

AE Order Number Banner

Report Description

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App Number: pVF1726437775

3RP - 1054

WILLIAMS FOUR CORNERS, LLC

2/9/2018

3R-1054

Williams Lowery Tank Battery

C-141 Remediation Plan

January 2018

State of New Mexico Energy Minerals and Natural Resources

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

OIL CONS. DIV DIST. 3 Form C-141 Revised August 8, 2011

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

Release Notification and Corrective Action

	OPERATOR	\boxtimes	Initial Report (Subsequent)	Final Report
Name of Company Williams Four Corners LLC	Contact	Aaron Ga	ler	
Address 1755 Arroyo Drive, Bloomfield, NM 87413	Telephone N	No. 801-584	-6746	
Facility Name Lowery Tank Battery	Facility Typ	e Storage	Fank	

Surface Owner State of New Mexico Lands Mineral Owner API No.

LOCATION OF RELEASE

Unit Letter I	Section 16	Township 26N	Range 6W	Feet from the	North/South Line	Feet from the	East/West Line	County Rio Arriba
------------------	---------------	-----------------	-------------	---------------	------------------	---------------	----------------	----------------------

Latitude 36.484182 Longitude -107.465462

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release Unknown	Volume Recovered Unknown
Source of Release Below-grade tank	Date and Hour of Occurrence	Date and Hour of Discovery
	03/26/2013; 9:00 AM	03/26/2013; 9:00 AM
Was Immediate Notice Given?	If YES, To Whom?	
Yes No X Not Required	1	
By Whom?	Date and Hour	
Was a Watercourse Reached?	If YES, Volume Impacting the Wat	tercourse.
🗌 Yes 🛛 No		
If a Waterpaying was Impacted Describe Fully *		
If a watercourse was impacted, Describe Funy.		
Describe Cause of Problem and Remedial Action Taken * During remov	al/replacement of a below-grade tank f	rom the location hydrocarbon impacted
soils were encountered. An investigation of the area beneath the below-g	rade tank was performed to determine	the extent of hydrocarbon impacts. No
remedial action has taken place at the location. The replacement below-	rade tank has not been installed at this	time.
9/12/2017 Update: Please see the attached Remediation Plan and Condition	ions of Approval, as requested.	
1/23/2018 Update: Please see the attached Remedial Assessment Wo	rk Plan.	
Describe Area Affected and Cleanup Action Taken.* The investigation f	indings are documented in the attached	Investigation Report. Additional actions
are proposed as documented in the attached Supplemental Site Investigation	tion & Corrective Action Work Plan. It	should be noted that groundwater was not
encountereu during me investigation.		
9/12/2017 Update: Please see the attached Remediation Plan and Conditi	ons of Approval, as requested.	
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Fields, Vanessa, EMNRD

From:	Fields, Vanessa, EMNRD
Sent:	Friday, February 9, 2018 1:40 PM
То:	'Galer, Aaron'; Webre, Matt; 'Hong, Kijun'; Bohannon, Jodi
Cc:	Martin, Ed; Foley, Brandon M.; Perrin, Charlie, EMNRD; Powell, Brandon, EMNRD; Smith,
	Cory, EMNRD
Subject:	RE: Lowery Tank Battery Status

Aaron,

OCD has approved Williams proposed delineation plan for the Lowery Tank Battery received hardcopy on January 26, 2018 with the following conditions of approval. These conditions of approval will be attached to the hard copy.

Conditions of Approval:

- Following the NMOCD Guidelines for Remediation's of Leaks, Spills and Releases the remediation's levels for soils at the Lowery Tank Battery are as follows 10 mg/kg Benzene, 50 mg/kg BTEX and 100 mg/kg TPH
 - 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.
 - Delineation must be completed by April 9, 2018.
 - Horizontal delineation of soil impacts 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; C6 thru C36). Soil sampling must be both within the impacted area and beyond.
 - Vertical delineation of soil impacts 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; C6 thru C36), 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 the sites closure standards must be demonstrated as existing above the water table.
 - Composite sampling will not be allowed for delineation.
 - 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

