 Silica Sand					Seal: Benton	ite Chips	Grout: Bentonite Slurry	
Casing Type: Schedule 40 PVC					Diameter:	Length:	Hole Diameter:	Depth to Liquid:
Screen Type: Schedule 40 PVC	Slot:	.010"			Diameter:	Length: 2"	Total Depth:	Depth to Water:
Penetration Resistance Moisture Content Vapor (ppm)	Staining Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Rei	narks	Well Completion
moist 16.5	No Yes No	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 14		100 90	SP SM	Hand Auger 100se It. rodish brow gravei No stain/odov No stain/odov black Staining Strong odor SS Compact Dark re Silty Sand, w/ w NO Stain/odor	addish brown hite motoling	

Ľ	Compliance « Engineering » Remediation							Boring/Well # Project: Project #	BH-9 Kutz Gas Plant 34017003.000		
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Date	ll2~l	Well Completion
					15 16	-			SAA	-	
	ynoi36	4.9	NP		17 18 19	•	100 %		NO Stai	nlodor	- - -
					²⁰ 21	-					
					22 23 24	-			TD=	20'	
					25 26	- - -				-	-
					27 28	• • •					-
					29 30 31					-	-
					32 33					-	-
					34 35					-	-
					36 37						-

ATTACHMENT 3

LABORATORY ANALYTICAL REPORTS





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 <u>www.hallenvironmental.com</u> 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysi		Analytical Report Lab Order 1711594 Date Reported: 11/14/2017					
CLIENT: Williams Four Corners			C	lient Samp	e ID: EX	-South@10'	
Project: Kutz GCNM ROW				Collection	Date: 11/	9/2017 3:00:00 PM	[
Lab ID: 1711594-001	Matrix:	MEOH (S	OIL)	Received	Date: 11/	10/2017 7:30:00 Al	М
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Anal	yst: MRA
Chloride	39	30		mg/Kg	20	11/10/2017 12:31:22	PM 34942
EPA METHOD 8015M/D: DIESEL RANG		S				Anal	yst: 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 RAN	GE					Anal	yst: 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						Analy	yst: 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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method	Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 1 of 7
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	1 450 1 01 7
	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	t as specified

Hall Environmental Analysis Laboratory, Inc. Lab Order 1711594 Date Reported: 11/14/2017											
CLIENT: Williams Four Corners			C	lient Sampl	e ID: TR	.01@8'					
Project: Kutz GCNM ROW				Collection	Date: 11/	9/2017 3:15:00 PM					
Lab ID: 1711594-002	Matrix:	MEOH (S	OIL)	Received	Date: 11/	10/2017 7:30:00 AN	1				
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS						Analy	st: MRA				
Chloride	43	30		mg/Kg	20	11/10/2017 12:43:46	PM 34942				
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS	6				Analy	st: 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 RAN	IGE					Analy	st: 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						Analy	st: 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 Conta

- * 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 Page 2 of 7

Analytical Report

- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analys	Lab Order 1711594 Date Reported: 11/14/2017					
CLIENT: Williams Four Corners Project: Kutz GCNM ROW Lab ID: 1711594-003	Matrix. N	C	Client Sampl	e ID: TR Date: 11/	.02@6' /9/2017 3:30:00 PM	
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 RANG	SE ORGANICS				Analyst	TOM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	11/10/2017 10:55:28 AI	A 34939
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	11/10/2017 10:55:28 A	/ 34939
Surr: DNOP	102	70-130	%Rec	1	11/10/2017 10:55:28 A	1 34939
EPA METHOD 8015D: GASOLINE RAN	GE				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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method	Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 3 of 7
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	1 age 5 01 7
	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 lim	it as specified

Hall Environmental Analysis Laboratory, Inc.

Williams Four Corners **Client: Project:** Kutz GCNM ROW

Sample ID MB-34942 Client ID: PBS	SampTyp Batch I	De: mb)lk 942	Tes F	tCode: El RunNo: 4	PA Method 7043	300.0: Anion	s		
Prep Date: 11/10/2017	Analysis Dat	te: 11	/10/2017	S	SeqNo: 1	501826	Units: mg/k	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								
		_								
Sample ID LCS-34942	SampTyp	be: Ics		Tes	tCode: El	PA Method	300.0: Anion	s		
Sample ID LCS-34942 Client ID: LCSS	SampTyp Batch I	De: Ics	942	Tes F	tCode: El	PA Method 7043	300.0: Anion	S		
Sample ID LCS-34942 Client ID: LCSS Prep Date: 11/10/2017	SampTyp Batch I Analysis Dat	De: Ics D: 349	942 /10/2017	Tes F S	tCode: EF RunNo: 4 SeqNo: 1	PA Method 7043 501827	300.0: Anion Units: mg/k	s		
Sample ID LCS-34942 Client ID: LCSS Prep Date: 11/10/2017 Analyte	SampTyp Batch I Analysis Dat Result	De: Ics D: 349 de: 11 PQL	942 /10/2017 SPK value	Tes F S SPK Ref Val	tCode: EF RunNo: 4 SeqNo: 1 %REC	PA Method 7043 501827 LowLimit	300.0: Anion Units: mg/M HighLimit	s íg %RPD	RPDLimit	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н 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
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 4 of 7

14-Nov-17

WO#: 1711594

Hall Environmental Analysis Laboratory, Inc.

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. *
- D Sample Diluted Due to Matrix
- Н 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
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL **Reporting Detection Limit**
- W Sample container temperature is out of limit as specified

1711594

WO#:

Page 5 of 7

14-Nov-17

Hall Environmental Analysis Laboratory, Inc.

WO#: 1711594

Page 6 of 7

14-Nov-17

Client: Willi Project: Kutz	ams Four Corners GCNM ROW								
Sample ID MB-34930	SampType:	MBLK	Test	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID: PBS	Batch ID:	34930	R	unNo: 4	7044				
Prep Date: 11/9/2017	Analysis Date:	11/10/2017	S	eqNo: 1	501473	Units: mg/k	(g		
Analyte	Result PQ	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO Surr: BFB) ND 5 1100	i.0 1000		108	15	316			
Sample ID LCS-34930	SampType:	LCS	Test	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID: LCSS	Batch ID:	34930	R	unNo: 4	7044				
Prep Date: 11/9/2017	Analysis Date:	11/10/2017	S	eqNo: 1	501474	Units: mg/k	(g		
Analyte	Result PQ	L 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.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Client:	Williams Four Corners
Project:	Kutz GCNM ROW

Sample ID MB-34930	Samp	ype: ME	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batc	h ID: 34	930	F	RunNo: 4	7044				
Prep Date: 11/9/2017	Analysis E	Date: 11	/10/2017	S	SeqNo: 1	501482	Units: mg/M	g		
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								
Xvlenes. Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			
Sample ID LCS-34930	Samp	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Sample ID LCS-34930 Client ID: LCSS	Samp1 Batcl	ype: LC	S 930	Tes	tCode: El RunNo: 4	PA Method 7044	8021B: Vola	tiles		
Sample ID LCS-34930 Client ID: LCSS Prep Date: 11/9/2017	SampT Batcl Analysis [ype: LC n ID: 349 Date: 11	S 930 1/10/2017	Tes R S	tCode: El RunNo: 4 SeqNo: 1	PA Method 7044 501483	8021B: Volat	tiles		
Sample ID LCS-34930 Client ID: LCSS Prep Date: 11/9/2017 Analyte	Samp Batcl Analysis I Result	Type: LC n ID: 34 Date: 11 PQL	S 930 I/10/2017 SPK value	Tes R S SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC	PA Method 7044 501483 LowLimit	8021B: Volat Units: mg/K HighLimit	tiles Sg %RPD	RPDLimit	Qual
Sample ID LCS-34930 Client ID: LCSS Prep Date: 11/9/2017 Analyte Benzene	Samp Batcl Analysis E Result 0.98	Type: LC n ID: 34 Date: 11 PQL 0.025	S 930 1/10/2017 SPK value 1.000	Tes R S SPK Ref Val 0	tCode: El RunNo: 4 GeqNo: 1 <u>%REC</u> 97.8	PA Method 7044 501483 LowLimit 77.3	8021B: Volat Units: mg/K HighLimit 128	tiles Sg %RPD	RPDLimit	Qual
Sample ID LCS-34930 Client ID: LCSS Prep Date: 11/9/2017 Analyte Benzene Toluene	Samp Batcl Analysis I Result 0.98 1.0	ype: LC n ID: 34 Date: 11 PQL 0.025 0.050	S 930 1/10/2017 SPK value 1.000 1.000	Tes F S SPK Ref Val 0 0	tCode: El RunNo: 4 SeqNo: 1 %REC 97.8 101	PA Method 7044 501483 LowLimit 77.3 79.2	8021B: Volat Units: mg/K HighLimit 128 125	tiles Gg %RPD	RPDLimit	Qual
Sample ID LCS-34930 Client ID: LCSS Prep Date: 11/9/2017 Analyte Benzene Toluene Ethylbenzene	Samp1 Batcl Analysis E Result 0.98 1.0 1.0	ype: LC n ID: 34 Date: 11 PQL 0.025 0.050 0.050	S 930 1/10/2017 SPK value 1.000 1.000 1.000	Tes F S SPK Ref Val 0 0 0	tCode: El RunNo: 4 SeqNo: 1 %REC 97.8 101 101	PA Method 7044 501483 LowLimit 77.3 79.2 80.7	8021B: Volat Units: mg/K HighLimit 128 125 127	tiles (g %RPD	RPDLimit	Qual
Sample ID LCS-34930 Client ID: LCSS Prep Date: 11/9/2017 Analyte Benzene Toluene Ethylbenzene Xylenes, Total	Samp1 Batcl Analysis E Result 0.98 1.0 1.0 3.0	Type: LC n ID: 349 Date: 11 PQL 0.025 0.050 0.050 0.10	S 930 1/10/2017 SPK value 1.000 1.000 3.000	Tes F S SPK Ref Val 0 0 0 0 0	tCode: El RunNo: 4 SeqNo: 1 %REC 97.8 101 101 98.9	PA Method 7044 501483 LowLimit 77.3 79.2 80.7 81.6	8021B: Volat Units: mg/K HighLimit 128 125 127 129	tiles (g %RPD	RPDLimit	Qual

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Н 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
- Analyte detected in the associated Method Blank В
- Е 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

Page 7 of 7

14-Nov-17

WO#: 1711594

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hali TEL W	Environmental A Albun 505-345-3975 F ebsite: www.hali	Inalysis 4901 I guerqua, FAX: 50 lenviron	Laboratory lawkias NE NM 87109 8-345-4107 menial.com	Sar	nple Log-In Check L	.ist
Client Name: WILLIAMS FOUR (CORN Work C)rder Number:	171159	14		RcptNo: 1	
Received By: Richie Eriacho	11/10/20	17 7:30:00 AM		(2-4		
Completed By: Erin Melendrez Reviewed By:	11/10/20	17 8:31:00 AM		И	L'AA	, - 	
Chain of Custody							•
1. Custody seals intact on sample b	attles?		Yes		No 🗌	Not Present	
2. Is Chain of Custody complete?			Yes		No 🗌	Not Present	
3. How was the sample delivered?			Courie	ť			
Log In							
4. Was an attempt made to cool the	samples?		Yes		No 🗌		
5. Were all samples received at a te	mperature of >0° C	to 6.0°C	Yes 3		No 🗌		
6. Sample(s) in proper container(s)	2		Yes		No 🗌	I	
7. Sufficient sample volume for indic	ated test(s)?		Yes		No 🗆		
8. Are samples (except VOA and OI	NG) properly preserve	ad?	Yes [No 🗆		
9. Was preservative added to bottle	\$?		Yes [No 🗹	NA 🗆	
10.VOA vials have zero headspace?			Yes		No 🗌	No VOA Vials 🗹	
11. Were any sample containers rec	aived broken?		Yes		No 🗹	# of preserved bottles checked	
12. Does paperwork match bottle lab	els?		Yes		No L	for pH: (<2 or >12 unle:	ss noted)
13 Are matrices correctly identified o	n Chain of Custody?		Yes		No 🗆	Adjusted?	ee noted,
14 Is it clear what analyses were rec	uested?		Yes				
15. Were all holding times able to be (If no, notify customer for authoriz	met? ation.)		Yes		No 🗆	Checked by:	
Special Handling (if applicab	(e)						
16, Was client notified of all discrepa	ncies with this order?	e.	Yes		No 🗆	NA 🗹	
Person Notified: By Whom: Regarding: Client Instructions:		Date: Via:] eMai	Phon	ie 🗌 Fa	x in Person	
17. Additional remarks:						Contract of the second s	
18. <u>Cooler Information</u>	dition Seal latact	Seal No. C	aal Del	a Sia	med Bu	1	
1 3.9 Good	Yes	308/110 3	an L'di	00	ned by		
the in more particular the fight in a second with the second							

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Client: Mailing	hain Willin Address B	Webr 1785	e Arroyo Dr. ield, NM 37-4442	Turn-Around Standard Project Name Kutz Project #:	Time: Rush e: GCN	Same notice day, 11-10-17 IM ROW		49/ Te	01 H	H A awkii 5-34	IAI N M M M M M M M M M M M M M M M M M M	AL hall E - 75	EN YS envi Albu Fi	ronn uque ax	IF S L ment arqui 505- Reg	All tal.co e, Ni 345-	NF 30 m M 87 410	7109	NT.	AL	
email o QA/QC 🗹 Star	r Fax#: Package: idard	matt.v	□ Level 4 (Full Validation)	Project Mana	agor: Willia anny Burn	ms-Kijun Hony 15 701-570 (ceu) -4727	ars (8021)	I (Gas only)	RO / MRO)			SIMS)		2,PO4,SO4)	2 PCB's						
Accred	AP	Othe	r	Sampler:)) burns		A	TPF	5	3.1)	4.1)	270		NO	/ 806		_				Î
IX EDD	(Type)	POF		Sample Tem	perature: 3.4	2+01=3.9	Ŵ	÷ ш	(SR)	418	150	or 8	sle	NOS	les /		VOA	0)			Yor
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	STEX) WHE	BTEX + MTB	TPH 8015B	TPH (Method	EDB (Method	PAH's (8310	RCRA 8 Met	Anions (F,CI,	8081 Pesticic	8260B (VOA	8270 (Semi-\	Chloride			Air Bubbles (
11-9	1500	S	EX-South@10'	2-202	cool	-001	X		X									X			
i	1515	1	TROIP 8'	1	1	-007	X		X									X			\square
V	1530	¥	TRØ2C6'	V	*	-003	X		X									X			
Date: 11-9-17 Date:	Time: 1825 Time: 2045	Relinquish	ed by: Bed by: At Valle	Received by:	Jaet	Date Time 11/9/17 1825 Date Time 11/10/17 0730	Rer	nark:	Kill	jun on . rns	.w.)ng ler Ite	e ei	will will co	lian Ian	15 : 5.0	DB COM COM	gel	er er	t-enw,	con

(ourier



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 <u>www.hallenvironmental.com</u> 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109



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

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 Analys	is Labora	tory, In	c.			Lab Order 1712109 Date Reported: 12/13/20	017
CLIENT: Williams			C	lient Sampl	e ID: BH	I-3 2'-4'	
Project: Kutz Gas Plan				Collection 1	Date: 11/	30/2017 11:15:00 AM	
Lab ID: 1712109-001	Matrix:	SOIL		Received I	Date: 12/	2/2017 8:30:00 AM	
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS	3				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 RAM	IGE					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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 29
	ND	Not Detected at the Reporting Limit	Р	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 Analysi	s Laborat	tory, In	с.		Lab Order 1712109 Date Reported: 12/13/20)17
CLIENT: Williams			Client Sample	ID: BI	I-3 23'-25'	
Project: Kutz Gas Plan			Collection Da	ate: 11/	/30/2017 11:30:00 AM	
Lab ID: 1712109-002	Matrix: S	SOIL	Received Da	ate: 12	/2/2017 8:30:00 AM	
Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG					Analyst	том
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 RANG	GE				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

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 29
	ND	Not Detected at the Reporting Limit	Р	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 Er	vironmental Analy	sis Labora	tory, In	c.			Date Reported: 12/13/2	017
CLIENT: Project: Lab ID:	Williams Kutz Gas Plan 1712109-003	Matrix:	AQUEOUS	6	Client Sam Collection Received	ple ID: BF n Date: 11 d Date: 12	I-3 /30/2017 11:50:00 AN /2/2017 8:30:00 AM	1
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA MET	HOD 8015M/D: DIESEL RAM	IGE					Analys	t: TOM
Diesel Ra	ange Organics (DRO)	31	1.0	н	mg/L	1	12/12/2017 10:29:01 A	M 35444
Motor Oil	Range Organics (MRO)	ND	5.0	Н	mg/L	1	12/12/2017 10:29:01 A	M 35444
Surr: E	DNOP	105	77.5-161	Н	%Rec	1	12/12/2017 10:29:01 A	M 35444
EPA MET	HOD 8015D: GASOLINE RA	NGE					Analys	t: NSB
Gasoline	Range Organics (GRO)	ND	0.10	D	mg/L	2	12/8/2017 10:45:05 AM	G47631
Surr: E	3FB	109	69.3-150	D	%Rec	2	12/8/2017 10:45:05 AM	G47631
EPA MET	HOD 8260: VOLATILES SHO	ORT LIST					Analys	t: 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
Ethylben	zene	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	l-Bromofluorobenzene	112	70-130	DP	%Rec	2	12/6/2017 5:30:43 PM	A47582
Surr: D	Dibromofluoromethane	87.6	70-130	DP	%Rec	2	12/6/2017 5:30:43 PM	A47582
Surr: 1	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.

- 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
- Analyte detected below quantitation limits Page 4 of 29 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report Lab Order 1712109

Hall E	nvironmental Analy	ysis Laborato	ory, In	c.			Lab Order 1712109 Date Reported: 12/13/20	017
CLIENT:	Williams			С	lient Sampl	e ID: BH	[-4 3'-5'	
Project:	Kutz Gas Plan				Collection 1	Date: 11/	30/2017 12:10:00 PM	
Lab ID:	1712109-004	Matrix: So	OIL		Received I	Date: 12/	2/2017 8:30:00 AM	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA MET	HOD 8015M/D: DIESEL RA	NGE ORGANICS					Analyst	том
Diesel R	ange Organics (DRO)	ND	9.4		mg/Kg	1	12/6/2017 1:03:22 PM	35332
Motor Oi	I Range Organics (MRO)	ND	47		mg/Kg	1	12/6/2017 1:03:22 PM	35332
Surr: I	DNOP	103	70-130		%Rec	1	12/6/2017 1:03:22 PM	35332
EPA MET	HOD 8015D: GASOLINE R	ANGE					Analyst	NSB
Gasoline	Range Organics (GRO)	15	4.7		mg/Kg	1	12/7/2017 7:29:34 PM	35319
Surr: E	BFB	125	15-316		%Rec	1	12/7/2017 7:29:34 PM	35319
EPA MET	HOD 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
Ethylben	zene	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	4-Bromofluorobenzene	87.1	80-120		%Rec	1	12/7/2017 7:29:34 PM	35319

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 5 of 29
	ND	Not Detected at the Reporting Limit	Р	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 Analys	sis Labora	tory, Inc.			Lab Order 1712109 Date Reported: 12/13/2	017
CLIENT: Williams			Client Sample	e ID: BH	I-4 18'-20'	
Project: Kutz Gas Plan			Collection I	Date: 11/	30/2017 12:40:00 PM	
Lab ID: 1712109-005	Matrix:	SOIL	Received I	Date: 12/	2/2017 8:30:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS	5			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 RAM	NGE				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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 6 of 29
	ND	Not Detected at the Reporting Limit	Р	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 Analys	sis Laborat	tory, Inc.			Lab Order 1712109 Date Reported: 12/13/20	017
CLIENT: Williams Project: Kutz Gas Plan Lab ID: 1712109-006	Client Sample ID: BH-2 13-'15' Collection Date: 11/30/2017 1:40:00 PM Matrix: SOIL Received Date: 12/2/2017 8:30:00 AM					
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE 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 RAM	NGE				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.

		e de summing report una sumpre regin encenn	or for mage	eu de una ma preser
Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the asso
	D	Sample Diluted Due to Matrix	E	Value above quantitation ra
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below qua
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

% Recovery outside of range due to dilution or matrix

S

- sociated Method Blank
- ange
- antitation limits Page 7 of 29

Analytical Report

- W Sample container temperature is out of limit as specified

Hall Environmental Analys	is Laborat	ory, Inc.			Lab Order 1712109 Date Reported: 12/13/2	017
CLIENT: Williams			Client Sample	e ID: BH	I-2 23'-25'	
Project: Kutz Gas Plan			Collection I	Date: 11/	/30/2017 2:00:00 PM	
Lab ID: 1712109-007	Matrix: S	SOIL	Received I	Date: 12/	/2/2017 8:30:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	GE 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 RAN	IGE				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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 8 of 29
	ND	Not Detected at the Reporting Limit	Р	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

						Lab Order 1712109	
Hall Environmental Analysis	Labora	tory, In	c.			Date Reported: 12/13/2	017
CLIENT: Williams			С	lient Sam	ple ID: BH	I-1 13'-15'	
Project: Kutz Gas Plan				Collection	Date: 11	/30/2017 2:20:00 PM	
Lab ID: 1712109-008	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	ORGANIC	S				Analyst	том
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 RANG	E					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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 9 of 29
	ND	Not Detected at the Reporting Limit	Р	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 Analys	is Labora	tory, Inc.			Lab Order 1712109 Date Reported: 12/13/2	017
CLIENT: Williams Project: Kutz Gas Plan Lab ID: 1712109-009	Matrix: S	SOIL	Client Sampl Collection Received	e ID: BH Date: 11/ Date: 12/	H-1 18'-20' /30/2017 2:40:00 PM /2/2017 8:30:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS	5			Analyst	том
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 RAM	IGE				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

Re data and preservation information.

