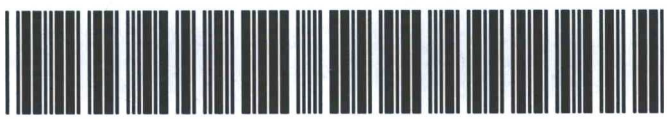
AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.



App Number: pCS1430838889

3RP - 1019

WILLIAMS FOUR CORNERS

12/19/2017

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company **Williams Four Corners LLC**	Contact **Kijun Hong**
Address **1755 Arroyo Drive, Bloomfield, NM 87413**	Telephone No. **505-632-4442**
Facility Name **Kutz Canyon Gas Plant**	Facility Type **Natural Gas Processing Plant**

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

LOCATION OF RELEASE

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

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

NATURE OF RELEASE

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

If a Watercourse was Impacted, Describe Fully.

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

This is a subsequent report, please see work plan attached.

OIL CONS. DIV DIST. 3

DEC 07 2017

Describe Area Affected and Cleanup Action Taken.*
This is a subsequent report, please see work plan attached.

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

Signature:	OIL CONSERVATION DIVISION
Printed Name: **Kijun Hong**	Approved by Environmental Specialist:
Title: **Environmental Specialist**	Approval Date: 12/18/17 Expiration Date:
E-mail Address: kijun.hong@williams.com	Conditions of Approval: Email Attached. Attached ☒
Date: **12/5/2017** Phone: **(505) 436-8457**	

* Attach Additional Sheets If Necessary

#NCS1729626631
3RP-1019

21

Smith, Cory, EMNRD

From: Smith, Cory, EMNRD
Sent: Monday, December 18, 2017 10:33 AM
To: 'Galer, Aaron'
Cc: Fields, Vanessa, EMNRD; Powell, Brandon, EMNRD; 'Hong, Kijun'; Webre, Matt (Matt.Webre@Williams.com)
Subject: RE: Kutz Canyon GP Soil Delineation Work Plan

Aaron,

OCD has received Williams Kutz Canyon Gas Plant Delineation work plan on 12/7/2017 and has approved the work plan with the attached and below conditions of approval.

- Water was observed within the excavation and showed signs of significant quantities. There is a possibility that a perched aquifer exists. OCD considers this protectable ground water unless Williams can provide additional site specific ground water information. Therefore the site close standards would be 100 mg/kg Total Petroleum Hydrocarbons, 50 mg/kg Total BTEX and 10 mg/kg Benzene.
- Williams will fully delineate the release both horizontally and vertically. Boreholes that exceeded 100ppm OVM or exhibit heavy staining and/or apparent hydrocarbon impacts will be considered impacted until sampled.
- Williams will submit to the OCD a delineation report and proposed remediation plan no later than January 9, 2018, with expected remediation to commence no later than January 22, 2018
- Since the release potentially impacted groundwater, a water sample will be required sampling for BTEX using method EPA Method 8260.
- 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 give me a call

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: Smith, Cory, EMNRD
Sent: Friday, December 1, 2017 1:30 PM
To: 'Webre, Matt' <Matt.Webre@Williams.com>
Cc: Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>; Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>; Hong, Kijun <Kijun.Hong@williams.com>; Galer, Aaron <Aaron.Galer@Williams.com>
Subject: RE: Kutz Canyon GP Soil Delineation Work Plan

Matt,

COMPLIANCE / ENGINEERING / REMEDIATION

LT Environmental, Inc.
348 East 2nd Avenue
Durango, Colorado 81301
T 970 385 1096 | F 970 385 1373

November 15, 2017

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

RE: Proposed Impacted Soil Delineation Work Plan
Kutz Canyon Gas Plant – GCNM ROW
Williams Four Corners LLC
San Juan County, New Mexico

Dear Mr. Smith:

LT Environmental, Inc. (LTE), on behalf of Williams Four Corners LLC (Williams), proposes the following work plan to delineate suspected impacted soil at the Kutz Canyon Gas Plant – Gas Company of New Mexico (GCNM) Right-of-Way (ROW) pipeline (Site) located in the northwest quarter of the northwest quarter of Section 13 within Township 28 North and Range 11 West in the San Juan Basin in San Juan County, New Mexico.