From: Fields, Vanessa, EMNRD [mailto:Vanessa.Fields@state.nm.us]
Sent: Tuesday, January 16, 2018 1:55 PM
To: Galer, Aaron <<u>Aaron.Galer@Williams.com</u>>; Webre, Matt <<u>Matt.Webre@Williams.com</u>>
Cc: Powell, Brandon, EMNRD <<u>Brandon.Powell@state.nm.us</u>>; Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>>; Foley, Brandon M. <<u>bfoley@slo.state.nm.us</u>>
Subject: RE: Lowery Tank Battery Status

Aaron,

Thank you for the report. After a quick review of LTE's report it was noted that all three water samples were destroyed during shipment to Hall Laboratory. I was unware that this occurred. Why was the OCD not notified that this occurred and why was new water samples not collected.

Please let me know.

Vanessa Fields Environmental Specialist Oil Conservation Division Energy, Minerals, & Natural Resources 1000 Rio Brazos, Aztec, NM 87410 (505)334-6178 ext 119 Cell: (505) 419-0463 vanessa.fields@state.nm.us

From: Fields, Vanessa, EMNRD
Sent: Tuesday, January 16, 2018 12:56 PM
To: 'Galer, Aaron' <<u>Aaron.Galer@Williams.com</u>>; 'Webre, Matt' <<u>Matt.Webre@Williams.com</u>>
Cc: Powell, Brandon, EMNRD <<u>Brandon.Powell@state.nm.us</u>>; Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>>; 'Foley, Brandon M.' <<u>bfoley@slo.state.nm.us</u>>
Subject: RE: Lowery Tank Battery Status

Good afternoon Aaron,

As per the conditions of approval for the Lowery Tank Battery Williams would submit the finding of the delineation, along with the report including corrective actions to the OCD by January 14, 2018. As of today, I have not received this report.

Could you please let me know when the report will be submitted to the OCD.

Thank you,

Vanessa Fields

Thank you,

Vanessa Fields Environmental Specialist Oil Conservation Division Energy, Minerals, & Natural Resources 1000 Rio Brazos, Aztec, NM 87410 (505)334-6178 ext 119 Cell: (505) 419-0463 vanessa.fields@state.nm.us

From: Fields, Vanessa, EMNRD
Sent: Thursday, November 9, 2017 2:36 PM
To: 'Galer, Aaron' <<u>Aaron.Galer@Williams.com</u>>; Webre, Matt <<u>Matt.Webre@Williams.com</u>>
Cc: Martin, Ed <<u>emartin@slo.state.nm.us</u>>; Foley, Brandon M. <<u>bfoley@slo.state.nm.us</u>>; Perrin, Charlie, EMNRD<<<u>charlie.perrin@state.nm.us</u>>; Perrin, Charlie, EMNRD <<u>charlie.perrin@state.nm.us</u>>; Powell, Brandon, EMNRD<<<u>Brandon.Powell@state.nm.us</u>>; Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>>;
Subject: RE: Lowery Tank Battery Status

Good afternoon Aaron,

The OCD has set up a conference call with the State Land office on Tuesday November 14, 2017 at 1:00 pm. and request Williams be in attendance so we can all get on the same page with the necessary access agreements required for delineation on the Lowery Tank Battery.

Williams is welcome to join the OCD at the District III office for the conference call, and/or may call in from a remote area.

A conference line and code will be provided on Monday November 13, 2017 .

Thank you,

Vanessa Fields Environmental Specialist Oil Conservation Division Energy, Minerals, & Natural Resources 1000 Rio Brazos, Aztec, NM 87410 (505)334-6178 ext 119 Cell: (505) 419-0463 vanessa.fields@state.nm.us

From: Galer, Aaron [mailto:Aaron.Galer@Williams.com]
Sent: Monday, November 6, 2017 10:19 AM
To: Fields, Vanessa, EMNRD <<u>Vanessa.Fields@state.nm.us</u>>
Cc: Foley, Brandon M. <<u>bfoley@slo.state.nm.us</u>>; Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>>
Subject: RE: Lowery Tank Battery Status

Aaron,

OCD has approved Williams proposed delineation plan for the lowery Tank Battery received via email 8/29/17 with the following conditions of approval. These conditions of approval will be attached to the hard copy when received.