Refe	er to the	e QC Summary report and sample login checklis	st for flagg	ged QC o
Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte
	D	Sample Diluted Due to Matrix	E	Value ab
	Η	Holding times for preparation or analysis exceeded	J	Analyte
	ND	Not Detected at the Reporting Limit	Р	Sample p
	PQL	Practical Quanitative Limit	RL	Reportin

- % Recovery outside of range due to dilution or matrix S
- detected in the associated Method Blank
- pove quantitation range
- detected below quantitation limit Page 10 of 29

Analytical Report

- pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysi	Labora	town Inc			Lab Order 1712109	
Hall Environmental Analysis	s Labora	tory, Inc.	,		Date Reported: 12/13/2	017
CLIENT: Williams			Client Sampl	e ID: BH	H-5 3'-5'	
Project: Kutz Gas Plan			Collection I	Date: 12/	/1/2017 9:15:00 AM	
Lab ID: 1712109-010	Matrix:	SOIL	Received I	Date: 12/	/2/2017 8:30:00 AM	
Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS	5			Analyst	том
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 RANG	E				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.

Itelt		e de Summary report and sample login enceknis	st for magg
Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В
	D	Sample Diluted Due to Matrix	E
	Н	Holding times for preparation or analysis exceeded	J
	ND	Not Detected at the Reporting Limit	Р
	PQL	Practical Quanitative Limit	RL

- 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 limit Page 11 of 29

Analytical Report

- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Er	vironmental Analy	sis Laborat	ory, Inc			Lab Order 1712109 Date Reported: 12/13/20	017
CLIENT: Project: Lab ID:	Williams Kutz Gas Plan 1712109-011	Matrix: S	OIL	Client Samp Collection Received	le ID: BH Date: 12/ Date: 12/	H-5 18'-20' /1/2017 9:30:00 AM /2/2017 8:30:00 AM	
Analyses		Result	PQL (Qual Units	DF	Date Analyzed	Batch
EPA MET	HOD 8015M/D: DIESEL RAN	IGE ORGANICS				Analyst	том
Diesel Ra	ange 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: D	DNOP	97.6	70-130	%Rec	1	12/6/2017 3:53:29 PM	35332
EPA MET	HOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline	Range Organics (GRO)	ND	4.8	mg/Kg	1	12/7/2017 4:14:39 AM	35319
Surr: E	BFB	83.4	15-316	%Rec	1	12/7/2017 4:14:39 AM	35319
EPA MET	HOD 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
Ethylben	zene	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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limitspage 12 of 29
	ND	Not Detected at the Reporting Limit	Р	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 Analys	is Labora	tory, Inc			Lab Order 1712109 Date Reported: 12/13/20	017
CLIENT: Williams			Client Sample	e ID: BH	I-6 13'-15'	
Project: Kutz Gas Plan			Collection I	Date: 12/	/1/2017 9:50:00 AM	
Lab ID: 1712109-012	Matrix:	SOIL	Received I	Date: 12/	2/2017 8:30:00 AM	
Analyses	Result	PQL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE 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 RAM	IGE				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.

- 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 Page 13 of 29

Analytical Report

- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysi	is Labora	tory, Inc	•		Lab Order 1712109 Date Reported: 12/13/20	017
CLIENT: Williams Project: Kutz Gas Plan Lab ID: 1712109-013	Matrix:	SOIL	Client Sample Collection I Received I	e ID: BH Date: 12/ Date: 12/	H-6 18'-20' /1/2017 10:10:00 AM /2/2017 8:30:00 AM	
Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS	6			Analyst	том
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 RAN	GE				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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limitspage 14 of 29
	ND	Not Detected at the Reporting Limit	Р	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 Analysi	s Labora	tory, Inc.			Lab Order 1712109 Date Reported: 12/13/20	017
CLIENT: Williams Project: Kutz Gas Plan	Matrix	SOIL	Client Sample Collection I	e ID: BF Date: 12/	I-7 4'-6' /1/2017 10:40:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG		5			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 RAN	GE				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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit Page 15 of 29
	ND	Not Detected at the Reporting Limit	Р	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 En	vironmental Analy	sis Laborato	ory, In	c.			Lab Order 1712109 Date Reported: 12/13/2	017
CLIENT:	Williams			C	lient Samp	le ID: BH	H-7 18'-20'	
Lab ID:	1712109-015	Matrix: So	DIL		Received	Date: 12/ Date: 12/	/2/2017 8:30:00 AM	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA MET	HOD 8015M/D: DIESEL RAN	NGE ORGANICS					Analyst	TOM
Diesel Ra	inge 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: D	NOP	92.6	70-130		%Rec	1	12/6/2017 5:31:57 PM	35332
EPA MET	HOD 8015D: GASOLINE RA	NGE					Analyst	NSB
Gasoline	Range Organics (GRO)	ND	4.7		mg/Kg	1	12/7/2017 10:10:06 PM	35319
Surr: B	FB	86.6	15-316		%Rec	1	12/7/2017 10:10:06 PM	35319
EPA MET	HOD 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
Ethylbenz	zene	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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limitspage 16 of 29
	ND	Not Detected at the Reporting Limit	Р	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 En	vironmental Analys	sis Laborat	tory, In	ic.			Lab Order 1712109 Date Reported: 12/13/2	017
CLIENT:	Williams			C	lient Sampl	e ID: BH	I-8 7'-10'	
Project:	Kutz Gas Plan				Collection 1	Date: 12/	/1/2017 11:30:00 AM	
Lab ID:	1712109-016	Matrix: S	SOIL		Received 1	Date: 12/	/2/2017 8:30:00 AM	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METI	HOD 8015M/D: DIESEL RAN	GE ORGANICS					Analyst	TOM
Diesel Ra	nge 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: D	NOP	102	70-130		%Rec	1	12/6/2017 5:56:03 PM	35332
EPA METI	HOD 8015D: GASOLINE RAI	NGE					Analyst	NSB
Gasoline	Range Organics (GRO)	38	4.9		mg/Kg	1	12/7/2017 1:17:22 AM	35319
Surr: B	FB	446	15-316	S	%Rec	1	12/7/2017 1:17:22 AM	35319
EPA METI	HOD 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
Ethylbenz	ene	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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limitspage 17 of 29
	ND	Not Detected at the Reporting Limit	Р	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 Analy	vsis Labora	tory, Inc.			Lab Order 1712109 Date Reported: 12/13/2	017
CLIENT: Williams			Client Sampl	e ID: BH	I-8 18'-20'	
Project: Kutz Gas Plan			Collection	Date: 12	/1/2017 11:45:00 AM	
Lab ID: 1712109-017	Matrix: SOIL Received Date: 12/2/2017 8:30:00 AM					
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RA	NGE 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 RA	NGE				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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limitspace 18 of 29
	ND	Not Detected at the Reporting Limit	Р	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 Analysi	Lab Order 1712109 Date Reported: 12/13/2017						
CLIENT: Williams Client Sample ID: BH-9 7'-10'							
Project: Kutz Gas Plan				Collection	Date: 12	/1/2017 12:10:00 PM	
Lab ID: 1712109-018	Matrix:	Matrix: SOIL Received Date: 12/2/2017 8:30:00 A			/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 RAN	GE					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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limitspage 19 of 29
	ND	Not Detected at the Reporting Limit	Р	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
Ana	lytical	Re	port	
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Lab Order 1712109

Date Reported: 12/13/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	Williams			Client Sampl	e ID: BH	I-9 18'-20'					
Project:	Kutz Gas Plan	Collection Date: 12/1/2017 12:20:00 PM									
Lab ID:	1712109-019	Matrix: S	Received 1	Date: 12/	/2/2017 8:30:00 AM						
Analyses		Result	PQL Qu	al Units	DF	Date Analyzed	Batch				
EPA MET	HOD 8015M/D: DIESEL RAN	GE ORGANICS				Analyst	том				
Diesel Ra	ange Organics (DRO)	ND	9.5	mg/Kg	1	12/6/2017 7:08:16 PM	35332				
Motor Oi	Range Organics (MRO)	ND	47	mg/Kg	1	12/6/2017 7:08:16 PM	35332				
Surr: [ONOP	94.5	70-130	%Rec	1	12/6/2017 7:08:16 PM	35332				
EPA MET	HOD 8015D: GASOLINE RAN	IGE				Analyst	NSB				
Gasoline	Range Organics (GRO)	ND	4.6	mg/Kg	1	12/7/2017 10:32:59 PM	35319				
Surr: E	3FB	86.2	15-316	%Rec	1	12/7/2017 10:32:59 PM	35319				
EPA MET	HOD 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				
Ethylben	zene	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	4-Bromofluorobenzene	84.8	80-120	%Rec	1	12/7/2017 10:32:59 PM	35319				

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits page 20 of 20
	ND	Not Detected at the Reporting Limit	Р	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

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					
Sample ID MB-35332 Client ID: PBS	SampType: MBLK Batch ID: 35332	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47518					
Sample ID MB-35332 Client ID: PBS Prep Date: 12/5/2017	SampType: MBLK Batch ID: 35332 Analysis Date: 12/6/2017	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47518 SeqNo: 1518926 Units: mg/Kg					
Sample ID MB-35332 Client ID: PBS Prep Date: 12/5/2017 Analyte	SampType: MBLK Batch ID: 35332 Analysis Date: 12/6/2017 Result PQL SPK value	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47518 SeqNo: 1518926 Units: mg/Kg SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual					
Sample ID MB-35332 Client ID: PBS Prep Date: 12/5/2017 Analyte Diesel Range Organics (DRO)	SampType: MBLK Batch ID: 35332 Analysis Date: 12/6/2017 Result PQL SPK value ND 10	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47518 SeqNo: 1518926 Units: mg/Kg SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual					
Sample ID MB-35332 Client ID: PBS Prep Date: 12/5/2017 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)	SampType: MBLK Batch ID: 35332 Analysis Date: 12/6/2017 Result PQL SPK value ND 10 ND 50	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47518 SeqNo: 1518926 Units: mg/Kg SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual					
Sample ID MB-35332 Client ID: PBS Prep Date: 12/5/2017 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	SampType: WBLK Batch ID: 35332 Analysis Date: 12/6/2017 Result PQL SPK value ND 10 ND 50 10 10.00	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47518 SeqNo: 1518926 Units: mg/Kg SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 103 70 130					
Sample ID MB-35332 Client ID: PBS Prep Date: 12/5/2017 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	SampType: WBLK Batch ID: 35332 Analysis Date: 12/6/2017 Result PQL SPK value ND 10 ND 50 10 10.00 SampType: LUS	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47518 SeqNo: 1518926 Units: mg/Kg SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 103 70 130 TestCode: EPA Method 8015M/D: Diesel Range Organics					
Sample ID MB-35332 Client ID: PBS Prep Date: 12/5/2017 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID LCS-35334 Client ID: LCSS	SampType: MBLK Batch ID: 35332 Analysis Date: 12/6/2017 Result PQL SPK value ND 10 ND 50 10 50 SampType: LCS Batch ID: 3534	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47518 SeqNo: 1518926 Units: mg/Kg SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 103 70 130 TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47491					
Sample ID MB-35332 Client ID: PBS Prep Date: 12/5/2017 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID LCS-35334 Client ID: LCSS Prep Date: 12/5/2017	SampType: WBLK Batch ID: 35332 Analysis Date: 12/6/2017 Result PQL SPK value ND 10 ND 50 10 10.00 SampType: 10.00 SampType: 10.00 Analysis Date: 12/6/2017	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47518 SeqNo: 1518926 Units: mg/Kg SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 103 70 130 TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47491 SeqNo: 1520256 Units: %Rec					
Sample ID MB-35332 Client ID: PBS Prep Date: 12/5/2017 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID LCS-35334 Client ID: LCSS Prep Date: 12/5/2017 Analyte	SampType: WBLK Batch ID: 35332 Analysis Date: 12/6/2017 Result PQL SPK value ND 10 ND 50 10 50 SampType: LCS Batch ID: 35334 Analysis Date: 12/6/2017 Result PQL SampType: SampType:	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47518 SeqNo: 1518926 Units: mg/Kg SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 103 70 130 TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47491 SeqNo: 1520256 Units: %Rec SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual					
Sample ID MB-35332 Client ID: PBS Prep Date: 12/5/2017 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID LCS-35334 Client ID: LCSS Prep Date: 12/5/2017 Analyte Surr: DNOP	SampType: WBLK Batch ID: 35332 Analysis Date: 12/6/2017 Result PQL SPK value ND 10 ND 50 10 10.00 SampType: LC Batch ID: 353 Analysis Date: 12/6/2017 Batch ID: 354 Analysis Date: 12/2017 Result PQL SPK value 3.6 5.000	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47518 SeqNo: 1518926 Units: mg/Kg SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 103 70 130 TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47491 SeqNo: 1520256 Units: %Rec SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 71.7 70 130					
Sample ID MB-35332 Client ID: PBS Prep Date: 12/5/2017 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID LCS-35334 Client ID: LCSS Prep Date: 12/5/2017 Analyte Surr: DNOP Sample ID MB-35334	SampType: WBLK Batch ID: 35332 Analysis Date: 12/6/2017 Result PQL SPK value ND 10 ND 50 10 10 SampType: LCS Batch ID: 35334 Analysis Date: 12/6/2017 Result PQL SPK value Analysis Date: 12/6/2017 Result PQL SPK value 3.6 5.000	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47518 SeqNo: 1518926 Units: mg/Kg SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 103 70 130 TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47491 SeqNo: 1520256 Units: %Rec SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 71.7 70 130 TestCode: EPA Method 8015M/D: Diesel Range Organics					
Sample ID MB-35332 Client ID: PBS Prep Date: 12/5/2017 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID LCS-35334 Client ID: LCSS Prep Date: 12/5/2017 Analyte Surr: DNOP Sample ID MB-35334 Client ID: PBS	SampType: WBLK Batch ID: 35332 Analysis Date: 12/6/2017 Result PQL SPK value ND 10 ND 50 10 10.00 SampType: LC Batch ID: 35334 Analysis Date: 12/6/2017 Result PQL SPK value Analysis Date: 12/6/2017 Result PQL SPK value 3.6 5.000 SampType: MBLK Batch ID: 35334	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47518 SeqNo: 1518926 Units: mg/Kg SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 103 70 130 TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47491 SeqNo: 1520256 Units: %Rec SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 71.7 70 130 TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47491					
Sample ID MB-35332 Client ID: PBS Prep Date: 12/5/2017 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID LCS-35334 Client ID: LCSS Prep Date: 12/5/2017 Analyte Surr: DNOP Sample ID MB-35334 Client ID: PBS Prep Date: 12/5/2017	SampType: WBLK Batch ID: 35332 Analysis Date: 12/6/2017 Result PQL SPK value ND 10 ND 50 10 50 SampType: LCS Batch ID: 35334 Analysis Date: 12/6/2017 Result PQL SPK value 3.6 S2000 SampType: MBLK Batch ID: 35.000 SampType: BLK Batch ID: 35.34	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47518 SeqNo: 1518926 Units: mg/Kg SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 103 70 130 TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47491 SeqNo: 1520256 Units: %Rec SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 71.7 70 130 TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47491 SeqNo: 1520258 Units: %Rec					
Sample ID MB-35332 Client ID: PBS Prep Date: 12/5/2017 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID LCS-35334 Client ID: LCSS Prep Date: 12/5/2017 Analyte Sample ID MB-35334 Client ID: PBS Prep Date: 12/5/2017 Analyte	SampType: WBLK Batch ID: 35332 Analysis Date: 12/6/2017 Result PQL SPK value ND 10 ND 50 10 10.00 SampType: LC Batch ID: 35334 Analysis Date: 12/6/2017 Result PQL SPK value Analysis Date: 12/6/2017 Result PQL SPK value SampType: MELK Batch ID: 35.000 SampType: MELK Batch ID: 3534 Analysis Date: 12/6/2017 Result PQL SPK value Analysis Date: 12/6/2017 Result PQL SPK value	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47518 SeqNo: 1518926 Units: mg/Kg SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 103 70 130 TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47491 SeqNo: 1520256 Units: %Rec SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 71.7 70 130 TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 47491 SeqNo: 1520258 Units: %Rec SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual					

Qualifiers:

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

Page 21 of 29

13-Dec-17

WO#: 1712109

WO#: 1712109

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Page 22 of 29

13-Dec-17

Hall Environmental Analysis Laboratory, Inc.