BACKGROUND

While excavating a trench for a new pipeline to be installed by GCNM within the ROW at the Kutz Canyon Gas Plant, soil suspected of petroleum hydrocarbon impact was encountered. GCNM and Williams both collected independent soil samples to determine if hydrocarbon impact was present and the New Mexico Oil Conservation Division (NMOCD) was notified of a potential release. The initial results were inconclusive and were not collected in the presence of the NMOCD. Based on visual and olfactory observations, additional soil samples were collected in the presence and discretion of a NMOCD on-site representative. Soil samples were collected as 3-point composite samples from the walls of the open pipeline trench (Figure 1). Laboratory analytical results are summarized in Table 1.

Depth to groundwater, based on nearby water well information and hydrogeologic features, is estimated to be greater than 100 feet below ground surface (bgs). This has been documented in historical release assessments and below grade tank (BGT) registrations for the Site available in the NMOCD database. Although water was observed in the open construction trench, at approximately 15 feet below bgs, the water is believed to be the result of precipitation runoff and/or accumulation from the stormwater drainage system at the facility. Previous excavations at the Site to as great as 20 feet bgs have not encountered water. The closest surface water to the Site is the seasonally intermittent arroyo running through Kutz Canyon, located approximately 1.4 miles west of the Site. Based on these criteria, the New Mexico Oil Conservation Division (NMOCD) site ranking is a 0 and remediation action levels for soil are as follows: 10 milligrams per kilogram (mg/kg) benzene, 50 mg/kg benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 5,000

mg/kg total petroleum hydrocarbon (TPH). Groundwater standards are established by the New Mexico Water Quality Control Commission (NMWQCC) as 10 micrograms per liter (µg/L) benzene, 750 µg/L toluene, 750 µg/L ethylbenzene, and 620 µg/L total xylenes.

Results of laboratory analyses of the excavation samples indicated that the soil samples collected from the southern extent of the larger exposed pipeline excavation (EX-South@10'), and into the pipeline trench running south (TR01@8') exhibit total BTEX concentrations of 156.2 mg/kg and 93.7 mg/kg, respectively. Upon confirmation of suspected petroleum hydrocarbon impact in soil in the pipeline trench, additional subsurface delineation is proposed to define the horizontal and vertical extent of impact. The delineation will additionally assist with confirmation that water accumulating in the trench is not shallow groundwater.

PROPOSED DELINEATION

LTE proposes installing nine soil borings around the current open, exposed pipeline excavation and trench. Due to the numerous subsurface utilities at a natural gas processing facility, the first 6 feet to 8 feet of the borehole will be cleared via hand auger and hydrovac. A hand auger will be used first to clear the borehole so that the shallow soil interval can be assessed for impact. Following hydrovac activities, the soil borings will be installed using hollow stem auger techniques. If the proposed borehole is inaccessible for the hollow stem auger drill rig due to existing infrastructure, the borehole will be advanced until refusal is encountered with the hand auger. Continuous soil samples will be logged by an LTE geologist and described using the Unified Soil Classification System (USCS) to delineate hydrocarbon impacts. The intervals from immediately beneath the ground surface and then every five feet thereafter will be screened using a photo-ionization detector (PID) for volatile aromatic hydrocarbons as well as any soil that is stained or has a hydrocarbon odor. Soil samples with the highest PID measurements and a bottom hole sample will be collected from each borehole to be submitted to a certified laboratory for analysis of BTEX by United States Environmental Protection Agency (EPA) Method 8021 and TPH – gasoline range organics (GRO), diesel range organics (DRO), motor oil range organics (MRO) by EPA Method 8015.

Additional soil borings will be advanced radially in approximately 50-foot intervals from any soil boring demonstrating significant evidence of hydrocarbon impacts. The soil borings will be advanced until one of the following criteria are met: a depth below the extent of soil impacted above NMOCD standards based on site ranking, groundwater is encountered, or auger refusal.