Conditions of Approval:

- Following the NMOCD Guidelines for Remediation's of Leaks, Spills and Releases the remediation's levels for soils at the Lowery Tank Battery are as follows 10 mg/kg Benzene, 50 mg/kg BTEX and 100 mg/kg TPH
 - 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.
 - Delineation must be completed by November 11, 2017.
 - Horizontal delineation of soil impacts 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; C6 thru C36). Soil sampling must be both within the impacted area and beyond.
 - Vertical delineation of soil impacts 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; C6 thru C36), 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 the sites closure standards must be demonstrated as existing above the water table.
 - Composite sampling will not be allowed for delineation
 - 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).
 - Within 30 days of completion of delineation Williams will submit to the OCD a delineation report and proposed alternative remediation plan.

Please let me know if you have any questions.

Thank you,

This email originates outside of Williams. Use caution if this message contains attachments, links or requests for information.



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

Remedial Assessment Work Plan Lowery Tank Battery

Lowery Tank Battery Rio Arriba County, New Mexico

January 18, 2018

Prepared for:



Williams Four Corners LLC

Prepared by:

APTIM Environmental & Infrastructure, Inc.

6380 South Fiddlers Green, Suite 310 Greenwood Village, CO 80111 United States www.APTIM.com_ Lowery Remedial Assessment Work Plan Lowery Tank Battery Rio Arriba County, New Mexico January 18, 2018



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LT Environmental, Inc.

848 East 2nd Avenue Durango, Colorado 81301 10.385 1096 - F 303.433 1432

January 12, 2018

Ms. Vanessa Fields New Mexico Oil Conservation Division 1000 Rio Brazos Road Aztec, New Mexico 87410

RE: Subsurface Investigation Report Williams Four Corners LLC Lowery Tank Battery Rio Arriba County, New Mexico

Dear Ms. Fields:

LT Environmental, Inc. (LTE), on behalf of Williams Four Corners LLC (Williams), presents this report documenting investigation of the subsurface soil at the Lowery Tank Battery (Site). The release source was unknown, but was likely a historical unlined production pit. Initial remediation and delineation activities are detailed in the previously submitted *Limited Site Investigation – Lowery Tank Battery*, dated September 3, 2013 by Southwest Geoscience, and in the *Interim Corrective Action and Supplemental Environmental Site Investigation Report*, dated June 16, 2015 by Apex TITAN. This report describes additional soil delineation efforts and associated soil analytical results.

SITE DESCRIPTION AND HISTORY

The Site is in the northeast quarter of the southeast quarter of Section 16, Township 26 North, and Range 6 West in Rio Arriba County, New Mexico, as depicted on Figure 1. The Site currently consists of one 400-barrel (bbl) condensate/produced water tank, one 250-bbl below grade tank, two polyethylene tanks containing glycol and methanol, and all are located within a lined secondary containment. Based on the New Mexico Oil Conservation Division (NMOCD) site ranking of 30, the following remediation action levels apply: 10 milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for total benzene, toluene, ethylbenzene, and xylenes (BTEX), and 100 mg/kg for total petroleum hydrocarbons (TPH).

While moving a below-grade tank at the Site in early 2013, Williams observed petroleum hydrocarbon-impacted soil under the tank. The observed impact was believed to be from the historical unlined pit. A limited environmental site investigation and excavation was conducted during March 2013.

SOIL SAMPLING

The site investigation occurred from December 11 to December 14, 2017. LTE advanced eight soil borings (SB-16 through SB-23) utilizing a CME 55 truck mounted hollow-stem auger drill rig





Fields, V. Page 2

in and around the release location and collected field screened samples every 5 feet of continuous drilling. The soil borings were advanced to depths between 40 and 50 feet below ground surface where refusal was encountered or no hydrocarbon soil impacts were observed. Samples were screened in the field for volatile organic compounds (VOCs) using a photo-ionization detector (PID) equipped with a 10.6 electron volt lamp per methods in accordance with the NMOCD Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993. Soil samples with the highest PID values and a sample from the bottom of each borehole were submitted for confirmation laboratory analysis. The soil samples were collected directly into pre-cleaned glass jars, labeled with location, date, time, sampler, 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 using United States Environmental Protection Agency (USEPA) Method 8021 and TPH-gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO) per USEPA Method 8015. A Site Map with soil boring locations is depicted on Figure 2.