5.0

Client: Williams **Project:** Kutz Gas Plan

Surr: DNOP

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 SPK value Analyte Result PQL SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 64 9.3 61.38 55.8 125 S 46.38 4.84 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: Analysis Date: 12/7/2017 SeqNo: 1521040 Units: mg/Kg 12/5/2017 SPK value SPK Ref Val %RPD **RPDLimit** Analyte Result PQL %REC LowLimit HighLimit Qual Diesel Range Organics (DRO) 61.38 -20.6 20.6 RS 52 9.3 46.64 55.8 125 20

108

70

130

0

4.664

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Η Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Р 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

Sample ID LCS-35300	SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range									
Client ID: LCSW	Batch	ID: 35	300	F	RunNo: 4	7491				
Prep Date: 12/4/2017	Analysis Da	te: 12	2/5/2017	5	SeqNo: 1	518569	Units: %Red	;		
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	SampTy	pe: ME	BLK	Tes	tCode: E	PA Method	8015M/D: Die	esel Range	e	
Client ID: PBW	Batch	ID: 35	300	F	RunNo: 4	7491				
Prep Date: 12/4/2017	Analysis Da	ite: 12	2/5/2017	S	SeqNo: 1	518570	Units: %Red	;		
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	SampTv	pe: LC	S	Tes	tCode: E	PA Method	8015M/D: Die	sel Rang	9	
	J		-							
Client ID: LCSW	Batch	ID: 35	444	F	RunNo: 4	7698				
Client ID: LCSW Prep Date: 12/11/2017	Batch Analysis Da	ID: 35	444 2/12/2017	F	RunNo: 4 SeqNo: 1	7698 524686	Units: mg/L			
Client ID: LCSW Prep Date: 12/11/2017 Analyte	Batch Analysis Da Result	ID: 35 Ite: 12 PQL	444 2/12/2017 SPK value	F SPK Ref Val	RunNo: 4 SeqNo: 1 %REC	7698 524686 LowLimit	Units: mg/L HighLimit	%RPD	RPDLimit	Qual
Client ID: LCSW Prep Date: 12/11/2017 Analyte Diesel Range Organics (DRO)	Batch Analysis Da Result 5.6	ID: 35 Ite: 12 PQL 1.0	444 2/12/2017 SPK value 5.000	F SPK Ref Val	RunNo: 4 SeqNo: 1 %REC 112	7698 524686 LowLimit 92.3	Units: mg/L HighLimit 135	%RPD	RPDLimit	Qual
Client ID: LCSW Prep Date: 12/11/2017 Analyte Diesel Range Organics (DRO) Surr: DNOP	Batch Analysis Da Result 5.6 0.51	ID: 35 Ite: 1 2 PQL 1.0	444 2/12/2017 SPK value 5.000 0.5000	F S SPK Ref Val 0	RunNo: 4 SeqNo: 1 %REC 112 102	7698 524686 LowLimit 92.3 77.5	Units: mg/L HighLimit 135 161	%RPD	RPDLimit	Qual
Client ID: LCSW Prep Date: 12/11/2017 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID MB-35444	Batch Analysis Da Result 5.6 0.51 SampTy	ID: 35 ite: 12 PQL 1.0	444 2/12/2017 SPK value 5.000 0.5000 BLK	F SPK Ref Val 0 Tes	RunNo: 4 SeqNo: 1 %REC 112 102 tCode: E	7698 524686 LowLimit 92.3 77.5 PA Method	Units: mg/L HighLimit 135 161 8015M/D: Die	%RPD	RPDLimit	Qual
Client ID: LCSW Prep Date: 12/11/2017 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID MB-35444 Client ID: PBW	Batch Analysis Da Result 5.6 0.51 SampTy Batch	ID: 35 ite: 12 PQL 1.0 pe: ME ID: 35	444 2/12/2017 SPK value 5.000 0.5000 BLK 444	F SPK Ref Val 0 Tes F	RunNo: 4 SeqNo: 1 %REC 112 102 tCode: E RunNo: 4	7698 524686 LowLimit 92.3 77.5 PA Method 7698	Units: mg/L HighLimit 135 161 8015M/D: Die	%RPD	RPDLimit	Qual
Client ID: LCSW Prep Date: 12/11/2017 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID MB-35444 Client ID: PBW Prep Date: 12/11/2017	Batch Analysis Da Result 5.6 0.51 SampTy Batch Analysis Da	ID: 354 Ite: 12 PQL 1.0 ID: 354 ID: 354	444 2/12/2017 SPK value 5.000 0.5000 BLK 444 2/12/2017	SPK Ref Val 0 Tes 5 5	RunNo: 4 SeqNo: 1 %REC 112 102 tCode: E RunNo: 4 SeqNo: 1	7698 524686 UowLimit 92.3 77.5 PA Method 7698 524687	Units: mg/L HighLimit 135 161 8015M/D: Die Units: mg/L	%RPD	RPDLimit	Qual
Client ID: LCSW Prep Date: 12/11/2017 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID MB-35444 Client ID: PBW Prep Date: 12/11/2017 Analyte	Batch Analysis Da Result 5.6 0.51 SampTy Batch Analysis Da Result	ID: 35 ite: 12 PQL 1.0 ID: 35 ite: 12 PQL	444 2/12/2017 SPK value 5.000 0.5000 BLK 444 2/12/2017 SPK value	F SPK Ref Val 0 Tes F SPK Ref Val	RunNo: 4 SeqNo: 1 %REC 112 102 tCode: E RunNo: 4 SeqNo: 1 %REC	7698 524686 092.3 77.5 PA Method 7698 524687 LowLimit	Units: mg/L HighLimit 135 161 8015M/D: Die Units: mg/L HighLimit	%RPD	RPDLimit P	Qual
Client ID: LCSW Prep Date: 12/11/2017 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID MB-35444 Client ID: PBW Prep Date: 12/11/2017 Analyte Diesel Range Organics (DRO)	Batch Analysis Da Result 5.6 0.51 SampTy Batch Analysis Da Result ND	ID: 35- ite: 12 PQL 1.0 ID: 35- ite: 12 PQL 1.0	444 2/12/2017 SPK value 5.000 0.5000 3LK 444 2/12/2017 SPK value	F SPK Ref Val 0 Tes F SPK Ref Val	RunNo: 4 SeqNo: 1 %REC 112 102 tCode: E RunNo: 4 SeqNo: 1 %REC	7698 524686 2000 92.3 77.5 PA Method 7698 524687 LowLimit	Units: mg/L HighLimit 135 161 8015M/D: Die Units: mg/L HighLimit	%RPD	RPDLimit RPDLimit	Qual
Client ID: LCSW Prep Date: 12/11/2017 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID MB-35444 Client ID: PBW Prep Date: 12/11/2017 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)	Batch Analysis Da Result 5.6 0.51 SampTy Batch Analysis Da Result ND ND	ID: 35- ite: 12 PQL 1.0 ID: 35- ite: 12 PQL 1.0 5.0	444 2/12/2017 SPK value 5.000 0.5000 3LK 444 2/12/2017 SPK value	F SPK Ref Val 0 Tes F SPK Ref Val	RunNo: 4 SeqNo: 1 %REC 112 102 tCode: E RunNo: 4 SeqNo: 1 %REC	7698 524686 UowLimit 92.3 77.5 PA Method 7698 524687 LowLimit	Units: mg/L HighLimit 135 161 8015M/D: Die Units: mg/L HighLimit	%RPD	RPDLimit RPDLimit	Qual

Qualifiers:

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

Page 23 of 29

WO#: 1712109

13-Dec-17

Hall Environmental Analysis Laboratory, Inc.

WO#: 1712109

13-Dec-17

Client: Project:	Williams Kutz Gas	Plan									
Sample ID	MB-35330	SampT	/pe: M	BLK	Tes	tCode: El	PA Method	8015D: Gas	oline Rang	e	
Client ID:	PBS	Batch	ID: 3	5330	F	RunNo: 4	7564				
Prep Date:	12/5/2017	Analysis D	ate: 1	2/6/2017	S	SeqNo: 1	519487	Units: %Re	C		
Analyta		Begult	DOI	SDK value	SDK Dof Val	W DEC	Loud imit	Highl imit	0/ DDD	PPDI imit	Qual
Surr: BFB		970	FQL	1000	SFK REI Val	97.4	15	316	70KFD	KFDLIIIII	Quai
Sample ID	LCS-35330	SampT	pe: L	CS	Tes	tCode: El	PA Method	8015D: Gas	oline Rang	e	
Client ID:	LCSS	Batch	ID: 3	5330	F	RunNo: 4	7564				
Prep Date:	12/5/2017	Analysis Da	ate: 1	2/6/2017	5	SeqNo: 1	519488	Units: %Re	C		
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	SampT	/pe: M	BLK	Tes	tCode: El	PA Method	8015D: Gas	oline Rang	e	
Client ID:	PBS	Batch	ID: 3	5319	F	RunNo: 4	7564				
Prep Date:	12/5/2017	Analysis Da	ate: 1	2/6/2017	5	SeqNo: 1	51951 <mark>0</mark>	Units: mg/l	Kg		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	ND	5.0								
Surr: BFB		890		1000		88.6	15	316			
				1000				010			
Sample ID	LCS-35319	SampTy	/pe: L	cs	Tes	tCode: El	PA Method	8015D: Gas	oline Rang	e	
Sample ID Client ID:	LCS-35319 LCSS	SampTy Batch	/pe: L	CS 5319	Tes	tCode: EF	PA Method 7564	8015D: Gas	oline Rang	e	
Sample ID Client ID: Prep Date:	LCS-35319 LCSS 12/5/2017	SampTy Batch Analysis Da	/pe: Lo ID: 3: ate: 1	CS 5319 2/6/2017	Tes F	tCode: EF RunNo: 4 SeqNo: 1	PA Method 7564 519511	8015D: Gas	oline Rang Kg	e	
Sample ID Client ID: Prep Date: Analyte	LCS-35319 LCSS 12/5/2017	SampTy Batch Analysis Da Result	/pe: Lo ID: 3 ate: 1 PQL	5319 2/6/2017 SPK value	Tes F SPK Ref Val	tCode: EF RunNo: 4 SeqNo: 1 %REC	PA Method 7564 519511 LowLimit	8015D: Gas Units: mg/l HighLimit	oline Rang Kg %RPD	e RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Gasoline Rang	LCS-35319 LCSS 12/5/2017 ge Organics (GRO)	SampTy Batch Analysis Da Result 28	/pe: Lo ID: 34 ate: 1 PQL 5.0	2/6/2017 SPK value 25.00	Tes F S SPK Ref Val 0	tCode: EF RunNo: 4 SeqNo: 1 %REC 110	PA Method 7564 519511 LowLimit 75.9	8015D: Gas Units: mg/l HighLimit 131	oline Rang Kg %RPD	e RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB	LCS-35319 LCSS 12/5/2017 ge Organics (GRO)	SampTy Batch Analysis Da Result 28 1100	/pe: Li ID: 3 ate: 1 PQL 5.0	25.00 25.00 1000	Tes F SPK Ref Val 0	tCode: EF RunNo: 4 SeqNo: 1 %REC 110 114	PA Method 7564 519511 LowLimit 75.9 15	8015D: Gas Units: mg/l HighLimit 131 316	oline Rang Kg %RPD	e RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID	LCS-35319 LCSS 12/5/2017 ge Organics (GRO) 1712109-002AMS	SampTy Batch Analysis Da Result 28 1100 SampTy	/pe: Lo ID: 3: ate: 1 PQL 5.0	2/6/2017 SPK value 25.00 1000	Tes F SPK Ref Val 0 Tes	tCode: EF RunNo: 4 SeqNo: 1 %REC 110 114 tCode: EF	PA Method 7564 519511 LowLimit 75.9 15 PA Method	8015D: Gas Units: mg/l HighLimit 131 316 8015D: Gas	oline Rang Kg %RPD oline Rang	e RPDLimit e	Qual
Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID:	LCS-35319 LCSS 12/5/2017 ge Organics (GRO) 1712109-002AMS BH-3 23'-25'	SampTy Batch Analysis Da Result 28 1100 SampTy Batch	ype: Lu ID: 34 ate: 1 PQL 5.0 ype: M ID: 34	2/6/2017 2/6/2017 25.00 1000 5 5319	Tes F SPK Ref Val 0 Tes F	tCode: EF RunNo: 4 SeqNo: 18 %REC 110 114 tCode: EF RunNo: 4	PA Method 7564 519511 LowLimit 75.9 15 PA Method 7564	8015D: Gas Units: mg/l HighLimit 131 316 8015D: Gas	oline Rang Kg %RPD oline Rang	e RPDLimit e	Qual
Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date:	LCS-35319 LCSS 12/5/2017 ge Organics (GRO) 1712109-002AMS BH-3 23'-25' 12/5/2017	SampTy Batch Analysis Da Result 28 1100 SampTy Batch Analysis Da	/pe: Lo ID: 34 ate: 1 PQL 5.0 /pe: M ID: 34 ate: 1	2/6/2017 SPK value 25.00 1000 S 5319 2/6/2017	Tes F SPK Ref Val 0 Tes F S	tCode: EF RunNo: 4: SeqNo: 1: %REC 110 114 tCode: EF RunNo: 4: SeqNo: 1:	PA Method 7564 519511 LowLimit 75.9 15 PA Method 7564 519517	8015D: Gas Units: mg/l HighLimit 131 316 8015D: Gas Units: mg/l	oline Rang Kg %RPD oline Rang Kg	e RPDLimit e	Qual
Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte	LCS-35319 LCSS 12/5/2017 ge Organics (GRO) 1712109-002AMS BH-3 23'-25' 12/5/2017	SampTy Batch Analysis Da Result 28 1100 SampTy Batch Analysis Da Result	/pe: Li ID: 3: ate: 1 PQL 5.0 /pe: M ID: 3: ate: 1 PQL	25.00 25.00 1000 5 5 5 3 2 6 2 5 3 19 2 5 3 19 2 5 3 19 2 5 5 3 19 2 5 5 5 5 5 5 5 5 5 5 5 5 5	Tes F SPK Ref Val 0 Tes F SPK Ref Val	tCode: EF RunNo: 43 SeqNo: 18 %REC 110 114 tCode: EF RunNo: 43 SeqNo: 18 %REC	PA Method 7564 519511 LowLimit 75.9 15 PA Method 7564 519517 LowLimit	8015D: Gas Units: mg/l HighLimit 131 316 8015D: Gas Units: mg/l HighLimit	oline Rang Kg %RPD oline Rang Kg %RPD	e RPDLimit e RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang	LCS-35319 LCSS 12/5/2017 ge Organics (GRO) 1712109-002AMS BH-3 23'-25' 12/5/2017 ge Organics (GRO)	SampTy Batch Analysis Da Result 28 1100 SampTy Batch Analysis Da Result 26	/pe: Lo ID: 34 ate: 1 PQL 5.0 /pe: M ID: 34 ate: 1 PQL 4.9	2/6/2017 2/6/2017 2FK value 25.00 1000 S 5319 2/6/2017 SPK value 24.51	Tes F SPK Ref Val 0 Tes F SPK Ref Val 0	tCode: EF RunNo: 4: SeqNo: 1: %REC 110 114 tCode: EF RunNo: 4: SeqNo: 1: %REC 106	PA Method 7564 519511 LowLimit 75.9 15 PA Method 7564 519517 LowLimit 77.8	8015D: Gas Units: mg/l HighLimit 131 316 8015D: Gas Units: mg/l HighLimit 128	oline Rang Kg %RPD oline Rang Kg %RPD	e RPDLimit e RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB	LCS-35319 LCSS 12/5/2017 ge Organics (GRO) 1712109-002AMS BH-3 23'-25' 12/5/2017 ge Organics (GRO)	SampTy Batch Analysis Da Result 28 1100 SampTy Batch Analysis Da Result 26 1000	/pe: Lo ID: 34 ate: 1 PQL 5.0 /pe: M ID: 34 ate: 1 PQL 4.9	2/6/2017 SPK value 25.00 1000 S 5319 2/6/2017 SPK value 24.51 980.4	Tes F SPK Ref Val 0 Tes F SPK Ref Val 0	tCode: EF RunNo: 4 SeqNo: 1 %REC 110 114 tCode: EF RunNo: 4 SeqNo: 1 %REC 106 105	PA Method 7564 519511 LowLimit 75.9 15 PA Method 7564 519517 LowLimit 77.8 15	8015D: Gas Units: mg/l HighLimit 131 316 8015D: Gas Units: mg/l HighLimit 128 316	oline Rang Kg %RPD oline Rang Kg %RPD	e RPDLimit e RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB	LCS-35319 LCSS 12/5/2017 ge Organics (GRO) 1712109-002AMS BH-3 23'-25' 12/5/2017 ge Organics (GRO)	SampTy Batch Analysis Da Result 28 1100 SampTy Batch Analysis Da Result 26 1000 SampTy	/pe: Lo ID: 34 ate: 1 PQL 5.0 /pe: M ID: 34 ate: 1 PQL 4.9 /pe: M	2/6/2017 SPK value 25.00 1000 S 319 2/6/2017 SPK value 24.51 980.4 SD	Tes SPK Ref Val 0 Tes SPK Ref Val 0 Tes	tCode: EF RunNo: 4 SeqNo: 1 %REC 110 114 tCode: EF RunNo: 4 SeqNo: 1 %REC 106 105 tCode: EF	PA Method 7564 519511 LowLimit 75.9 15 PA Method 7564 519517 LowLimit 77.8 15 PA Method	8015D: Gas Units: mg/l HighLimit 131 316 8015D: Gas Units: mg/l HighLimit 128 316 8015D: Gas	oline Rang Kg %RPD oline Rang Kg %RPD	e RPDLimit e RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID:	LCS-35319 LCSS 12/5/2017 ge Organics (GRO) 1712109-002AMS BH-3 23'-25' 12/5/2017 ge Organics (GRO) 1712109-002AMSE BH-3 23'-25'	SampTy Batch Analysis Da Result 28 1100 SampTy Batch Analysis Da Result 26 1000 SampTy Batch	/pe: Lo ID: 34 ate: 1 PQL 5.0 /pe: M ID: 34 ate: 1 PQL 4.9 /pe: M ID: 34	2/6/2017 SPK value 25.00 1000 S 5319 2/6/2017 SPK value 24.51 980.4 SD 5319	Tes F SPK Ref Val 0 Tes SPK Ref Val 0 Tes F	tCode: EF RunNo: 4 SeqNo: 1 %REC 110 114 tCode: EF RunNo: 4 %REC 106 105 tCode: EF RunNo: 4	PA Method 7564 519511 LowLimit 75.9 15 PA Method 7564 519517 LowLimit 75.8 15 PA Method 7564	8015D: Gas Units: mg/l HighLimit 131 316 8015D: Gas Units: mg/l HighLimit 128 316 8015D: Gas	oline Rang Kg %RPD oline Rang Kg %RPD	e RPDLimit e RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date:	LCS-35319 LCSS 12/5/2017 ge Organics (GRO) 1712109-002AMS BH-3 23'-25' 12/5/2017 1712109-002AMSI BH-3 23'-25' 12/5/2017	SampTy Batch Analysis Da Result 28 1100 SampTy Batch Analysis Da C SampTy Batch Analysis Da	/pe: Lo ID: 34 ate: 1 PQL 5.0 /pe: M ID: 34 ate: 1 ID: 34 ate: 1	2/6/2017 SPK value 25.00 1000 S 5319 2/6/2017 SPK value 24.51 980.4 SD 5319 2/6/2017	Tes SPK Ref Val 0 Tes SPK Ref Val 0 Tes F SPK Ref Val 0	tCode: EF RunNo: 4 SeqNo: 1 %REC 110 114 tCode: EF RunNo: 4 %REC 106 105 tCode: EF RunNo: 4 SeqNo: 1	PA Method 7564 519511 LowLimit 75.9 15 PA Method 7564 519517 LowLimit 77.8 15 PA Method 7564 519518	8015D: Gas Units: mg/l HighLimit 131 316 8015D: Gas Units: mg/l HighLimit 128 316 8015D: Gas Units: mg/l	oline Rang Kg %RPD oline Rang %RPD oline Rang	e RPDLimit e RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte	LCS-35319 LCSS 12/5/2017 ge Organics (GRO) 1712109-002AMS BH-3 23'-25' 12/5/2017 ge Organics (GRO) 1712109-002AMSE BH-3 23'-25' 12/5/2017	SampTy Batch Analysis Da Result 28 1100 SampTy Batch Analysis Da Result 26 1000 SampTy Batch Analysis Da Result	/pe: Lu ID: 34 ate: 1 PQL 5.0 /pe: M ID: 34 ate: 1 PQL /pe: M ID: 34 ate: 1 PQL	2/6/2017 SPK value 25.00 1000 S 5319 2/6/2017 SPK value 24.51 980.4 SD 5319 2/6/2017 SPK value	Tes SPK Ref Val 0 Tes SPK Ref Val 0 Tes F SPK Ref Val	tCode: EF RunNo: 4 SeqNo: 1 %REC 110 114 tCode: EF RunNo: 4 %REC 106 105 tCode: EF RunNo: 4 SeqNo: 1 %REC	PA Method 7564 519511 LowLimit 75.9 15 PA Method 7564 519517 LowLimit 77.8 15 PA Method 7564 519518 LowLimit	8015D: Gas Units: mg/l HighLimit 131 316 8015D: Gas Units: mg/l HighLimit 8015D: Gas Units: mg/l HighLimit	oline Rang Kg %RPD oline Rang %RPD oline Rang oline Rang Kg %RPD	e RPDLimit e RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang	LCS-35319 LCSS 12/5/2017 ge Organics (GRO) 1712109-002AMS BH-3 23'-25' 12/5/2017 ge Organics (GRO) 1712109-002AMSE BH-3 23'-25' 12/5/2017 ge Organics (GRO)	SampTy Batch Analysis Da Result 28 1100 SampTy Batch Analysis Da Result 26 1000 SampTy Batch Analysis Da Result 25	/pe: Lu ID: 34 ate: 1 PQL 5.0 /pe: M ID: 34 ate: 1 PQL 4.9 /pe: M ID: 34 ate: 1 PQL ID: 34 ate: 1 PQL 4.9	2/6/2017 SPK value 25.00 1000 S 3319 2/6/2017 SPK value 24.51 980.4 SD 3319 2/6/2017 SPK value 24.51 980.4	Tes SPK Ref Val 0 Tes SPK Ref Val 0 Tes SPK Ref Val SPK Ref Val 0	tCode: EF RunNo: 4: SeqNo: 1: %REC 110 114 tCode: EF RunNo: 4: SeqNo: 1: %REC 106 105 tCode: EF RunNo: 4: SeqNo: 1: %REC 102	PA Method 7564 519511 LowLimit 75.9 15 PA Method 7564 519517 LowLimit 77.8 519518 LowLimit 77.8	8015D: Gas Units: mg/l HighLimit 131 316 8015D: Gas Units: mg/l HighLimit 128 316 8015D: Gas Units: mg/l HighLimit 128	oline Rang Kg %RPD oline Rang %RPD oline Rang oline Rang Kg %RPD 5.42	e RPDLimit e RPDLimit e RPDLimit 20	Qual

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
 - Sample pH Not In Range
- RL Reporting Detection Limit

Р

W Sample container temperature is out of limit as specified

Page 24 of 29

WO#: 1712109

13-Dec-17

Hall Environmental Analysis Laboratory, Inc.