LTE will complete all work in accordance with industry-accepted practices. LTE will survey the soil boring locations with a Trimble® GeoExplorer® 6000 series Global Positioning System (GPS) to determine the latitude and longitude. Field activities will be documented in a bound field book and soil descriptions will be documented on a boring log. Observations to be noted on the boring log will include, but not be limited to, lithology, moisture content, staining, soil boring depth, latitude, longitude, project number, and comments. All down-hole drilling equipment will be thoroughly decontaminated prior to each use. If impacted soil is identified within a borehole, the

impacted cuttings will be drummed and transported to the Envirotech, Inc. Landfarm in Hilltop, New Mexico.

REMEDIATION

Williams will prepare a report documenting all field activities and describing results. The report will include site maps and a table of laboratory analytical results. Based on the results of the delineation, Williams will propose an appropriate remediation strategy.

LTE appreciates the opportunity to provide this proposed work plan to the NMOCD. If you have any questions or comments regarding this plan, do not hesitate to contact me at (970) 385-1096 or via email at aager@ltenv.com or Aaron Galer at Williams at (801) 584-6746 or Aaron.Galer@Williams.com.

Sincerely,
LT ENVIRONMENTAL, INC.

Ashley L. Ager

Ashley Ager
Senior Geologist

Attachments
Figure 1 – Site Map
Table 1 – Soil Analytical Results

FIGURE

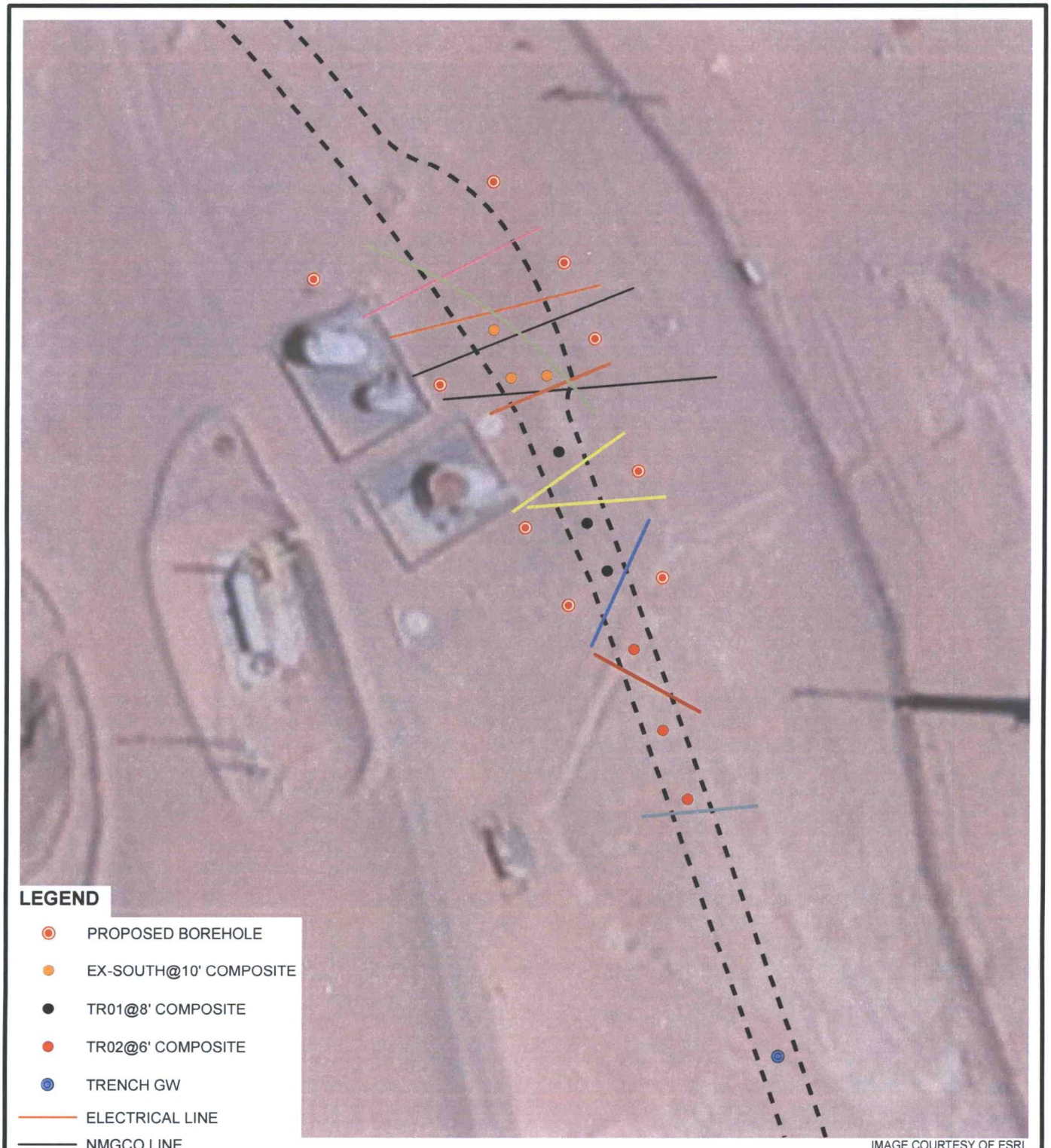


FIGURE 1
SITE MAP
KUTZ GAS PLANT
NWNW SEC 13 T28N R11W
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FOUR CORNERS LLC

P:\Williams Four Corners\GIS\MXD\034017003_KUTZ\034017003_KUTZ_FIG01_SITE_171110.mxd

TABLES

TABLE 1
SOIL ANALYTICAL 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 analyzed by EPA method 8021B
DRO - diesel range organics analyzed by EPA Modified Method 8015M/D
GRO - gasoline range organics analyzed by EPA Modified Method 8015D
mg/kg - milligrams per kilogram
MRO - motor oil range organics analyzed by EPA Modified Method 8015M/D
NMOCD - New Mexico Oil Conservation Division ppm - parts per million
NE - not established
TPH - total petroleum hydrocarbons
< - indicates result is less than the stated laboratory reporting limit
BOLD indicates result exceeds applicable standard

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

November 14, 2017

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

RE: Kutz GCNM ROW

OrderNo.: 1711594

Dear Kijun Hong:

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

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

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

Hall Environmental Analysis Laboratory, Inc.

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

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

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

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

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

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

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

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

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711594**

14-Nov-17

Client: Williams Four Corners