During the delineation activities, groundwater was encountered in SB-16 and SB-21; groundwater was not observed in any other soil borings. A groundwater sample could not be collected from SB-16 before a temporary well could be set, as the borehole collapsed. Groundwater was encountered in SB-21 at approximately 45 feet below ground surface. A groundwater grab sample was collected from SB-21 using a disposable bailer and submitted to Hall for analysis of BTEX; however, all three sample containers were destroyed during shipment via courier to Hall and no laboratory analysis was completed. No groundwater data are available from this investigation. Soil boring logs are included as Attachment 1.

RESULTS

Sixteen soil samples were collected and submitted for laboratory analysis between December 11 and December 14, 2017, from soil borings SB-16 through SB-23. PID values from field-screened soil ranged from 0 parts per million (ppm) in soil borings SB-18 and SB-19 to 2,850 ppm in SB-16.

Laboratory analytical results indicated that total BTEX and total TPH concentrations from soil samples SB-16 @ 25'- 30', SB16 @ 47'- 50', SB21 @ 33'- 35', and SB-22 @ 28' – 30' exceeded the applicable NMOCD remediation action levels for this Site. All remaining soil samples submitted for analysis were in compliance with the NMOCD remediation action levels for benzene, total BTEX, and total TPH. The analytical results are presented on Figure 3 and are summarized in Table 1 with the field data. The complete Hall laboratory analytical reports are included as Attachment 2.

CONCLUSIONS

Based on the analytical results from the soil investigation indicating presence of soil exceeding NMOCD remediation action levels, as well as observation of groundwater in two of the boreholes,





Fields, V. Page 3

Williams will submit an additional work plan to completely define the extent of the impacted soil and groundwater.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Danny Burns Project Geologist

Attachments:

Ashley L. ager

Ashley Ager, M.S., P.G. Senior Geologist, V.P.

Figure 1 – Location Map Figure 2 – Site Map Figure 3 – Soil Sample Analytical Results Table 1 – Soil Analytical Results Attachment 1 – Soil Boring Logs Attachment 2 – Laboratory Analytical Reports



FIGURES





TABLE









Lowery Remedial Assessment Work Plan Lowery Tank Battery Rio Arriba County, New Mexico January 18, 2018



1.0 INTRODUCTION

1.1 BACKGROUND

In December 2017, the State of New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division (NMOCD) approved the "Interim Corrective Action and Supplemental Environmental Site Investigation Report" dated June 16, 2015 and authorized Williams Field Services LLC (Williams) to proceed with the proposed delineation activities at the Lowery Tank Battery site in Rio Arriba County, New Mexico. **Figure 1** presents a site location map. Investigation conducted by Williams has identified soil contamination originating from the former 250 bbl below-grade tank (BGT) at the site which has the potential to impact the groundwater. **Figure 2** presents a site map with locations of borings completed to date. Impacted soil has been observed over 250 feet downgradient of the release area. The primary contaminants of concern (COCs) are benzene; total benzene, toluene, ethylbenzene, xylenes (BTEX); total petroleum hydrocarbons-gasoline range organics (TPH-GRO), TPH-diesel range organics (TPH-DRO; and total TPH.

In response to the detection of the release, Williams initiated assessment activities.

- In 2013, impacted soils were discovered while removing a 250 bbl BGT associated with natural gas gathering;
- In November 2013, approximately 954 cubic yards of TPH and BTEX impacted soil were removed from the area beneath the former BGT. The impacted soil was transported to the Envirotech, Inc. landfill located near Hilltop, New Mexico for final disposition;
- In June 2015, Williams submitted "Interim Corrective Action and Supplemental Environmental Site Investigation Report" to NMOCD which summarized previous activities and outlined plans for assessment and corrective action;
- In August 2017, the NMOCD inquired on the progress of the project. The NMOCD subsequently approved the proposed delineation plan with the stipulation that the work was to be competed in 30-days;
- In December 2017, approval was received from the New Mexico State Land Office to proceed with the NMOCD required soil delineation. The phase II delineation activities were conducted the following week which included the collection of soil samples from borings SB-16 through SB-23. Groundwater was encountered at two of the soil borings;
- As of January 2018, the distal and west lateral extents of the impacted soil and groundwater were not delineated.