Client: Project:

Williams 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 RP	DLimit Qual			
Surr: BFB	860 1000	86.4 15	316				
Sample ID LCS-35335	SampType: LCS	TestCode: EPA Method	8015D: Gasoline Range				
Sample ID LCS-35335 Client ID: LCSS	SampType: LCS Batch ID: 35335	TestCode: EPA Method RunNo: 47603	8015D: Gasoline Range				
Sample ID LCS-35335 Client ID: LCSS Prep Date: 12/5/2017	SampType: LCS Batch ID: 35335 Analysis Date: 12/7/2017	TestCode: EPA Method RunNo: 47603 SeqNo: 1521405	8015D: Gasoline Range Units: %Rec				
Sample ID LCS-35335 Client ID: LCSS Prep Date: 12/5/2017 Analyte	SampType: LCS Batch ID: 35335 Analysis Date: 12/7/2017 Result PQL SPK value	TestCode: EPA Method RunNo: 47603 SeqNo: 1521405 SPK Ref Val %REC LowLimit	8015D: Gasoline Range Units: %Rec HighLimit %RPD RP	DLimit Qual			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н 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
- В Analyte detected in the associated Method Blank
- Value above quantitation range E
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 25 of 29

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Williams Kutz Gas Plan **Project:**

Sample ID RB	Samp	Туре: МЕ	BLK	TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBW	Batc	h ID: G4	7631	F	RunNo: 4	7631				
Prep Date:	Analysis [Date: 12	2/8/2017	S	SeqNo: 1	522771	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	Samp	Type: LC	S	Tes	tCode: El	PA Method	8015D: Gasol	ine Rang	e	
Client ID: LCSW	Batc	h ID: G4	7631	F	RunNo: 4	7631				
Prep Date:	Analysis [Date: 12	2/8/2017	S	SeqNo: 1	522772	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.54	0.050	0 5000	0	102	75.9	123			
oubonno rungo organioo (orto)	0.51	0.050	0.5000	0	105	15.0	125			

Qualifiers:

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

Page 26 of 29

1712109

WO#: 13-Dec-17

Hall Environmental Analysis Laboratory, Inc.

Client: Williams **Project:** Kutz Gas Plan

Sample ID MB-35330	Samp	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: PBS	Batc	h ID: 35	330	RunNo: 47564						
Prep Date: 12/5/2017	Analysis E	Date: 12	2/6/2017	5	SeqNo: 1	519530	Units: %Ree	C		
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	Samp	Type: LC	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batcl	h ID: 35	330	F	RunNo: 4	7564				
Prep Date: 12/5/2017	Analysis D	Date: 12	2/6/2017	S	SeqNo: 1	519531	Units: %Re	C		
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	Samp1	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batcl	h ID: 35	319	F	RunNo: 4	7564				
Prep Date: 12/5/2017	Analysis E	Date: 12	2/6/2017	5	SeqNo: 1	519534	Units: mg/K	g		
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								
1,101,00,1000	ND	0.10								
Surr: 4-Bromofluorobenzene	0.87	0.10	1.000		86.6	80	120			
Surr: 4-Bromofluorobenzene	0.87 Samp1	Type: LC	1.000	Tes	86.6 tCode: El	80 PA Method	120 8021B: Volat	iles		
Surr: 4-Bromofluorobenzene Sample ID LCS-35319 Client ID: LCSS	0.87 SampT Batcl	Type: LC	1.000 S 319	Tes	86.6 tCode: El RunNo: 4	80 PA Method 7564	120 8021B: Volat	iles		
Surr: 4-Bromofluorobenzene Sample ID LCS-35319 Client ID: LCSS Prep Date: 12/5/2017	0.87 SampT Batcl Analysis E	Type: LC h ID: 35 Date: 12	1.000 S 319 2/6/2017	Tes F	86.6 tCode: El RunNo: 4 SeqNo: 1	80 PA Method 7564 519535	120 8021B: Volat Units: mg/K	iles g		
Surr: 4-Bromofluorobenzene Sample ID LCS-35319 Client ID: LCSS Prep Date: 12/5/2017 Analyte	0.87 SampT Batcl Analysis E Result	Type: LC h ID: 35 Date: 12 PQL	1.000 S 319 2/6/2017 SPK value	Tes F SPK Ref Val	86.6 tCode: El RunNo: 4 SeqNo: 1 %REC	80 PA Method 7564 519535 LowLimit	120 8021B: Volat Units: mg/K HighLimit	illes g %RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene Sample ID LCS-35319 Client ID: LCSS Prep Date: 12/5/2017 Analyte Benzene	0.87 SampT Batcl Analysis E Result 0.95	Fype: LC h ID: 35 Date: 12 PQL 0.025	1.000 S 319 2/6/2017 SPK value 1.000	Tes F SPK Ref Val 0	86.6 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3	80 PA Method 7564 519535 LowLimit 77.3	120 8021B: Volat Units: mg/K HighLimit 128	iles g %RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene Sample ID LCS-35319 Client ID: LCSS Prep Date: 12/5/2017 Analyte Benzene Toluene	0.87 SampT Batch Analysis E Result 0.95 0.95	Fype: LC h ID: 35 Date: 12 PQL 0.025 0.050	1.000 S 319 2/6/2017 SPK value 1.000 1.000	Tes F SPK Ref Val 0 0	86.6 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 94.9	80 PA Method 7564 519535 LowLimit 77.3 79.2	120 8021B: Volat Units: mg/K HighLimit 128 125	illes g %RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene Sample ID LCS-35319 Client ID: LCSS Prep Date: 12/5/2017 Analyte Benzene Toluene Ethylbenzene	Analysis E Result 0.95 0.94	Fype: LC h ID: 35: Date: 12 PQL 0.025 0.050 0.050	1.000 S 319 2/6/2017 SPK value 1.000 1.000 1.000	Tes F SPK Ref Val 0 0 0 0	86.6 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 94.9 93.8	80 PA Method 7564 519535 LowLimit 77.3 79.2 80.7	120 8021B: Volat Units: mg/K HighLimit 128 125 127	illes g %RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene Sample ID LCS-35319 Client ID: LCSS Prep Date: 12/5/2017 Analyte Benzene Toluene Ethylbenzene Xylenes, Total	Analysis D Result 0.95 0.95 0.94 2.8	Fype: LC h ID: 35: Date: 12 0.025 0.050 0.050 0.10	1.000 S 319 2/6/2017 SPK value 1.000 1.000 1.000 3.000	Tes F SPK Ref Val 0 0 0 0 0 0	86.6 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 94.9 93.8 94.6	80 PA Method 7564 519535 LowLimit 77.3 79.2 80.7 81.6	120 8021B: Volat Units: mg/K HighLimit 128 125 127 129	illes g %RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene Sample ID LCS-35319 Client ID: LCSS Prep Date: 12/5/2017 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	0.87 SampT Batcl Analysis E Result 0.95 0.95 0.94 2.8 0.87	Fype: LC h ID: 35: Date: 12 0.025 0.050 0.050 0.10	1.000 S 319 2/6/2017 SPK value 1.000 1.000 3.000 1.000	Tes F SPK Ref Val 0 0 0 0 0 0	86.6 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 94.9 93.8 94.6 86.9	80 PA Method 7564 519535 LowLimit 77.3 79.2 80.7 81.6 80	120 8021B: Volat Units: mg/K HighLimit 128 125 127 129 120	iles g %RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene Sample ID LCS-35319 Client ID: LCSS Prep Date: 12/5/2017 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID 1712109-001AMS	Analysis D Result 0.95 0.95 0.94 2.8 0.87	Fype: LC h ID: 35: Date: 12 0.025 0.050 0.050 0.10	1.000 S 319 2/6/2017 SPK value 1.000 1.000 3.000 1.000 3.000 1.000	Tes F SPK Ref Val 0 0 0 0 0 Tes	86.6 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 94.9 93.8 94.6 86.9 tCode: El	80 PA Method 7564 519535 LowLimit 77.3 79.2 80.7 81.6 80 PA Method	120 8021B: Volat Units: mg/K HighLimit 128 125 127 129 120 8021B: Volat	illes g %RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene Sample ID LCS-35319 Client ID: LCSS Prep Date: 12/5/2017 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID 1712109-001AMS Client ID: BH-3 2'-4'	Analysis E Result 0.95 0.95 0.94 2.8 0.87 SampT Batcl	Fype: LC h ID: 35: Date: 12 0.025 0.050 0.050 0.10 Fype: MS h ID: 35:	1.000 S 319 2/6/2017 SPK value 1.000 1.000 1.000 3.000 1.000 3.000 3.000 1.000	Tes F SPK Ref Val 0 0 0 0 0 Tes F	86.6 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 94.9 93.8 94.6 86.9 tCode: El RunNo: 4	80 PA Method 7564 519535 LowLimit 77.3 79.2 80.7 81.6 80 PA Method 7564	120 8021B: Volat Units: mg/K HighLimit 128 125 127 129 120 8021B: Volat	iles ig %RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene Sample ID LCS-35319 Client ID: LCSS Prep Date: 12/5/2017 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID 1712109-001AMS Client ID: BH-3 2'-4' Prep Date: 12/5/2017	Analysis D Batcl Analysis D Result 0.95 0.95 0.94 2.8 0.87 SampT Batcl Analysis D	Fype: LC h ID: 35: Date: 12 0.025 0.050 0.050 0.050 0.10 Type: MS h ID: 35: Date: 12	1.000 S 319 2/6/2017 SPK value 1.000 1.000 3.000 3.000 1.000 3.0000 3.00000 3.00000 3.00000 3.000000 3.00000 3.00000000 3.000	Tes F SPK Ref Val 0 0 0 0 0 Tes F S	86.6 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 94.9 93.8 94.6 86.9 tCode: El RunNo: 4 SeqNo: 1	80 PA Method 7564 519535 LowLimit 77.3 79.2 80.7 81.6 80 PA Method 7564 519540	120 8021B: Volat Units: mg/K HighLimit 128 125 127 129 120 8021B: Volat Units: mg/K	illes %RPD illes	RPDLimit	Qual
Surr: 4-Bromofluorobenzene Sample ID LCS-35319 Client ID: LCSS Prep Date: 12/5/2017 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID 1712109-001AMS Client ID: BH-3 2'-4' Prep Date: 12/5/2017 Analyte	Analysis D Result 0.95 0.95 0.94 2.8 0.87 SampT Batcl Analysis D Result	Fype: LC h ID: 35: Date: 12 0.025 0.050 0.050 0.050 0.10 Fype: MS h ID: 35: Date: 12 PQL	1.000 S 319 2/6/2017 SPK value 1.000 1.000 3.000 1.000 3.000 3.000 3.000 1.000 3.000 5.319 2/6/2017 SPK value	Tes F SPK Ref Val 0 0 0 0 0 Tes F SPK Ref Val	86.6 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 94.9 93.8 94.6 86.9 tCode: El RunNo: 4 SeqNo: 1 %REC	80 PA Method 7564 519535 LowLimit 77.3 79.2 80.7 81.6 80 PA Method 7564 519540 LowLimit	120 8021B: Volat Units: mg/K HighLimit 128 125 127 129 120 8021B: Volat Units: mg/K HighLimit	iles g %RPD iles ig %RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene Sample ID LCS-35319 Client ID: LCSS Prep Date: 12/5/2017 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID 1712109-001AMS Client ID: BH-3 2'-4' Prep Date: 12/5/2017 Analyte Benzene	Analysis D Result 0.95 0.95 0.94 2.8 0.87 SampT Batcl Analysis D Result 0.99	Fype: LC h ID: 35: Date: 12 0.025 0.050 0.050 0.050 0.10 Fype: MS h ID: 35: Date: 12 PQL 0.025	1.000 S 319 2/6/2017 SPK value 1.000 1.000 1.000 3.000 3.0000 3.0000 3.0000 3.0000 3.0000 3.0000 3.0000 3.0000 3.0000 3.0000 3.0000 3.0000 3.0000 3.0000 3.0000 3.00000 3.00000 3.00000 3.000000 3.000000000 3.0000000000	Tes 5 SPK Ref Val 0 0 0 0 0 Tes 5 SPK Ref Val 0.03957	86.6 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 94.9 93.8 94.6 86.9 tCode: El RunNo: 4 SeqNo: 1 %REC 96.5	80 PA Method 7564 519535 LowLimit 77.3 79.2 80.7 81.6 80 PA Method 7564 519540 LowLimit 80.9	120 8021B: Volat Units: mg/K HighLimit 128 125 127 129 120 8021B: Volat Units: mg/K HighLimit 132	iles g %RPD iles g %RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene Sample ID LCS-35319 Client ID: LCSS Prep Date: 12/5/2017 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID 1712109-001AMS Client ID: BH-3 2'-4' Prep Date: 12/5/2017 Analyte Benzene Toluene	Analysis D Result 0.95 0.95 0.94 2.8 0.87 SampT Batcl Analysis D Result 0.99 0.98	Fype: LC h ID: 35: Date: 12 0.025 0.050 0.050 0.050 0.10 Fype: MS h ID: 35: Date: 12 PQL 0.025 0.049	1.000 S 319 2/6/2017 SPK value 1.000 1.000 1.000 3.000 3.0000 3.00000 3.00000 3.00000 3.0000000 3.0000000000	Tes 5 SPK Ref Val 0 0 0 0 0 Tes F SPK Ref Val 0.03957 0	86.6 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 94.9 93.8 94.6 86.9 tCode: El RunNo: 4 SeqNo: 1 %REC 96.5 99.6	80 PA Method 7564 519535 LowLimit 77.3 79.2 80.7 81.6 80 PA Method 7564 519540 LowLimit 80.9 79.8	120 8021B: Volat Units: mg/K HighLimit 128 125 127 129 120 8021B: Volat Units: mg/K HighLimit 132 136	iles g %RPD iles g %RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene Sample ID LCS-35319 Client ID: LCSS Prep Date: 12/5/2017 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID 1712109-001AMS Client ID: BH-3 2'-4' Prep Date: 12/5/2017 Analyte Benzene Toluene Ethylbenzene	Analysis D Result 0.95 0.95 0.94 2.8 0.87 SampT Batch Analysis D Result 0.99 0.98 0.98	Fype: LC h ID: 35: Date: 12 0.025 0.050 0.050 0.050 0.050 0.10 Fype: MS h ID: 35: Date: 12 PQL 0.025 0.049 0.049	1.000 S 319 2/6/2017 SPK value 1.000 1.000 3.000 3.0000 3.00000 3.00000 3.00000 3.00000000 3.0000000000	Tes SPK Ref Val 0 0 0 0 0 0 0 5 FK Ref Val 0.03957 0 0 0	86.6 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 94.9 93.8 94.6 86.9 tCode: El RunNo: 4 SeqNo: 1 %REC 96.5 99.6 99.7	80 PA Method 7564 519535 LowLimit 77.3 79.2 80.7 81.6 80 PA Method 7564 519540 LowLimit 80.9 79.8 79.8 79.4	120 8021B: Volat Units: mg/K HighLimit 128 125 127 129 120 8021B: Volat Units: mg/K HighLimit 132 136 140	iles g %RPD iles g %RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene Sample ID LCS-35319 Client ID: LCSS Prep Date: 12/5/2017 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID 1712109-001AMS Client ID: BH-3 2'-4' Prep Date: 12/5/2017 Analyte Benzene Toluene Ethylbenzene Xylenes, Total	ND 0.87 Samp1 Batcl Analysis I Result 0.95 0.94 2.8 0.87 Samp1 Batcl Analysis I Result 0.95 0.94 2.8 0.87 Batcl Analysis I Result 0.99 0.98 0.98 3.2	Fype: LC h ID: 35: Date: 12 0.025 0.050 0.050 0.050 0.10 Type: MS h ID: 35: Date: 12 PQL 0.025 0.049 0.049 0.099	1.000 S 319 2/6/2017 SPK value 1.000 1.000 3.000 3.0000 3.0000 3.0000 3.0000 3.0000 3.0000 3.000000 3.0000 3.000	Tes F SPK Ref Val 0 0 0 0 0 0 5 F SPK Ref Val 0.03957 0 0 0.2630	86.6 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 94.9 93.8 94.6 86.9 tCode: El RunNo: 4 SeqNo: 1 %REC 96.5 99.6 99.7 98.3	80 PA Method 7564 519535 LowLimit 77.3 79.2 80.7 81.6 80 PA Method 7564 519540 LowLimit 80.9 79.8 79.8 79.4 78.5	120 8021B: Volat Units: mg/K HighLimit 128 125 127 129 120 8021B: Volat Units: mg/K HighLimit 132 136 140 142	illes %RPD illes g %RPD	RPDLimit	Qual

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank Е

Value above quantitation range

- Analyte detected below quantitation limits J
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

Page 27 of 29

WO#: 1712109 13-Dec-17

Hall Environmen	tal Analysis	Laboratory,	Inc.
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WO#: 1712109

13-Dec-17

Client: Williams **Project:** Kutz Gas Plan 1712109-001AMS TestCode: EPA Method 8021B: Volatiles Sample ID SampType: MS Client ID: RunNo: 47564 BH-3 2'-4' Batch ID: 35319 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 916 80 120 SampType: MSD Sample ID 1712109-001AMSD 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 SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result PQL LowLimit 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 20 Ethylbenzene 0.93 0.049 0.9823 0 94.3 79.4 140 5.95 0.098 20 Xylenes, Total 2.9 2.947 0.2630 90.4 78.5 142 8.05 0.90 0 0.9823 91.5 80 120 0 Surr: 4-Bromofluorobenzene 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 0.81 Surr: 4-Bromofluorobenzene 1.000 81.4 80 120 Sample ID LCS-35335 SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: Batch ID: 35335 LCSS RunNo: 47603 Prep Date: 12/5/2017 Analysis Date: 12/7/2017 SeqNo: 1521441 Units: %Rec %REC %RPD **RPDLimit** Analyte Result POL SPK value SPK Ref Val LowLimit HighLimit Qual 0.85 1.000 85.2 80 120

Surr: 4-Bromofluorobenzene

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- POL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 28 of 29

Hall	Environmer	ital Ana	lysis L	Laborat	tory, I	Inc.
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WO#: 1712109 13-Dec-17

Client: W	illiams									
Project: Ku	ıtz Gas Plan									
Sample ID rb	Samp	Туре: М	BLK	Tes	tCode: E	PA Method	8260: Volatile	es Short I	_ist	
Client ID: PBW	Bato	ch ID: A4	7582	F	RunNo: 4	7582				
Prep Date:	Analysis	Date: 1	2/6/2017	S	SeqNo: 1	519841	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-d	4 8.0		10.00		79.6	70	130			
Surr: 4-Bromofluorobenzer	ie 11		10.00		112	70	130			
Surr: Dibromofluoromethar	e 8.6		10.00		86.0	70	130			
Surr: Toluene-d8	10		10.00	in the second second	102	70	130			
Sample ID 100ng Ics	Samp	Type: LC	s	Tes	tCode: El	PA Method	8260: Volatile	s Short L	.ist	
Client ID: LCSW	Bato	h ID: A4	7582	F	RunNo: 4	7582				
Prep Date:	Analysis I	Date: 12	2/6/2017	S	SeqNo: 1	519842	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-de	4 7.9		10.00		79.1	70	130			
Surr: 4-Bromofluorobenzen	e 11		10.00		110	70	130			
Surr: Dibromofluoromethan	e 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.
- 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

Page 29 of 29

Detection Limit

HALL ENVIR ANALY LABOR	ONMENTAL SIS Atory	Hall Environmental A Albug TEL: 505-345-3975 F Website: www.hall	nalysi 4901 uerqu AX: 5 enviro	s Labor Hawkii e, NM 8 05-345 nmenta	ratory ns NE 87109 -4107 nl.com	S	am	ple Log-In Check List
Client Name:	WILLIAMS FOUR CORN	Work Order Number:	1712	109				RcptNo: 1
Received By: Completed By: Reviewed By:	Ashley Gallegos Anne Thome DDRS	12/2/2017 8:30:00 AM 12/4/2017 12:13:32 PM こ/ひҶ/ つ			4	Forme _	Hum	
Chain of Cust	ody							
1. Custody seal	s intact on sample bottles?		Yes			No		Not Present 🗹
2. Is Chain of C	ustody complete?		Yes	\checkmark		No		Not Present
3. How was the	sample delivered?		Cour	ier				
<u>Log In</u>								
4. Was an atter	npt made to cool the samples?	?	Yes			No		NA 🗆
5. Were all sam	ples received at a temperature	e of ≻0° C to 6.0°C	Yes			No [
6. Sample(s) in	proper container(s)?		Yes			No		
7. Sufficient san	nple volume for indicated test(s)?	Yes			No		
8. Are samples	(except VOA and ONG) proper	rly preserved?	Yes	\checkmark		No		
9. Was preserva	ative added to bottles?		Yes	\Box_{\cdot}		No	\checkmark	NA 🗌
10.VOA vials ha	ve zero headspace?		Yes			No		No VOA Vials 🗹
11. Were any sa	mple containers received brok	en?	Yes			No	V	# of preserved
12. Does paperw (Note discrep	ork match bottle labels? ancies on chain of custody)	·	Yes	\checkmark		No		for pH: (<2 or >12 unless noted)
13. Are matrices	correctly identified on Chain of	Custody?	Yes	\checkmark		No		Adjusted?
14. Is it clear what	at analyses were requested?		Yes			No		
15. Were all hold (If по, notify c	ing times able to be met? sustomer for authorization.)		Yes	\checkmark		No		Checked by:

Special Handling (if applicable)

Vas client notified of all o	discrepancies with this order?	Yes		No 🗌	NA 🗹
Person Notified:	TREFF CONSIGNOUS CONTRACTOR CONTRACTOR	Date		e.ch.ekster was belefteder	
By Whom:	Summer and the summary and the summer of the	Via: eMai	I D Phor	ne 🗌 Fax	In Person
Regarding:			MARCHINE & CONTRACTOR	hal Ad Antochal Manufacture A 200-214	
Client Instructions:				apartal da la la la la la la constante de la c	

.