Project: Kutz GCNM ROW

Sample ID	**MB-34942**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**34942**	RunNo:	**47043**					
Prep Date:	**11/10/2017**	Analysis Date:	**11/10/2017**	SeqNo:	**1501826**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-34942**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**34942**	RunNo:	**47043**					
Prep Date:	**11/10/2017**	Analysis Date:	**11/10/2017**	SeqNo:	**1501827**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.6	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711594**

14-Nov-17

Client: Williams Four Corners

Project: Kutz GCNM ROW

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

Sample ID **MB-34939**	SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **PBS**	Batch ID: **34939**			RunNo: **47029**					
Prep Date: **11/10/2017**	Analysis Date: **11/10/2017**			SeqNo: **1500664**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		101	70	130			

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

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711594**

14-Nov-17

Client: Williams Four Corners

Project: Kutz GCNM ROW

Sample ID **MB-34930**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **34930**	RunNo: **47044**
Prep Date: **11/9/2017**	Analysis Date: **11/10/2017**	SeqNo: **1501473** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		108	15	316			

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

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711594**

14-Nov-17

Client: Williams Four Corners

Project: Kutz GCNM ROW

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

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

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

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

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

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

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

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

Reviewed By: 11/10/17

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Courier		

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

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

Chain-of-Custody Record

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

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

Turn-Around Time:
☐ Standard ☒ Rush same day, EOD 11-10-17 needed by
Project Name: Kutz GCNM ROW
Project #:
Project Manager: Williams - Kijun Hong
LTE - Danny Burns 701-570 (cell) -4727
Sampler: D Burns
On Ice: ☒ Yes ☐ No
Sample Temperature: 3.8 + 0.1 = 3.9

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

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

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

Courier

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

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 12/7/17 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number NCS1729626631 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District III office in Aztec on or before N/A. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

- Nominal detection limits for field and laboratory analyses must be provided.

- Composite sampling is not generally allowed.

- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us