17. Additional remarks:

18. Cooler Information

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

Page 1 of 1

Imme	MALL ENVIRONT MALL State MALL State MALL State MALL State Main NE No.	HALL ENVIRONMENTA MALYSIS LABORATON Www.hallenvironmental.com 4001 Hawkins NE - Albuquerque, NM 8709 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request Markysis Request BTEX + MTBE + TPH (Gas only) Tel. 505-345-3975 Fax 505-345-4107 Analysis Request Markysis Request Markysis Request TPH S015B (GRO / DRO / MRO) TPH (Method 418.1) EDB (Method 504.1) BTEX + MTBE + TPH (Gas only) Representation TPH Method 418.1) EDB (Method 504.1) PAH's (8310 or 8270 SIMS) RCRA 8 Metals Anions (F, CI, NO ₃ , NO ₂ , PO ₄ , SO ₄) Remarks: Marks: Marks: </th
Annu Kallenvironmental.co Anny Burn's Commy Burn's Comm	Analysis Repuest Aaron Galer Participation Analysis Caler Participation Analysis Repuest Analysis Repuest Analysi	Mart Mart Mart Strate Mart Strate
Analysis Analysis Remarks: Pice Se CC: Orgen of Se Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) BTEX Both and an anome of Se Both and anome of Se Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) BTEX Both and anome of Se Both and anome of Se Conserver Both and anome of Se Anomalysis Representation Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Both and anome of Se Both and anome of Se Both and anome of Se Both and anome of Se Both and anome of Se Both and anome of Se Both and anome of Se Both and anome of Se Both and anome of Se Both and anome of Se Both anome of Se Both and anome of Se Both anome of Se Both anome of Se Both anome of Se Bo	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) File Se CC: Oragen © Its	Antipysis Request Antipysis Req
HALL ENVIRONMENTAL CONTROL MALY SIS LAB	Image: Pice + C: BTEX + MTBE + TPH (Gas 01119) Image: Pice + C: Image: Pice +	ISPER + MITBE + TPH (Gas only) WWW.hallenvironmental.com MALY SIS CRO / DRO / MRO) MALY SIS CRO / DRO / MRO) Analysis Request Bitenv. C
ANALYSIS LAB WWW.hallenvironmental.com Analysis Request Analysis Request Analysi	Pice Se CC: Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Aburns (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) X 8260B (VOA) BTE _X Aburns (F,Cl,NO ₃) Kore Kore Kore	Analysis Request Analysis Request Analysis Request Analysis Request Analysis Request Analysis Request BOB (Method 504.1) PAH's (8310 or 8270 SIMS) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) 8081 Pesticides / 8082 PCB's 8260B (VOA) <u>BTEx</u> 8260B (VOA) <u>BTEx</u> 8270 (Semi-VOA) Aburns@ Itenv. com
Analysis RCRA 8 Metals Anions (F,Cl,NO3,NO2,PO4,SO4) 8081 Pesticides / 8082 PCB's Aburnse X	Analysis Request the conserved of the server of the serve	Analysis EDB (Method 504.1) Ins NE - Albuquerque, NM 87109 Fax 505-345-4107 Analysis Request PAH's (8310 or 8270 SIMS) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) RCRA 8 Metals Anions (F,CI,NO ₃ , NO ₂ ,PO ₄ ,SO ₄) RCRA 8 Metals Anions (F,CI,NO ₃ , RCRA 8 Metals RCRA 8 Metals Anions (F,CI,NO ₃ , RCRA 8 Metals RCRA 8 Metals Anions (F,CI,NO ₃ , RCRA 8 Metals RCRA 8 Metals
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C: Q RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Albuquerque, Nh Fax 505-345 Aburns & 8081 Pesticides / 8082 PCB's 8260B (VOA) BTEx	C: Qayer Q It	C: Case Constraints Constraint
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Phone	#: 8	01-58	4-6746	03	701 700 /			~				Ana	ysis	Req	ues					
email o	r Fax#: (aaron.	galer P. Williams com	Project Mana	iger:	ron Galler	21)	only	IRO				304)	S						
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			8	Type and #	Type	1712109	BTE	BTE	H	TPH	PAH	RCF 1	Anio	808	826(827(- 1 ^{- 1}	Air E
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	09:30	1	BH-5 18'-20'	1		011	X		X											
	04:50		BH-6. 13'-15'			-012	X		$\boldsymbol{\star}$											
	10:10		BH-6 18'-20'			73	x		X											
	10:40		BH-7 4'-6'			ON	X		X	ľ										Γ
	10:50		BH-7 181-201			-715	X		X											
	11:36		BH-8 71-10'			-016	X		×											
	11:45		BH-8 18'-20'			-717	X		x	·										
1	12:10		BH-9 7'-10'			815	x		x											
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	f necessary	en alac sub	mitted to Hall Environmental may be sub	contracted to other a	ccradited laboratori	as This serves as notice of this	s possi	bility		b-contra	acted da	ta will I	be clea	rly not	ated or	the a	natytics	al report		

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



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

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 <u>www.hallenvironmental.com</u> 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four CornersClient Sample ID: SP01Project:Kutz Canyon Gas Plant GCNM ROWCollection Date: 12/1/2017 1:15:00 PMLab ID:1712115-001Matrix: SOILReceived Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL Qua	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE					Analyst:	том
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 RANG	ε				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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 7
	ND	Not Detected at the Reporting Limit	Р	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 GCNM ROW

 Lab ID:
 1712115-002
 Matrix: SOIL

Client Sample ID: SP02 Collection Date: 12/1/2017 1:20:00 PM Received Date: 12/2/2017 8:30:00 AM

PQL Qual Units Analyses Result **DF** Date Analyzed Batch EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: TOM Diesel Range Organics (DRO) 1100 10 12/7/2017 1:50:15 PM 35365 91 mg/Kg Motor Oil Range Organics (MRO) 640 450 mg/Kg 10 12/7/2017 1:50:15 PM 35365 Surr: DNOP 70-130 %Rec 12/7/2017 1:50:15 PM 0 S 10 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 12/6/2017 12:40:35 PM 35320 mg/Kg 5 Toluene ND 0.25 12/6/2017 12:40:35 PM 35320 mg/Kg 5 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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method B	lank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 2 of 7
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	1 age 2 01 7
	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 CornersProject:Kutz Canyon Gas Plant GCNM ROWLab ID:1712115-003Matrix: SOIL

Client Sample ID: SP03 Collection Date: 12/1/2017 1:30:00 PM

Received Date: 12/2/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS					Analyst	том
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 RANG	GE					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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method	Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 3 of 7
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	1 age 5 01 7
	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	t as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners Project: Kutz Canyon Gas Plant GCNM ROW

1712115-004

Lab ID:

Client Sample ID: SP04 Collection Date: 12/1/2017 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	1			Analyst	том
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 RANG	E				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

Matrix: SOIL

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 of 7
	ND	Not Detected at the Reporting Limit	Р	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.

WO#: 1712115

08-Dec-17

chent: willian	is Four Corne	rs								
Project: Kutz Ca	anyon Gas Pla	ant GC	CNM ROW							
Sample ID LCS-35365	SampTy	pe: LC	S	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batch	D: 35	365	F	RunNo: 4	7518				
Prep Date: 12/6/2017	Analysis Da	te: 12	2/7/2017	S	SeqNo: 1	520345	Units: mg/k	(g		
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			
					and the second se		And the second se	the second s	the second s	and the second se
Sample ID MB-35365	SampTy	pe: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Range	e Organics	
Sample ID MB-35365 Client ID: PBS	SampTy Batch	pe: ME	3LK 365	Tes	tCode: El	PA Method 7518	8015M/D: Di	esel Range	e Organics	
Sample ID MB-35365 Client ID: PBS Prep Date: 12/6/2017	SampTy Batch I Analysis Da	pe: ME D: 35 te: 12	3LK 365 2/7/2017	Tes R S	tCode: El RunNo: 4 SeqNo: 1	PA Method 7518 520346	8015M/D: Die Units: mg/K	esel Range	e Organics	
Sample ID MB-35365 Client ID: PBS Prep Date: 12/6/2017 Analyte	SampTy Batch I Analysis Da Result	pe: ME D: 35 te: 12 PQL	3LK 365 2/7/2017 SPK value	Tes R S SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC	PA Method 7518 520346 LowLimit	8015M/D: Die Units: mg/K HighLimit	esel Rango (g %RPD	e Organics	Qual
Sample ID MB-35365 Client ID: PBS Prep Date: 12/6/2017 Analyte Diesel Range Organics (DRO)	SampTy Batch Analysis Da Result ND	pe: ME D: 35 te: 12 PQL 10	3LK 365 2/7/2017 SPK value	Tes R S SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC	PA Method 7518 520346 LowLimit	8015M/D: Die Units: mg/K HighLimit	esel Rango Kg %RPD	e Organics	Qual
Sample ID MB-35365 Client ID: PBS Prep Date: 12/6/2017 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)	SampTy Batch I Analysis Da Result ND ND	pe: ME D: 35 te: 12 PQL 10 50	BLK 365 2/7/2017 SPK value	Tes F S SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC	PA Method 7518 520346 LowLimit	8015M/D: Die Units: mg/K HighLimit	esel Rango (g %RPD	e Organics	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL **Reporting Detection Limit**
- Sample container temperature is out of limit as specified W
- Page 5 of 7

Hall Environmenta	l Analysis	Laboratory,	Inc.
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WO#: 1712115

08-Dec-17

Client: William	s Four Corr	ners								
Project: Kutz Ca	inyon Gas P	lant GC	NM ROW							
Sample ID MB-35320	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID: PBS	Batch	n ID: 35	320	F	RunNo: 4	7565				
Prep Date: 12/5/2017	Analysis D	Date: 12	2/6/2017	5	SeqNo: 1	519555	Units: mg/k	۲g		
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	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID: LCSS	Batch	n ID: 35	320	F	RunNo: 4	7565				
Prep Date: 12/5/2017	Analysis D	Date: 12	2/6/2017	5	SeqNo: 1	519556	Units: mg/h	٢g		
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.
- Sample Diluted Due to Matrix D
- Н 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
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- W Sample container temperature is out of limit as specified

Page 6 of 7

RL Reporting Detection Limit

Hall Environmental	Analysis	Laboratory, Inc.	
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Client: Willia	ms Four Corr	ners								
Project: Kutz (Canyon Gas P	lant GC	CNM ROW							
Sample ID MB-35320	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch	n ID: 35	320	F	RunNo: 4	7565				
Prep Date: 12/5/2017	Analysis D	ate: 12	2/6/2017	S	SeqNo: 1	519593	Units: mg/K	g		
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	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batch	n ID: 35	320	F	RunNo: 4	7565				
Prep Date: 12/5/2017	Analysis D	ate: 12	2/6/2017	S	SeqNo: 1	519594	Units: mg/K	g		
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.
- 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

Page 7 of 7

WO#: 1712115

08-Dec-17

HALL ENVIR ANAL LABOR	CONMENTAL YSIS RATORY	Hall Environmental A Albu TEL: 505-345-3975 Website: www.hal	Analysis Labora 4901 Hawkins guerque, NM 87 FAX: 505-345-4 lenvironmental.	tory 8 NE 7109 Sam 9107 com	ple 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		A	
Reviewed By:	DDS	12/04/17		anne Som	
Chain of Cus	tody				
1 Custody sea	Is intact on sample bottles?		Yes	No 🗌	Not Present
2. Is Chain of C	Custody complete?		Yes 🔽	No 🗌	Not Present
3. How was the	sample delivered?		Courier		
Log In					
4. Was an atte	mpt made to cool the sample	88?	Yes 🗹	No 🗌	
5. Were all san	nples received at a temperatu	ure of >0° C to 6.0°C	Yes 🗹	No 🗌	
6. Sample(s) in	n proper container(s)?		Yes 🗹	No 🗌	
7. Sufficient sa	mple volume for indicated tes	st(s)?	Yes 🗹	No 🗆	
8. Are samples	(except VOA and ONG) prop	perly preserved?	Yes 🗹	No 🗌	
9. Was preserv	vative added to bottles?		Yes	No 🖌	NA
10.VOA vials ha	ave zero headspace?		Yes	No 🗌	No VOA Vials
11. Were any sa	ample containers received bro	oken?	Yes	No 🗹	# of preserved
12. Does paperw (Note discret	vork match bottle labels? pancies on chain of custody)		Yes 🗹	No 🗆	for pH: (<2 or >12 unless noted)
13. Are matrices	correctly identified on Chain	of Custody?	Yes 🗹	No 🗆	Adjusted?
14. Is it clear wh	at analyses were requested?		Yes 🗹	No 🗌	
15. Were all hold (If no, notify of	ling times able to be met? customer for authorization.)		Yes 🗹	No 🗌	Checked by:
Special Hand	ling (if applicable)				

16. Was client notified of all di	screpancies with this order?	Yes	_ ·	No 🗌	NA 🗹
Person Notified:	and an excellent and the foreign and the second second second second second second second second	Date	ana	and a second state of the	
By Whom:	débéhéhéhénenesessessessessessessessessessessesses	Via: eMai	I 🗌 Phon	e 🗌 Fax	in Person
Regarding:	nden senera da antigen de la servicio de la desta de la desta da de la seconda de la desta de la desta de la d	A AL AL ANY THE OTHER STREAM AND A MELAL AN ON APOLO	A STATEMENT		ANALACINAL ALIAN DESILATION DESILATION DESILATION DESILATION
Client Instructions:					

17. Additional remarks:

18. Cooler Information

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

Page 1 of 1

С	hain	of-Cu	stody Record	Turn-Around	Time:					-										
Client:	Willie	ums 1	Four Corners LLC	Standard	C Rush			1					E		IR S I					
Λ		C 1		Project Name	e:	C-CNTM		кŢ				AL		913	» I.,	PAL		KA	10	R I
Mailing	Address	: 1JICS	A No	Kutz (Lanyon G	as Plant ROW		10			wwv	v.hal	lenv	rironr	nent	al.co)m			
	81	1110	ATTOYO DE	Project #:				49		awki	ns N	NE -	AID	ouque	erque	e, Nr	VI 87	109		
	DIOGN	thelor	NA STID					16	el. 50	15-34	5-3	9/5	ł	ax	505-	345-	4107			des la
Phone #	# :		1 0 "					0				А	nary	/SIS	Req	uest			4	
email or	Fax#:	aaron.	galer @williams.com	Project Mana	ger:	Te	(yIng	8					04)	0					
QA/QC F	Package:			Danny C	ownas - L		802	as c	N			(S		04rS	B					
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Accredi	tation			Sampler: D	Burns		H	Hd	0	÷	=	70		ş	308					1
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Date	Time	Matrix	Sample Request ID	Container	Preservative	HEAL No.		+	80	Š	Š	s (8	A 8) su	. ď	B	(S			n pp
				Type and #	туре	1713115		E	HH	H	8	AH	CR	nio	081	260	270			-i-
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lf	1		mental may be subc	contracted to other ad	celediled laboratorie	s. This serves as notice of this	possil	bility.	Any su	ub-cont	racted	d data	will be	e clear	y nota	ted on	the an	alytical	report.	
				2.12.20	<i></i>															



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

November 16, 2017

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

OrderNo.: 1711647

Dear Danny Burns:

RE: Kutz Gas Plant

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 <u>www.hallenvironmental.com</u> 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Date Reported: 11/16/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners

Kutz Gas Plant

1711647-001

Project:

Lab ID:

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	10	0 11/15/2017 10:12:50 AM	1 R47167
Bromide	13	0.50		mg/L	5	11/14/2017 3:54:47 PM	R47134
Phosphorus, Orthophosphate (As P)	ND	2.5	Н	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:	том
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 RANG	E					Analyst:	NSB
Gasoline Range Organics (GRO)	5.2	0.050	Р	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	Р	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	Р	µg/L	1	11/14/2017 5:33:00 AM	A47088
Methyl tert-butyl ether (MTBE)	ND	1.0	Р	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,2,4-Trimethylbenzene	11	1.0	Р	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,3,5-Trimethylbenzene	10	1.0	Ρ	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,2-Dichloroethane (EDC)	ND	1.0	Ρ	µg/L	1	11/14/2017 5:33:00 AM	A47088
1,2-Dibromoethane (EDB)	ND	1.0	Ρ	µg/L	1	11/14/2017 5:33:00 AM	A47088
Naphthalene	ND	2.0	Ρ	µg/L	1	11/14/2017 5:33:00 AM	A47088
1-Methylnaphthalene	ND	4.0	Ρ	µg/L	1	11/14/2017 5:33:00 AM	A47088
2-Methylnaphthalene	ND	4.0	Ρ	µg/L	1	11/14/2017 5:33:00 AM	A47088
Acetone	25	10	Ρ	µg/L	1	11/14/2017 5:33:00 AM	A47088
Bromobenzene	ND	1.0	Ρ	µg/L	1	11/14/2017 5:33:00 AM	A47088
Bromodichloromethane	ND	1.0	Ρ	µg/L	1	11/14/2017 5:33:00 AM	A47088
Bromoform	ND	1.0	Ρ	µg/L	1	11/14/2017 5:33:00 AM	A47088
Bromomethane	ND	3.0	Ρ	µg/L	1	11/14/2017 5:33:00 AM	A47088
2-Butanone	ND	10	Ρ	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

Matrix: AQUEOUS

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 18
	ND	Not Detected at the Reporting Limit	Р	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

Date Reported: 11/16/2017

11/14/2017 5:33:00 AM A47088

CLIENT: Williams Four Corners Client Sample ID: Seep North of Flare Collection Date: 11/9/2017 5:00:00 PM **Project:** Kutz Gas Plant Lab ID: 1711647-001 Matrix: AQUEOUS Received Date: 11/11/2017 10:26:00 AM **POL Qual Units DF** Date Analyzed Batch Analyses Result EPA METHOD 8260B: VOLATILES Analyst: RAA ND Ρ 11/14/2017 5:33:00 AM A47088 Carbon Tetrachloride 1.0 µg/L 1 Chlorobenzene ND 1.0 Ρ µg/L 1 11/14/2017 5:33:00 AM A47088 Chloroethane ND 2.0 Ρ 1 11/14/2017 5:33:00 AM A47088 µg/L Ρ ND 1 11/14/2017 5:33:00 AM A47088 Chloroform 1.0 µg/L ND 3.0 Ρ 1 11/14/2017 5:33:00 AM A47088 Chloromethane µg/L 2-Chlorotoluene ND 1.0 Ρ 11/14/2017 5:33:00 AM A47088 µg/L 1 1.0 4-Chlorotoluene ND Ρ µg/L 1 11/14/2017 5:33:00 AM A47088 cis-1,2-DCE ND 1.0 Ρ µg/L 1 11/14/2017 5:33:00 AM A47088 cis-1,3-Dichloropropene ND 1.0 Ρ µg/L 1 11/14/2017 5:33:00 AM A47088 2.0 Ρ 1,2-Dibromo-3-chloropropane ND µg/L 1 11/14/2017 5:33:00 AM A47088 P Dibromochloromethane ND 1.0 µg/L 1 11/14/2017 5:33:00 AM A47088 Ρ Dibromomethane ND 1.0 11/14/2017 5:33:00 AM A47088 µg/L 1 Ρ 1,2-Dichlorobenzene ND 1.0 µg/L 1 11/14/2017 5:33:00 AM A47088 P 1,3-Dichlorobenzene ND 1.0 µg/L 1 11/14/2017 5:33:00 AM A47088 P ND 1.0 1 1.4-Dichlorobenzene µg/L 11/14/2017 5:33:00 AM A47088 Ρ Dichlorodifluoromethane ND 1.0 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 ND 1.0 P 1,1-Dichloroethene µg/L 1 11/14/2017 5:33:00 AM A47088 1,2-Dichloropropane ND 1.0 Ρ 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 Ρ 1 11/14/2017 5:33:00 AM A47088 µg/L 1,1-Dichloropropene ND 1.0 Ρ 11/14/2017 5:33:00 AM A47088 µg/L 1 Hexachlorobutadiene ND 1.0 Ρ 11/14/2017 5:33:00 AM A47088 µg/L 1 ND Ρ 2-Hexanone 10 µg/L 1 11/14/2017 5:33:00 AM A47088 Isopropylbenzene 1.0 Ρ ND µg/L 1 11/14/2017 5:33:00 AM A47088 4-Isopropyltoluene ND 10 Ρ µg/L 1 11/14/2017 5:33:00 AM A47088 4-Methyl-2-pentanone ND 10 Ρ µg/L 1 11/14/2017 5:33:00 AM A47088 Methylene Chloride ND 3.0 Ρ µg/L 1 11/14/2017 5:33:00 AM A47088 11/14/2017 5:33:00 AM A47088 n-Butylbenzene ND 3.0 P µg/L 1 n-Propylbenzene ND 1.0 Ρ µg/L 1 11/14/2017 5:33:00 AM A47088 sec-Butylbenzene ND 1.0 Ρ µg/L 1 11/14/2017 5:33:00 AM A47088 Styrene ND 1.0 Ρ µg/L 1 11/14/2017 5:33:00 AM A47088 P tert-Butylbenzene ND 1.0 1 11/14/2017 5:33:00 AM A47088 µg/L 1,1,1,2-Tetrachloroethane ND 1.0 Ρ 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 11/14/2017 5:33:00 AM A47088 µg/L 1 trans-1,2-DCE Ρ ND 1.0 µg/L 1 11/14/2017 5:33:00 AM A47088 Ρ trans-1,3-Dichloropropene ND 1.0 µg/L 1 11/14/2017 5:33:00 AM A47088

Hall Environmental Analysis Laboratory, Inc.

1,2,3-Trichlorobenzene

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

1.0

Ρ

µg/L

1

ND

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 18
	ND	Not Detected at the Reporting Limit	Р	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	Client Sample ID: Seep North of Flare Collection Date: 11/9/2017 5:00:00 PM								
Lab ID: 1711647-001	Matrix:	AQUEOU	S	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	Ρ	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		

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 18
	ND	Not Detected at the Reporting Limit	Р	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

Date Reported: 11/16/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners

Project: Kutz Gas Plant

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

Lab ID: 1711647-002	Matrix:	AQUEOU	JS	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	i -	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	Н	mg/L	5	11/14/2017 4:19:36 PM	R47134		
Sulfate	74	2.5	1	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 RANG	ε					Analyst	том		
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 RAN	GE					Analyst	NSB		
Gasoline Range Organics (GRO)	240	5.0		ma/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		ua/L	1E	11/14/2017 6:30:00 PM	R47131		
Toluene	40000	1000		ua/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	li -	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	1	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		

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 of 18
	ND	Not Detected at the Reporting Limit	Р	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

Date Reported: 11/16/2017

CLIENT: Williams Four Corners Client Sample ID: API Water Outlet Kutz Gas Plant Collection Date: 11/9/2017 5:15:00 PM **Project:** Matrix: AQUEOUS Received Date: 11/11/2017 10:26:00 AM Lab ID: 1711647-002 Result **PQL** Qual Units **DF** Date Analyzed Batch Analyses EPA METHOD 8260B: VOLATILES Analyst: RAA Carbon Tetrachloride ND 50 11/14/2017 5:57:00 AM A47088 µg/L 50 ND Chlorobenzene 50 µg/L 50 11/14/2017 5:57:00 AM A47088 100 11/14/2017 5:57:00 AM A47088 Chloroethane ND µg/L 50 ND 11/14/2017 5:57:00 AM A47088 Chloroform 50 50 µg/L Chloromethane ND 150 µg/L 50 11/14/2017 5:57:00 AM A47088 11/14/2017 5:57:00 AM A47088 2-Chlorotoluene ND 50 µg/L 50 4-Chlorotoluene ND 50 50 11/14/2017 5:57:00 AM A47088 µg/L 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 50 11/14/2017 5:57:00 AM A47088 µg/L Dibromochloromethane ND 50 µg/L 50 11/14/2017 5:57:00 AM A47088 Dibromomethane ND 50 50 11/14/2017 5:57:00 AM A47088 µg/L 1,2-Dichlorobenzene ND 50 50 11/14/2017 5:57:00 AM A47088 µg/L 1,3-Dichlorobenzene ND 50 µg/L 50 11/14/2017 5:57:00 AM A47088 1.4-Dichlorobenzene ND 50 50 11/14/2017 5:57:00 AM A47088 µg/L 50 Dichlorodifluoromethane ND 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 50 11/14/2017 5:57:00 AM A47088 µg/L 1,3-Dichloropropane ND 50 50 11/14/2017 5:57:00 AM A47088 µg/L 2,2-Dichloropropane ND 100 50 11/14/2017 5:57:00 AM A47088 µg/L ND 1,1-Dichloropropene 50 50 11/14/2017 5:57:00 AM A47088 µg/L Hexachlorobutadiene ND 50 50 11/14/2017 5:57:00 AM A47088 µg/L 2-Hexanone ND 500 50 11/14/2017 5:57:00 AM A47088 µg/L Isopropylbenzene 64 50 11/14/2017 5:57:00 AM A47088 µg/L 50 4-Isopropyltoluene ND 50 50 11/14/2017 5:57:00 AM A47088 µg/L 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 ND 50 sec-Butylbenzene 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 50 11/14/2017 5:57:00 AM A47088 µg/L 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 ND 11/14/2017 5:57:00 AM A47088 trans-1,3-Dichloropropene 50 µg/L 50 1,2,3-Trichlorobenzene ND 50 µg/L 50 11/14/2017 5:57:00 AM A47088

Hall Environmental Analysis Laboratory, Inc.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 5 of 18
	ND	Not Detected at the Reporting Limit	Р	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

Date Reported: 11/16/2017

50 11/14/2017 5:57:00 AM A47088

50 11/14/2017 5:57:00 AM A47088

CLIENT: Williams Four Corners Client Sample ID: API Water Outlet **Project:** Kutz Gas Plant Collection Date: 11/9/2017 5:15:00 PM 1711647-002 Matrix: AQUEOUS Received Date: 11/11/2017 10:26:00 AM Lab ID: Analyses Result **PQL** Qual Units **DF** Date Analyzed Batch EPA METHOD 8260B: VOLATILES Analyst: RAA ND 50 11/14/2017 5:57:00 AM A47088 1,2,4-Trichlorobenzene 50 µg/L ND 50 11/14/2017 5:57:00 AM A47088 1,1,1-Trichloroethane µg/L 50 1,1,2-Trichloroethane ND 50 50 11/14/2017 5:57:00 AM A47088 µg/L 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 50 11/14/2017 5:57:00 AM A47088 µg/L 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

70-130

70-130

%Rec

%Rec

106

101

Hall Environmental Analysis Laboratory, Inc.

Surr: Dibromofluoromethane

Surr: Toluene-d8

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 6 of 18
	ND	Not Detected at the Reporting Limit	Р	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

11/14/2017 6:53:00 PM R47131

CLIENT: Williams Four Corners Client Sample ID: Pipeline Trench Water Collection Date: 11/9/2017 5:30:00 PM **Project:** Kutz Gas Plant Lab ID: 1711647-003 Matrix: AQUEOUS Received Date: 11/11/2017 10:26:00 AM **DF** Date Analyzed Result **POL Qual Units** Analyses Batch **EPA METHOD 300.0: ANIONS** Analyst: MRA Fluoride ND 0.50 11/14/2017 5:09:15 PM R47134 mg/L 5 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 20 11/14/2017 5:21:39 PM R47134 Н mg/L 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 11/15/2017 2:37:28 PM 34982 mg/L 10 10 34982 Magnesium 140 10 11/15/2017 2:37:28 PM mg/L Potassium 3.2 1.0 mg/L 1 11/15/2017 2:35:40 PM 34982 11/15/2017 4:01:09 PM 34982 Sodium 2800 50 mg/L 50 EPA METHOD 8015M/D: DIESEL RANGE Analyst: TOM Diesel Range Organics (DRO) 1.3 1.0 11/15/2017 2:49:48 PM 34994 mg/L 1 Motor Oil Range Organics (MRO) ND 11/15/2017 2:49:48 PM 34994 50 mg/L 1 Surr: DNOP 11/15/2017 2:49:48 PM 34994 101 77.5-161 %Rec 1 EPA METHOD 8015D: GASOLINE RANGE Analyst: NSB Gasoline Range Organics (GRO) ND 11/13/2017 5:15:12 PM G47078 0.050 mg/L 1 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 1 11/14/2017 6:53:00 PM R47131 µg/L 2.0 ND Naphthalene 11/14/2017 6:53:00 PM R47131 µg/L 1 1-Methylnaphthalene ND 4.0 µg/L 1 11/14/2017 6:53:00 PM R47131 2-Methylnaphthalene ND 11/14/2017 6:53:00 PM R47131 4.0 µg/L 1 Acetone 23 10 11/14/2017 6:53:00 PM R47131 µg/L 1 ND Bromobenzene 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 1 11/14/2017 6:53:00 PM R47131 µg/L 2-Butanone ND 10 µg/L 1 11/14/2017 6:53:00 PM R47131

Hall Environmental Analysis Laboratory, Inc.

Carbon disulfide

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

10

µg/L

1

ND

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 7 of 18
	ND	Not Detected at the Reporting Limit	Р	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 Sample ID: Pipeline Trench Water **CLIENT:** Williams Four Corners Collection Date: 11/9/2017 5:30:00 PM **Project:** Kutz Gas Plant Lab ID: 1711647-003 Matrix: AQUEOUS 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 11/14/2017 6:53:00 PM R47131 µq/L 1 Chlorobenzene ND 1.0 1 11/14/2017 6:53:00 PM R47131 µg/L 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 ND 3.0 Chloromethane 1 11/14/2017 6:53:00 PM R47131 µg/L 2-Chlorotoluene ND 1.0 µg/L 1 11/14/2017 6:53:00 PM R47131 4-Chlorotoluene ND 1.0 1 11/14/2017 6:53:00 PM R47131 µg/L ND cis-1,2-DCE 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 11/14/2017 6:53:00 PM R47131 µg/L 1 11/14/2017 6:53:00 PM R47131 ND 1.0 1,3-Dichlorobenzene µg/L 1 1,4-Dichlorobenzene ND 1.0 1 11/14/2017 6:53:00 PM R47131 µg/L Dichlorodifluoromethane ND 1.0 1 11/14/2017 6:53:00 PM R47131 µg/L 1,1-Dichloroethane ND 1.0 1 11/14/2017 6:53:00 PM R47131 µg/L 1,1-Dichloroethene ND 1.0 1 11/14/2017 6:53:00 PM R47131 µg/L 1,2-Dichloropropane ND 1.0 1 11/14/2017 6:53:00 PM R47131 µg/L 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 1 11/14/2017 6:53:00 PM R47131 µg/L 2-Hexanone ND 10 1 11/14/2017 6:53:00 PM R47131 µg/L 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 1 11/14/2017 6:53:00 PM R47131 µg/L 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 1 11/14/2017 6:53:00 PM R47131 µg/L sec-Butylbenzene ND 1.0 µg/L 1 11/14/2017 6:53:00 PM R47131 Styrene ND 1.0 11/14/2017 6:53:00 PM R47131 µg/L 1 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 1 11/14/2017 6:53:00 PM R47131 µg/L trans-1,3-Dichloropropene ND 1.0 1 11/14/2017 6:53:00 PM R47131 µg/L 1,2,3-Trichlorobenzene ND 1.0 1 11/14/2017 6:53:00 PM R47131 µg/L

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

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 8 of 18
	ND	Not Detected at the Reporting Limit	Р	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

11/14/2017 6:53:00 PM R47131

Hall Environmental Analysis Laboratory, Inc.

Surr: Toluene-d8

CLIENT: Williams Four Corners	rs Client Sample ID: Pipeline Trench Water											
Project: Kutz Gas Plant			Collection	Date: 11	/9/2017 5:30:00 PM)17 5:30:00 PM						
Lab ID: 1711647-003	Matrix:	AQUEOUS	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						

70-130

%Rec

1

96.9

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 9 of 18
	ND	Not Detected at the Reporting Limit	Р	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.

Williams Four Corners

Project:	Kutz Gas	s Plant										
Sample ID	MB-34982	SampT	ype: ME	BLK	TestCode: EPA Method 200.7: Metals							
Client ID:	PBW	Batch	1D: 34	982	R	RunNo: 4	7156					
Prep Date:	11/14/2017	Analysis D	ate: 1	1/15/2017	S	SeqNo: 1	504301	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: 34	982	RunNo: 47156							
Prep Date:		Analysis D	ate: 11	1/15/2017	S	eqNo: 1	504302	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			1.0	0 5000	0	102	50	150				
otaoorann		ND	1.0	0.5000	0	102	50	100				
Sodium		ND ND	1.0 1.0	0.5000	0	102	50	150				_
Sodium Sample ID	LCS-34982	ND ND SampT	1.0 1.0 ype: LC	0.5000 0.5000	0 0 Test	107 107	50 50 PA Method	150 200.7: Metals				-
Sample ID Client ID:	LCS-34982 LCSW	ND ND SampT Batch	1.0 1.0 ype: LC	0.5000 0.5000 S 982	0 0 Test	102 107 Code: EF	50 PA Method 7156	150 200.7: Metals				

Thep Date. Thirty 2	Analysis	Date.	1/13/2017		require.	004303	onits. 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:

Client:

- * 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

Page 10 of 18

WO#: 1711647 16-Nov-17

QC	SUMMARY REPOR	Т	
Hall	Environmental Analysis	Laboratory,	Inc.

Williams Four Corners

Project: Kutz Ga	s Plant									
Sample ID MB	Samp	Type: ml	blk	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	Samp	SampType: Ics TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batc	h ID: R4	7134	F	RunNo: 4	7134				
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	SampT	ype: ml	olk	Tes	tCode: El	PA Method	300.0: Anion	S		
Client ID: PBW	Batcl	h ID: R4	7167	F	RunNo: 4	7167				
Prep Date:	Analysis E	Date: 11	1/15/2017	S	SeqNo: 1	504645	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: Ics TestCode: EPA Method 300.0: Anions									
Client ID: LCSW	Batch ID: R47167			RunNo: 47167						
Prep Date:	Analysis D	ate: 11	1/15/2017	5	SeqNo: 1	504646	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:

Client:

- * 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

Page 11 of 18

- P Sample pH Not In RangeRL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

WO#: 1711647 16-Nov-17

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1711647

16-Nov-17

Client: William	ms Four Corr	ners								
Project: Kutz C	Gas Plant									
Sample ID LCS-34994 SampType: LCS				TestCode: EPA Method 8015M/D: Diesel Range						
Client ID: LCSW	Batch	n ID: 34	994	F	RunNo: 4	7146				
Prep Date: 11/14/2017	Analysis D	ate: 1	1/15/2017	5	SeqNo: 1	504200	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	34994 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range									
Client ID: PBW	Batch	Batch ID: 34994 RunNo: 4714				7146				
Prep Date: 11/14/2017	Analysis D	ate: 1	1/15/2017	5	SeqNo: 1	504201	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.
- 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
- Page 12 of 18
WO#: 1711647

16-Nov-17

Client:	Williams	Four Corr	ners								
Project:	Kutz Gas	Plant									
Sample ID	RB	SampT	vpe: MI	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	PBW	Batch	n ID [.] G4	17078	F	RunNo: 4	7078		5		
Prep Date:		Analysis D	ate: 1	1/13/2017		SeaNo: 1	502249	Units: ma/L			
Analyte		Desett	DOI	0.001/					~	DDDI	01
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	22	0.050	20.00		115	60.2	150			
SUIT. DED		23		20.00		115	09.3	150			
Sample ID	2.5UG GRO LCS	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Gasol	line Rang	e	
Client ID:	LCSW	Batch	n ID: G4	7078	F	RunNo: 4	7078				
Prep Date:		Analysis D	ate: 1	1/13/2017	S	SeqNo: 1	502250	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	0.53	0.050	0.5000	0	107	75.8	123			
0 000											
Sull: BEB		25		20.00		126	69.3	150			
Surr: BFB	1711647-001BMS	25 SampT	ype: MS	20.00	Tes	126 tCode: El	69.3 PA Method	150 8015D: Gasol	line Rang	6	
Sample ID Client ID:	1711647-001BMS Seep North of Flar	25 SampT e Batch	ype: MS	20.00 S	Tes	126 tCode: El RunNo: 4	69.3 PA Method 7078	150 8015D: Gasol	line Rang	e	
Sample ID Client ID: Prep Date:	1711647-001BMS Seep North of Flar	25 SampT e Batch Analysis D	ype: M ID: G 4	20.00 S 17078 1/13/2017	Tesi R S	126 tCode: El RunNo: 4 SeqNo: 1	69.3 PA Method 7078 502258	150 8015D: Gasol Units: mg/L	line Rang	e	
Sample ID Client ID: Prep Date: Analyte	1711647-001BMS Seep North of Flar	25 SampT e Batch Analysis D Result	ype: Ms ID: G4 Pate: 1 ⁴	20.00 5 17078 1/13/2017 SPK value	Tesi R S SPK Ref Val	126 tCode: El RunNo: 4 SeqNo: 1 %REC	69.3 PA Method 7078 502258 LowLimit	150 8015D: Gasol Units: mg/L HighLimit	line Rang %RPD	e RPDLimit	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang	1711647-001BMS Seep North of Flar	25 SampT e Batch Analysis D <u>Result</u> 5.7	ype: MS DID: G4 Date: 1 PQL 0.050	20.00 5 17078 1/13/2017 SPK value 0.5000	Tesi R S SPK Ref Val 5.201	126 tCode: El RunNo: 4 SeqNo: 1 %REC 103	69.3 PA Method 7078 502258 LowLimit 52.5	150 8015D: Gasol Units: mg/L HighLimit 149	line Rang %RPD	e RPDLimit	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB	1711647-001BMS Seep North of Flar ge Organics (GRO)	25 SampT e Batch Analysis D Result 5.7 26	Type: MS n ID: G4 Pate: 14 PQL 0.050	20.00 5 77078 1/13/2017 SPK value 0.5000 20.00	Tes R SPK Ref Val 5.201	126 tCode: El RunNo: 4 SeqNo: 1 %REC 103 131	69.3 PA Method 7078 502258 LowLimit 52.5 69.3	150 8015D: Gasol Units: mg/L HighLimit 149 150	line Rang %RPD	e RPDLimit	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID	1711647-001BMS Seep North of Flar ge Organics (GRO) 1711647-001BMSD	25 SampT e Batch Analysis D Result 5.7 26 SampT	ype: MS 1D: G4 vate: 1' PQL 0.050	20.00 3 47078 4/13/2017 SPK value 0.5000 20.00 3D	Tesi R SPK Ref Val 5.201 Tesi	126 tCode: El RunNo: 4 SeqNo: 1 %REC 103 131 tCode: El	69.3 PA Method 7078 502258 LowLimit 52.5 69.3 PA Method	150 8015D: Gasol Units: mg/L HighLimit 149 150 8015D: Gasol	line Rang %RPD	e RPDLimit	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID:	1711647-001BMS Seep North of Flar ge Organics (GRO) 1711647-001BMSD Seep North of Flar	25 SampT e Batch Analysis D Result 5.7 26 SampT e Batch	ype: MS a ID: G4 pate: 14 PQL 0.050	20.00 5 77078 1/13/2017 SPK value 0.5000 20.00 SD 77078	Tesi R SPK Ref Val 5.201 Tesi R	126 tCode: El RunNo: 4 SeqNo: 1 %REC 103 131 tCode: El RunNo: 4	69.3 PA Method 7078 502258 LowLimit 52.5 69.3 PA Method 7078	150 8015D: Gasol Units: mg/L HighLimit 149 150 8015D: Gasol	NRPD	e RPDLimit e	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date:	1711647-001BMS Seep North of Flar ge Organics (GRO) 1711647-001BMSD Seep North of Flar	25 SampT e Batch Analysis D Result 5.7 26 SampT e Batch Analysis D	ype: MS o ID: G4 pate: 11 PQL 0.050 ype: MS ype: MS DID: G4 pate: 11	20.00 3 1/13/2017 SPK value 0.5000 20.00 3D 37078 1/13/2017	Tesi SPK Ref Val 5.201 Tesi R S	126 tCode: El RunNo: 4 SeqNo: 1 %REC 103 131 tCode: El RunNo: 4 SeqNo: 1	69.3 PA Method 7078 502258 LowLimit 52.5 69.3 PA Method 7078 502259	150 8015D: Gasol Units: mg/L HighLimit 149 150 8015D: Gasol Units: mg/L	NRPD	e RPDLimit e	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte	1711647-001BMS Seep North of Flar ge Organics (GRO) 1711647-001BMSD Seep North of Flar	25 SampT e Batch Analysis D Result 5.7 26 SampT e Batch Analysis D	ype: MS Date: 14 PQL 0.050 ype: MS DD: G4 pate: 14	20.00 5 57078 1/13/2017 SPK value 0.5000 20.00 5D 57078 1/13/2017 SPK value	Tesi R SPK Ref Val 5.201 Tesi R SPK Ref Val	126 tCode: El RunNo: 4 SeqNo: 1 %REC 103 131 tCode: El RunNo: 4 SeqNo: 1	69.3 PA Method 7078 502258 LowLimit 52.5 69.3 PA Method 7078 502259	150 8015D: Gasol Units: mg/L HighLimit 149 150 8015D: Gasol Units: mg/L	%RPD	e RPDLimit e	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang	1711647-001BMS Seep North of Flar ge Organics (GRO) 1711647-001BMSD Seep North of Flar	25 SampT e Batch Analysis D Result 5.7 26 SampT e Batch Analysis D Result	ype: MS 1D: G4 PQL 0.050 ype: MS 1D: G4 PQL 0.050	20.00 3 47078 1/13/2017 SPK value 0.5000 20.00 3D 47078 1/13/2017 SPK value 0.5000	Test SPK Ref Val 5.201 Test SPK Ref Val 5.201	126 tCode: El RunNo: 4 SeqNo: 1 %REC 103 131 tCode: El RunNo: 4 SeqNo: 1 %REC 93.5	69.3 PA Method 7078 502258 LowLimit 52.5 69.3 PA Method 7078 502259 LowLimit	150 8015D: Gasol Units: mg/L HighLimit 149 150 8015D: Gasol Units: mg/L HighLimit	%RPD	e RPDLimit e RPDLimit	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB	1711647-001BMS Seep North of Flar ge Organics (GRO) 1711647-001BMSD Seep North of Flar	25 SampT e Batch Analysis D Result 5.7 26 SampT e Batch Analysis D Result 5.7 26	ype: MS o ID: G4 PQL 0.050 ype: MS o ID: G4 vate: 1° PQL 0.050	20.00 3 1/13/2017 SPK value 0.5000 20.00 3D 1/13/2017 SPK value 0.5000 20.00 20.00	Tes R SPK Ref Val 5.201 Tes R SPK Ref Val 5.201	126 tCode: El RunNo: 4 SeqNo: 1 %REC 103 131 tCode: El RunNo: 4 SeqNo: 1 %REC 93.5 131	69.3 PA Method 7078 502258 LowLimit 52.5 69.3 PA Method 7078 502259 LowLimit 52.5 69.3	150 8015D: Gasol Units: mg/L HighLimit 149 150 8015D: Gasol Units: mg/L HighLimit 149 150	NRPD %RPD line Rang %RPD 0.840 0	e RPDLimit e RPDLimit 20 0	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL
- W Sample container temperature is out of limit as specified
- Page 13 of 18

Reporting Detection Limit

WO#:	1
	16

1711647 16-Nov-17

Client: William	ns Four Corn	ers								
Project: Kutz G	as Plant									
Sample ID 100ng Ics	SampT	ype: LC	S4	Tes	tCode: E	PA Method	8260B: VOL	ATILES		
Client ID: BatchQC	Batch	D: R4	7088	F	RunNo: 4	47088				
Prep Date:	Analysis D	ate: 1	1/13/2017	S	SeqNo: 1	1502364	Units: %Red	;		
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	SampT	ype: MI	3LK	Tes	tCode: E	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	ID: R4	7088	F	RunNo: 4	17088				
Prep Date:	Analysis D	ate: 1	1/13/2017	S	SeqNo: 1	502370	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	<mark>9.9</mark>		10.00		99.0	70	130			
Sample ID 100ng Ics2	SampT	ype: LC	s	Tes	tCode: E	PA Method	8260B: VOL	ATILES		
Client ID: LCSW	Batch	ID: A4	7088	R	RunNo: 4	7088				
Prep Date:	Analysis D	ate: 1	1/14/2017	S	SeqNo: 1	502423	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	SampT	ype: ME	BLK	Test	tCode: E	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	ID: A4	7088	R	RunNo: 4	7088				
Prep Date:	Analysis Da	ate: 11	1/14/2017	S	SeqNo: 1	502428	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 L	.evel.		B Analyte	detected i	in the associat	ted Method Bla	nk		

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Page 14 of 18
- Sample pH Not In Range Reporting Detection Limit RL

Р

W Sample container temperature is out of limit as specified

Client: Williams Four Corners

Project: Kutz Gas Plant

Sample ID rb2	SampT	ype: M	BLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch	n ID: A4	7088	F	RunNo: 4	7088					
Prep Date:	Analysis D	ate: 1	1/14/2017	S	SeqNo: 1	502428	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.
- 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

Page 15 of 18

WO#: 1711647 16-Nov-17

Client: Williams Four Corners

Project: Kutz Gas Plant

the second se										
Sample ID rb2	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batcl	n ID: A4	7088	F	RunNo: 4	7088				
Prep Date:	Analysis D	Date: 11	1/14/2017	5	SeqNo: 1	502428	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 Ics	SampT	ype: LC	S	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: LCSW	Batch	1D: R4	7131	F	RunNo: 4	7131				
Prep Date:	Analysis D	ate: 11	/14/2017	S	SeqNo: 1	503470	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.
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Е Value above quantitation range

В

- J Analyte detected below quantitation limits
- Page 16 of 18

- Р Sample pH Not In Range RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

WO#: 16-Nov-17

1711647

WO#: 1711647

16-Nov-17

Client:	Williams Four Cor	ners							
Project:	Kutz Gas Plant								
Sample ID 100ng	lcs Samp	Type: LCS	Test	tCode: EF	PA Method	8260B: VOL	ATILES		
Client ID: LCSW	Batc	h ID: R47131	R	RunNo: 47	7131				
Prep Date:	Analysis [Date: 11/14/2017	S	SeqNo: 15	503470	Units: µg/L			
Analyte	Result	PQL SPK value	e SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Toluene-d8	9.7	10.0	0	96.8	70	130			
Sample ID rb	Samp	Type: MBLK	Test	tCode: EF	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batc	h ID: R47131	R	RunNo: 47	7131				
Prep Date:	Analysis [Date: 11/14/2017	S	SeqNo: 15	503471	Units: µg/L			
Analyte	Result	PQL SPK value	e SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0							
Toluene	ND	1.0							
Ethylbenzene	ND	<mark>1.0</mark>							
Methyl tert-butyl ether (M	TBE) 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 (EDE	3) 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-chloroprop	pane 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.
- 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

Page 17 of 18

Client: Williams Four Corners

Project: Kutz Gas Plant

Sample ID rb	SampT	ype: MBLK	Т	estCode: E	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	ID: R47131		RunNo: 4	\$7131				
Prep Date:	Analysis D	ate: 11/14/201	7	SeqNo:	1503471	Units: µg/L			
Analyte	Result	PQL SPK va	lue SPK Ref V	al %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							
lsopropylbenzene	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.
- 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
- 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

В

W Sample container temperature is out of limit as specified

Page 18 of 18

WO#: 1711647 16-Nov-17

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental A Albu TEL: 505-345-3975 A Website: www.hal	Analysis Labo 4901 Hawk querque, NM FAX: 505-34 Ilenvironmeni	oratory tins NE 87109 5-4107 tal.com	Sam	ple Log-In Cł	neck List
Client Name: WILLIAMS FOUR CORN	Work Order Number:	1711647			RcptNo:	1
Received By:Anne Thorne1*Completed By:Erin Melendrez1*Reviewed By:DDS	1/11/2017 10:26:00 AI 1/13/2017 8:58:47 AM 11 /13 /17	M	a. vi	n Han	5	
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?	a.	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 🗹	1	No 🗆		
6. Sample(s) in proper container(s)?		Yes 🔽		No 🗌	٨	,
7. Sufficient sample volume for indicated test(s)?		Yes 🗹			Malin	50
8. Are samples (except VOA and ONG) properly	preserved?	Yes-		No D	RUI ON	
9. Was preservative added to bottles?		Yes 🗹	-	No	NA 🗆	
10.VOA vials have zero headspace?		Yes 🗌		No 🗌	No VOA Vials 🗹	
11. Were any sample containers received broken?		Yes		No 🗹	# of preserved	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🔽		No 🗌	for pH:	>12 unless noted)
13. Are matrices correctly identified on Chain of Cu	istody?	Yes 🗹)	No 🗆	Adjusted?	les
14. Is it clear what analyses were requested?		Yes 🗹		No 🗌		
15. Were all holding times able to be met?		Yes 🗹		No 🗌	Checked by:	-NM
(in not, notify customer for authorization.)		· · · ·				
Special Handling (if applicable)						
16. Was client notified of all discrepancies with this	s order?	Yes 📮		No 🗌	NA 🗹	1
Person Notified: By Whom: Regarding: Client Instructions:	Date: Via:	eMail [] Phone	Fax	In Person	
17. Additional remarks: Added 4mLH	1NO3 to -001	IE and	Im	- HN	03-00ZE-FC	ir acceptabl
18. <u>Cooler Information</u> Cooler No Temp C Condition Seal 1 4.7 Good Yes	5ENM 11/1 Intact Seal No S	3/17 @ Seal Date	Sign	O ed By		

Page 1 of 1

Chain-of-Custody Record Client: Williams Four Corners Mott Webse			Turn-Around Time: 2 day Standard KRush TAT				HALL ENVIRONMENTA ANALYSIS LABORATOR						Ĺ						
	Mat	f We	bre	Project Name):					1471	w ha	llenv	iron	ment	tal co	m			
Mailing	Address	1775	55 Arrova Dr	Kutz	2 Gas	Plant		490	1 Ha	wkins	NE	- Alb	uque	erau	e. NN	л 87 [.]	109		
	Blo	omfid	J, NM	Project #:				Tel	. 505	5-345-	3975	F	ax	505-	345-4	4107			
Phone :	#: 5	05-6	32-4442								ļ	Analy	/sis	Req	uest				
email o	r Fax#:			Project Mana	ger: William	s-Kijun Hong	((VIL	ĝ				04)						
QA/QC I	Package: dard		Level 4 (Full Validation)	LTE-Do	unny Burn	5 701-570-4727	s (8021	Gas ol	SO / ME		(SMI)		PO4,S(PCB's	S				
Accredi	itation AP	□ Othe	r	Sampler: D On Ice	Burrs	ENO	+ TMB's	+ TPH (RO / DF	18.1)	8270 S		03,NO2,	s / 8082	VÔC	(A)			Dr N)
A EDD	(Type)	1	DF	Sample hem	per al lines de la sec	H.7	BE	B	Ū	4 pd	00	etals	I'N(ide	A	2	5		2
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type		BTEX + MT	BTEX + MT	TPH 8015B	TPH (Metho FDR /Matho	PAH's (831	RCRA 8 Me	Anions (F,C	8081 Pestic	8260B (VO	8270 (Semi	Cation		Air Buhhles
11-9	13:60	AQ	Seep North of Flare	10	HCI, HSDY	-001			X				X		X		\mathbf{X}^{\top}		
1	17:15	AD	API Water Outlet	10		-007.			X		+		Ŕ		Ż	5	Ì		+
1	17:30	AQ	Pipeline Trench Wat	ar 10	V	-003			X				X		X		X_		
									\rightarrow	_	-					\rightarrow			
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	1																		
		1.1.1.1.1																	
		-				2													
Date:	Time: 0445	Rehiquish	ad live	Received by:		Date Time 11-10-17 0945	Ren	c. I	: Ciju	n.Ho	ng (2 wil	llaw	NS.CO	com				
Date:	11me:	Relinquish	and Dec	Received by	Wat	Date Time		d	bui	nse	Her	w.c	om		aad	jere	ilten	I.Con	4
1.1 r	f necessary,	samples sub	nitted to Hall Environmental may be subc	ontracted to other ad	correctified laboratorie	es. This serves as notice of this	possil	bility. A	ny sub	-contrac	ted data	a will be	e clear	ly nota	ited on t	the ana	alytical re	aport.	



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

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 <u>www.hallenvironmental.com</u> 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

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			0	lient Samp	le ID: Ma	in Cooling Tower	
Project:	Kutz Canyon Gas Plant				Collection	Date: 11/	21/2017 10:55:00 AM	
Lab ID:	1711B94-001	Matrix:	AQUEOU	S	Received	Date: 11/	22/2017 7:00:00 AM	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA MET	THOD 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
Phospho	orus, Orthophosphate (As P)	ND	10	Н	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+N	Nitrite as N	ND	1.0		mg/L	5	11/29/2017 3:00:42 AM	R47366
EPA 6010	0B: TOTAL RECOVERABLE	METALS					Analyst	MED
Calcium		300	5.0		mg/L	5	11/29/2017 8:13:23 AM	35173
Magnesi	um	60	5.0		mg/L	5	11/29/2017 8:13:23 AM	35173
Potassiu	im	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.	В	Analyte detected in the associated Method B	lank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range	
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 1 of 6
	ND	Not Detected at the Reporting Limit	Р	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 a	as specified

Analytical Report Lab Order 1711B94

Date Reported: 12/4/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	Williams Four Corners			C	lient Sa	mple ID: Ci	ty Water	
Project:	Kutz Canyon Gas Plant				Collecti	on Date: 11	/21/2017 11:05:00 AM	i i
Lab ID:	1711B94-002	Matrix:	AQUEOU	S	Receiv	ed Date: 11	/22/2017 7:00:00 AM	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA MET	HOD 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
Phospho	rus, 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+N	litrite as N	ND	1.0		mg/L	5	11/29/2017 3:13:07 AM	R47366
EPA 6010	B: TOTAL RECOVERABLE	METALS					Analyst	MED
Calcium		30	1.0		mg/L	1	11/29/2017 8:18:17 AM	35173
Magnesiu	um	5.6	1.0		mg/L	1	11/29/2017 8:18:17 AM	35173
Potassiu	m	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: * D H	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank						
	D	Sample Diluted Due to Matrix	E Value above quantitation range							
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 6						
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range						
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit						
	fiers: * Value exceeds D Sample Dilute H Holding times ND Not Detected PQL Practical Quar S % Recovery o	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified						

WO#: 1711B94

04-Dec-17

Client: Project:	Williams Fou Kutz Canyon	'illiams Four Corners utz Canyon Gas Plant									
Sample ID MB		SampType	mb	alk	Tes	tCode: E	PA Method	300 0: Anions			
		Batch ID:	DA	7366	100		7366	out.o. Amona			
Dren Dete:	0.00	Daten Date	1.4	/20/2047							
Prep Date:	Ana	aysis Date:	11	/28/2017		sequo. 1	512142	Units: mg/L			
Analyte	Re	esult P	QL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		ND C	.10								
Chloride		ND C	.50								
Bromide		ND C	.10								
Phosphorus, Orthopho	sphate (As P	ND C	.50								
Sulfate		ND C	.50								
Nitrate+Nitrite as N		ND C	.20								
Sample ID LCS	ID LCS SampType: Ics TestCode: EPA Method 300.0: Anions										
Client ID: LCSV	v	Batch ID:	R4	7366	F	RunNo: 4	7366				
Prep Date:	Ana	alysis Date:	11	/28/2017	S	SeqNo: 1	<mark>51214</mark> 3	Units: mg/L			
Analyte	Re	esult Po	JL	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, Orthopho	sphate (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 1711	394-001AMS	SampType:	ms		Tes	tCode: E	PA Method	300.0: Anions			
Client ID: Main	Cooling Tower	Batch ID:	R4	7366	F	RunNo: 4	7366				
Prep Date:	Ana	lysis Date:	11	/29/2017	S	SeqNo: 1	512184	Units: mg/L			
Analyte	Re	esult P	QL	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 1711E	394-001AMSD	SampType	ms	d	Tes	tCode: El	PA Method	300.0: Anions			
Client ID: Main	Cooling Tower	Batch ID:	R4	7366	F	RunNo: 4	7366				5.5
Prep Date:	Ana	lysis Date:	11	/29/2017	S	SeqNo: 1	512185	Units: mg/L			
Analyte	Re	esult PO	ΩL	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:	mb	lk	Tes	tCode: El	PA Method	300.0: Anions	;		
Client ID: PBW		Batch ID:	R4	7404	F	aunNo: 4	7404				
Prep Date:	Ana	lysis Date:	11	/29/2017	S	eqNo: 1	514013	Units: mg/L			
Analyte	Re	esult Po	QL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Page 3 of 6
- Sample pH Not In Range Reporting Detection Limit RL

Р

W Sample container temperature is out of limit as specified

Client:Williams Four CornersProject:Kutz Canyon Gas Plant

No.										
Sample ID MB	SampType: m	blk	TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R4	47404	R	RunNo: 47	7404					
Prep Date:	Analysis Date: 1	Analysis Date: 11/29/2017 SeqNo: 1514013								
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Sulfate	ND 0.50									
	110 0.00									
Sample ID LCS	SampType: Ic	s	Test	tCode: EF	PA Method	300.0: Anions	;			
Sample ID LCS Client ID: LCSW	SampType: Ic: Batch ID: R4	s 47404	Tesi	tCode: EF	PA Method 7404	300.0: Anions				
Sample ID LCS Client ID: LCSW Prep Date:	SampType: Ic: Batch ID: R4 Analysis Date: 1	s 47404 1/29/2017	Tesi R S	tCode: EF tunNo: 47 SeqNo: 1	PA Method 7404 514014	300.0: Anions Units: mg/L	1			
Sample ID LCS Client ID: LCSW Prep Date: Analyte	SampType: Ic: Batch ID: R4 Analysis Date: 1 Result PQL	s 47404 1/29/2017 SPK value	Test R SPK Ref Val	Code: EF CunNo: 47 SeqNo: 14 %REC	PA Method 7404 514014 LowLimit	300.0: Anions Units: mg/L HighLimit	%RPD	RPDLimit	Qual	

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

Page 4 of 6

04-Dec-17

WO#: 1711B94

Client: Project:	William Kutz Ca	ns Four Corn anyon Gas P	ners Plant										
Sample ID	MB-35173	SampT	Гуре: МВ	BLK	Tes	tCode: E	PA 6010B:	Total Recover	able Meta	als			
Client ID:	PBW	Batcl	h ID: 35	173	F	RunNo: 4	7380						
Prep Date:	11/28/2017	Analysis E	Date: 1	1/29/2017	S	SeqNo: 1	511701	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											
Sodium		ND	1.0										
Sample ID	LCS-35173	SampT	Type: LC	S	Tes	tCode: E	PA 6010B:	Total Recover	able Meta	als			
Client ID:	LCSW	Batch	h ID: 35	173	F	RunNo: 4	7380						
Prep Date:	11/28/2017	Analysis D	Date: 1	/29/2017	5	SeqNo: 1	511702	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	1711B94-001BM	I S SampT	ype: MS	6	Tes	tCode: El	PA 6010B:	Total Recover	able Meta	als			
Sample ID Client ID:	1711B94-001BM Main Cooling To	I S SampT ower Batch	ype: MS	5 173	Tes F	tCode: El RunNo: 4	PA 6010B: ⁻ 7380	Total Recover	able Meta	als			
Sample ID Client ID: Prep Date:	1711B94-001BM Main Cooling To 11/28/2017	IS SampT ower Batch Analysis D	ype: Ms n ID: 35 Date: 11	3 173 1/29/2017	Tes F	tCode: El RunNo: 4 SeqNo: 1	PA 6010B: ⁻ 7380 511710	Total Recover	able Meta	als			
Sample ID Client ID: Prep Date: Analyte	1711B94-001BM Main Cooling To 11/28/2017	I S SampT ower Batch Analysis D Result	Type: MS n ID: 35 Date: 11 PQL	5 173 1/29/2017 SPK value	Tes F S SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC	PA 6010B: ⁻ 7380 511710 LowLimit	Total Recover Units: mg/L HighLimit	vable Meta	als RPDLimit	Qual		
Sample ID Client ID: Prep Date: Analyte Potassium	1711B94-001BM Main Cooling To 11/28/2017	IS SampT ower Batch Analysis D Result 69	ype: MS n ID: 35 Date: 11 PQL 1.0	5 173 1/29/2017 SPK value 50.00	Tes F S SPK Ref Val 20.78	tCode: El RunNo: 4 SeqNo: 1 %REC 96.7	PA 6010B: ⁻ 7380 511710 LowLimit 75	Total Recover Units: mg/L HighLimit 125	wable Meta	als RPDLimit	Qual		
Sample ID Client ID: Prep Date: Analyte Potassium Sample ID	1711B94-001BM Main Cooling To 11/28/2017 1711B94-001BM	IS SampT ower Batch Analysis D Result 69 ISD SampT	ype: MS n ID: 35 Date: 11 PQL 1.0	5 173 1/29/2017 SPK value 50.00	Tes F SPK Ref Val 20.78 Tes	tCode: El RunNo: 4 SeqNo: 1 %REC 96.7 tCode: El	PA 6010B: 7380 511710 LowLimit 75 PA 6010B:	Total Recover Units: mg/L HighLimit 125 Total Recover	vable Meta %RPD	RPDLimit	Qual		
Sample ID Client ID: Prep Date: Analyte Potassium Sample ID Client ID:	1711B94-001BM Main Cooling To 11/28/2017 1711B94-001BM Main Cooling To	IS SampT ower Batch Analysis D Result 69 ISD SampT ower Batch	ype: MS n ID: 35 Date: 11 PQL 1.0 Type: MS n ID: 35	5 173 1/29/2017 SPK value 50.00 5D 173	Tes F SPK Ref Val 20.78 Tes F	tCode: El RunNo: 4 SeqNo: 1 %REC 96.7 tCode: El RunNo: 4	PA 6010B: ' 7380 511710 LowLimit 75 PA 6010B: ' 7380	Total Recover Units: mg/L HighLimit 125 Total Recover	able Meta %RPD	als RPDLimit	Qual		
Sample ID Client ID: Prep Date: Analyte Potassium Sample ID Client ID: Prep Date:	1711B94-001BM Main Cooling To 11/28/2017 1711B94-001BM Main Cooling To 11/28/2017	IS SampT ower Batch Analysis D Result 69 ISD SampT ower Batch Analysis D	ype: MS n ID: 35 Date: 11 PQL 1.0 ype: MS n ID: 35 Date: 11	5 173 1/29/2017 SPK value 50.00 5D 173 1/29/2017	Tes F SPK Ref Val 20.78 Tes F S	tCode: El RunNo: 4 SeqNo: 1 %REC 96.7 tCode: El RunNo: 4 SeqNo: 1	PA 6010B: ' 7380 511710 LowLimit 75 PA 6010B: ' 7380 511712	Total Recover Units: mg/L HighLimit 125 Total Recover Units: mg/L	%RPD	RPDLimit	Qual		
Sample ID Client ID: Prep Date: Analyte Potassium Sample ID Client ID: Prep Date: Analyte	1711B94-001BM Main Cooling To 11/28/2017 1711B94-001BM Main Cooling To 11/28/2017	IS SampT ower Batch Analysis D Result 69 ISD SampT ower Batch Analysis D Result	Type: MS n ID: 35 n ID: 35 Date: 11 PQL 1.0 Type: MS n ID: 35 n ID: 35 Date: 11 PQL 20 n ID: 35 Date: 11 PQL 20	5 1/29/2017 SPK value 50.00 5D 173 1/29/2017 SPK value	Tes F SPK Ref Val 20.78 Tes F SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC 96.7 tCode: El RunNo: 4 SeqNo: 1 %REC	PA 6010B: 7380 511710 LowLimit 75 PA 6010B: 7380 511712 LowLimit	Total Recover Units: mg/L HighLimit 125 Total Recover Units: mg/L HighLimit	able Meta %RPD able Meta %RPD	RPDLimit als	Qual		
Sample ID Client ID: Prep Date: Analyte Potassium Sample ID Client ID: Prep Date: Analyte Potassium	1711B94-001BM Main Cooling To 11/28/2017 1711B94-001BM Main Cooling To 11/28/2017	IS SampT ower Batch Analysis D Result 69 ISD SampT ower Batch Analysis D Result 68	ype: MS n ID: 35 Date: 11 PQL 1.0 Type: MS n ID: 35 Date: 11 PQL 1.0	5 1/29/2017 SPK value 50.00 5D 1/29/2017 SPK value 50.00	Tes F SPK Ref Val 20.78 Tes F SPK Ref Val 20.78	tCode: El RunNo: 4 SeqNo: 1 %REC 96.7 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3	PA 6010B: 7380 511710 LowLimit 75 PA 6010B: 7380 511712 LowLimit 75	Total Recover Units: mg/L HighLimit 125 Total Recover Units: mg/L HighLimit 125	*able Meta %RPD *able Meta %RPD 1.02	RPDLimit RPDLimit RPDLimit 20	Qual		
Sample ID Client ID: Prep Date: Analyte Potassium Sample ID Client ID: Prep Date: Analyte Potassium Sample ID	1711B94-001BM Main Cooling To 11/28/2017 1711B94-001BM Main Cooling To 11/28/2017 1711B94-001BM	IS SampT ower Batch Analysis D Result 69 ISD SampT ower Batch Analysis D Result 68 IS SampT	Type: MS n ID: 35 n ID: 35 Date: 11 PQL 1.0 Type: MS n ID: 35 Date: 11 PQL 1.0 Type: MS Type: MS	S 1/29/2017 SPK value 50.00 SD 1/29/2017 SPK value 50.00 S	Tes SPK Ref Val 20.78 Tes SPK Ref Val 20.78 Tes	tCode: El RunNo: 4 SeqNo: 1 %REC 96.7 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 tCode: El	PA 6010B: 7380 511710 LowLimit 75 PA 6010B: 7380 511712 LowLimit 75 PA 6010B: 75	Total Recover Units: mg/L HighLimit 125 Total Recover Units: mg/L HighLimit 125 Total Recover	able Meta %RPD able Meta %RPD 1.02	Als RPDLimit Als RPDLimit 20 Als	Qual		
Sample ID Client ID: Prep Date: Analyte Potassium Sample ID Client ID: Prep Date: Analyte Potassium Sample ID Client ID:	1711B94-001BM Main Cooling To 11/28/2017 1711B94-001BM Main Cooling To 11/28/2017 1711B94-001BM Main Cooling To	IS SampT ower Batch Analysis D Result 69 ISD SampT ower Batch Analysis D Result 68 IS SampT ower Batch	Type: MS n ID: 35 Date: 11 PQL 1.0 Type: MS n ID: 35 Date: 11 PQL 1.0 Type: MS 1.0 Type: 1.0 Type:	S 173 1/29/2017 SPK value 50.00 SD 173 1/29/2017 SPK value 50.00 S 173	Tes F SPK Ref Val 20.78 Tes SPK Ref Val 20.78 Tes F	tCode: El RunNo: 4 SeqNo: 1 %REC 96.7 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 tCode: El RunNo: 4	PA 6010B: 7380 511710 LowLimit 75 PA 6010B: 7380 511712 LowLimit 75 PA 6010B: 75	Total Recover Units: mg/L HighLimit 125 Total Recover Units: mg/L HighLimit 125 Total Recover	*able Meta %RPD *able Meta %RPD 1.02	Als RPDLimit Als RPDLimit 20 Als	Qual		
Sample ID Client ID: Prep Date: Analyte Potassium Sample ID Client ID: Prep Date: Analyte Potassium Sample ID Client ID: Prep Date:	1711B94-001BM Main Cooling To 11/28/2017 1711B94-001BM Main Cooling To 1711B94-001BM Main Cooling To 11/28/2017	IS SampT pwer Batch Analysis D Result 69 ISD SampT pwer Batch 68 IS SampT pwer Batch Analysis D pwer Batch Analysis D	Type: MS n ID: 35 Date: 11 PQL 1.0 Type: MS n ID: 35 Date: 11 PQL 1.0 Type: MS Date: 11 Type: MS Date: 110 Specific and the second sec	S 1/29/2017 SPK value 50.00 SD 1/29/2017 SPK value 50.00 S 1/29/2017 SPK value 50.00 S 1/29/2017	Tes SPK Ref Val 20.78 Tes SPK Ref Val 20.78 Tes Fi SSPK Ref Val 20.78	tCode: El RunNo: 4 SeqNo: 1 %REC 96.7 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 tCode: El RunNo: 4 SeqNo: 1	PA 6010B: ⁻ 7380 511710 LowLimit 75 PA 6010B: ⁻ 7380 511712 LowLimit 75 PA 6010B: ⁻ 7380 511721	Total Recover Units: mg/L HighLimit 125 Total Recover Units: mg/L HighLimit 125 Total Recover Units: mg/L	able Meta %RPD able Meta %RPD 1.02	Als RPDLimit Als RPDLimit 20 Als	Qual		
Sample ID Client ID: Prep Date: Analyte Potassium Sample ID Client ID: Prep Date: Analyte Sample ID Client ID: Prep Date: Analyte	1711B94-001BM Main Cooling To 11/28/2017 1711B94-001BM Main Cooling To 11/28/2017 1711B94-001BM Main Cooling To 11/28/2017	IS SampT ower Batch Analysis D Result 69 ISD SampT ower Batch Analysis D Result 68 S SampT ower Batch Analysis D Analysis D Result	Type: MS n ID: 35 Date: 11 PQL 1.0 Type: MS n ID: 35 Date: 11 PQL 1.0 Type: MS n ID: 35 Oate: 11 PQL 1.0 Type: MS n ID: 35 Date: 11 PQL 12	S 173 1/29/2017 SPK value 50.00 50 173 1/29/2017 SPK value 50.00 51 173 1/29/2017 SPK value	Tes SPK Ref Val 20.78 Tes SPK Ref Val 20.78 Tes SPK Ref Val SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC 96.7 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 tCode: El RunNo: 4 SeqNo: 1 %REC	PA 6010B: 7380 511710 LowLimit 75 PA 6010B: 7380 511712 LowLimit 75 PA 6010B: 7380 511721 LowLimit	Total Recover Units: mg/L HighLimit 125 Total Recover Units: mg/L HighLimit 125 Total Recover Units: mg/L HighLimit	*able Meta %RPD *able Meta %RPD 1.02 *able Meta %RPD	Als RPDLimit Als RPDLimit 20 Als RPDLimit	Qual		
Sample ID Client ID: Prep Date: Analyte Potassium Sample ID Client ID: Prep Date: Analyte Potassium Sample ID Client ID: Prep Date: Analyte Calcium	1711B94-001BM Main Cooling To 11/28/2017 1711B94-001BM Main Cooling To 11/28/2017 1711B94-001BM Main Cooling To 11/28/2017	IS SampT ower Batch Analysis D Result 69 ISD SampT ower Batch Analysis D Result 68 IS SampT ower Batch Analysis D Result 350	Type: MS in ID: 35 oh ID: 35 oh ID: 35 oh ID: 10 of ype: MS oh ID: 35	5 173 1/29/2017 SPK value 50.00 50 173 1/29/2017 SPK value 50.00 5 173 1/29/2017 SPK value 50.00	Tes SPK Ref Val 20.78 Tes SPK Ref Val 20.78 Tes SPK Ref Val SPK Ref Val 302.6	tCode: El RunNo: 4 SeqNo: 1 %REC 96.7 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 tCode: El RunNo: 4 SeqNo: 1 %REC 97.2	PA 6010B: [*] 7380 511710 LowLimit 75 PA 6010B: [*] 7380 511712 LowLimit 7380 511721 LowLimit 75	Total Recover Units: mg/L HighLimit 125 Total Recover Units: mg/L HighLimit 125 Total Recover Units: mg/L HighLimit 125	*able Meta %RPD *able Meta %RPD 1.02	Als RPDLimit Als RPDLimit 20 Als RPDLimit	Qual		
Sample ID Client ID: Prep Date: Analyte Potassium Sample ID Client ID: Prep Date: Analyte Potassium Sample ID Client ID: Prep Date: Analyte Calcium Magnesium	1711B94-001BM Main Cooling To 11/28/2017 1711B94-001BM Main Cooling To 11/28/2017 1711B94-001BM Main Cooling To 11/28/2017	IS SampT ower Batch Analysis D Result 69 ISD SampT ower Batch Analysis D Result 68 IS SampT ower Batch Analysis D Result 350 110	Type: MS n ID: 35 n ID: 35 Date: 11 PQL 1.0 Type: MS n ID: 35 Date: 11 PQL 1.0 Type: MS Date: 11 PQL 1.0 Type: MS Date: 11 PQL 35 Date: 11 PQL 5.0 5.0 5.0	5 1/29/2017 SPK value 50.00 50 173 1/29/2017 SPK value 50.00 5 173 1/29/2017 SPK value 50.00 50.00 50.00	Tes SPK Ref Val 20.78 Tes SPK Ref Val 20.78 SPK Ref Val 302.6 60.31	tCode: El RunNo: 4 SeqNo: 1 %REC 96.7 tCode: El RunNo: 4 SeqNo: 1 %REC 95.3 tCode: El RunNo: 4 SeqNo: 1 %REC 97.2 106	PA 6010B: ⁷ 7380 511710 LowLimit 75 PA 6010B: ⁷ 7380 511712 LowLimit 7380 511721 LowLimit 75 75 75	Total Recover Units: mg/L HighLimit 125 Total Recover Units: mg/L HighLimit 125 Total Recover Units: mg/L HighLimit 125 125	*able Meta %RPD *able Meta %RPD 1.02 *able Meta %RPD	Als RPDLimit RPDLimit 20 Als RPDLimit	Qual		

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Page 5 of 6

- Р Sample pH Not In Range RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

WO#:

1711B94

04-Dec-17

Williams Four Corners **Client:**

Project: Kutz Canyon Gas Plant

Sample ID	1711B94-001BMSD	1711B94-001BMSD SampType: MSD					TestCode: EPA 6010B: Total Recoverable Metals							
Client ID:	Main Cooling Tower	Batch II): 35	173	RunNo: 47380									
Prep Date:	11/28/2017 Ar	11/28/2017 Analysis Date: 11/29/2017					511722	Units: mg/L						
Analyte	F	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.
- 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
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Value above quantitation range Е
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

WO#: 1711B94

Page 6 of 6

04-Dec-17

	RONMENTA Lysis Dratory	Hall E L TEL: - Wei	nvironmental A Albuq 505-345-3975 F bsite: www.hall	nalysi 4901 uerque AX: 50 enviros	s Labo Hawk 2, NM 05-34. nment	oratory ins NE 87109 5-4107 al.com	Sam	ple Log-In C	heck List
Client Name:	WILLIAMS F	FOUR CORN Work Or	der Number:	1711E	394			RcptNo:	1
Received By: Completed By: Reviewed By:	Anne Thom Anne Thom DDS	ne 11/22/201 ne 11/27/201 \\/	7 7:00:00 AM 7 7:21:48 AM 2 7 /l7			Ú.	one Arm		
Chain of Cu 1. Custody se 2. Is Chain of 3. How was th	stody eals intact on sa Custody compl he sample delive	Imple bottles? lete? ered?		Yes Yes <u>Couri</u>	□ ⊻		No 🗌 No 🗍	Not Present ☑ Not Present □	
<u>Log In</u> 4. Was an at	tempt made to o	cool the samples?		Yes			No 🗌	NA 🗌	
5. Were all sa	amples received	i at a temperature of >0° C to	6.0°C	Yes		ļ	No 🗆	NA 🗆	
6. Sample(s)	in proper conta	iner(s)?		Yes			No 🗌		
7. Sufficient s 8. Are sample	ample volume f es (except VOA	for indicated test(s)? and ONG) properly preserved	1?	Yes Yes			No 🗆 No 🗹		
9. Was prese	rvative added to	bottles?		Yes	V		No 🗌	NA 🗌 HNO3, HNO3, H2S04	
10.VOA vials 1 11, Were any	have zero heads sample containe	space? ers received broken?		Yes Yes			No 🗆 No 🗹	No VOA Vials	
12. Does pape (Note discr	rwork match bo	ttle labels? ain of custody)		Yes	✓		No 🗆	# of preserved bottles checked for pH: 2	r >12 unless noted)
13. Are matrice	es correctly iden	tified on Chain of Custody? ere requested?		Yes				Adjusted?	See bilow
15. Were all ho (If no, notif	 4. Is it clear what analyses were requested? 5. Were all holding times able to be met? (If no, notify customer for authorization.) 						No 🗌	Checked by:	A-11/27/17
Special Han	dling (if app	licable)							
16. Was client	notified of all dis	screpancies with this order?		Yes			No 🗆	NA 🗹	
Perso By W Rega Clien	on Notified: /hom: .rding: t Instructions:	na senta e la contra de la contra La contra de la contr La contra de la contr	Date Via:	eMa	il 🗌] Phone	E Fax	in Person	

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

Page 1 of 2



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

Albuquerque, NM 87109 Sample Log-In Check List

Client Name:	WILLIAMS F	OUR CORN	Work C	order Numb	ber: 1711B94		×	RcptNo: 1
Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By	1	
1	2.6	Good	Yes					

																		1			
C	hain-	of-Cu	stody Record	Turn-Around	Time:															_	
Client:	Willie	uns.	Four Corners	Standard	□ Rush						H			N V Ste							
N	North.	hale bro	Quilliams Com	Project Name):						140	www.bs		iron	neni	tal co		RA			
Mailing	Address	: 1775	5 Array Dr	Kutz Canyon Gas Plant				4901 Hawkins NE - Albuquerque, NM 87109													
P	of roman	Ciold	NM	Project #:				Tel. 505-345-3975 Fax 505-345-4107													
Phone	#:		, , , ,					Analysis Request													
email o	email or Fax#:			Project Mana	ger:			-	(Â	ĝ				04)]
QA/QC I	QA/QC Package:			LTE-DO	unny Burn	S		s (8021	(Gas ol	KO / MF		(SMI)		PO4,SO	PCB's						
Accreditation NELAP Other			Sampler:	Burn	5 E N8-1-		+ TMB'	HdT +	KO / DF	18.1)	8270 S		3,NO ₂ ,	/ 8082		(A)			or N)	•	
EDD	(Type)	PDF		Semicleritem	eralthe	- 0 Z.6		H	H	G	4 pd	0 or	etals	N'NC	ides	(A	N-			Z	-
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HIEALI HEALI	vie Voltave Citation	BTEX + MT	BTEX + MT	TPH 8015B	TPH (Metho	PAH's (831	RCRA 8 Me	Anions (F.C	8081 Pestic	8260B (VO	8270 (Semi	Cations		Air Bubbles	
11-21	1055	AQ	Main Cooling Tower	1-1L	NA	in and the U house and the	201	_						X	~		~	X			1
11-21	1105	AQ	City Water	1-12	NA		202							X				X			1
																					1
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Date:	Time:	Relinquish	And the second second	Received by:	1/1	Date T	ime	Rem	harks	" "K1	iun.	hoi	ng (2 "	siil	ian	ηs.	cor	Λ		
Date:	1 150 Time:	Relinguish	ed by	Received by:	<u>NA</u>	Date 1	ime	agron, ader@williams.com													
ubilia	1815	Thit	War (1/10	m H	11/22/17	,)	downs@Itenv.com aager@Henvion													
h	f necessary,	amples sub	nitted to Hall Environmental may be subc	contracted to other ad	credited laboratorio	es. This serves as	notice of this	possib	oility. A	Any sub	-contra	ted data	a will b	e clear	ly note	ated or	n the a	nalytical	report.		