Additional activities are recommended to complete the delineation of COCs in the soil and determine the nature and extent of the COCs in the shallow aquifer.

1.2 OBJECTIVES

Based on the NMOCD site ranking of 30, the following remediation action levels apply: 10 milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for total BTEX, and 100 mg/kg for total petroleum hydrocarbons (TPH). This Work Plan was prepared with the following objectives:

- Delineate the horizontal and vertical extent of impacted soils originated from the former 250 bbl BGT;
- Delineate the groundwater contamination;
- Collect data to support remedial planning efforts.

Lowery Remedial Assessment Work Plan Lowery Tank Battery Rio Arriba County, New Mexico January 18, 2018



2.0 SCOPE OF WORK

2.1 SCOPE DEVELOPMENT

As a result of excavation and prior assessment activities, the following key observations were made:

- Elevated concentrations of benzene, total BTEX, TPH-GRO, TPH-DRO and Total TPH exceeding the NMOCD action levels were detected in the soil;
- Impacted soil extends down to the water table adjacent to the release area (SB-16);
- While groundwater is not readily apparent in many of the soil borings, the presence of hydrocarbons in subsurface soil at distances from the source appears indicative of contaminant migration with intermittent presence of groundwater;
- The extent of hydrocarbons is delineated to the north and east extents;
- Groundwater was only observed at two soil borings; SB-16 at 49 feet bgs and SB-21 at 40 feet bgs;
- The lithology in the impacted areas included unconsolidated silts, sands, and clay. The sands, silty sands become compacted and semi-consolidated below 45 to 50 feet.

2.2 SOIL BORINGS

The delineation of hydrocarbons in the soil will be completed through the advancement of soil borings, soil sampling, and laboratory analysis. The locations of the proposed borings are presented on **Figure 3**. Locations were selected based on the previous soil boring data. Final locations will be determined in the field.

Specifically, the scope of work includes:

- The locations for the proposed borings and monitoring wells will be marked and utility location notifications performed;
- Five soil borings (**Figure 3**) will be installed to an approximate total depth of 50 feet bgs (to saturated soils). Drilling will be advanced using best available techniques to obtain adequate samples and observe unsaturated and saturated lithology;
- The soil column from each soil boring will be screened for VOC vapors using a PID and the lithology logged;
- At each boring location, samples will be continuously sampled for logging and field screening purposes. Two soil samples from each boring will be submitted for laboratory analysis. One soil sample from the 5foot interval with the highest recorded PID reading and one from the 5-foot interval adjacent to the water table will be submitted to the laboratory for BTEX analysis using method 8260B and TPH-GRO (C6-C10), TPH-DRO (C10-C20), and TPH-MRO (C28-C40) using method 8015.

2.3 MONITORING WELLS

Because groundwater has not been readily apparent in many historic borings, monitoring wells will be installed to evaluate the potential impact to groundwater. The locations for the proposed monitoring wells is presented on **Figure 4**. Four of the five new soil borings will be completed as monitoring wells and four prior boring locations will be recompleted as monitoring wells. The final locations will be determined based on the ability to safely access the locations with drilling equipment given the terrain and the results of the field screening at the proposed soil boring locations.



Impacted soil was observed extending to the underlying groundwater beneath the release area at soil boring SB-16. Groundwater has been observed at soil borings SB-16 and SB-21, but no analytical data for the groundwater is available.

The depth to groundwater will be recorded to determine the direction of groundwater flow and the hydraulic gradient. The wells are anticipated to be completed at an approximate depth of 5 feet below the water table (observed water). The actual depth of the wells will be based on the observations of the geologist onsite.

Specifically, the scope of work includes:

- The locations for the proposed monitoring wells will be marked and utility location notifications performed;
- Groundwater monitoring wells are proposed based on the available data and include the following:
 - MW-1 will be installed near existing SB-16 to monitor COC concentrations near the source areas.
 - MW-2 will be installed between existing SB-19 and SB-22 to monitor COC concentrations to the east.
 - MW-3 will be installed near existing SB-21 to monitor COC concentrations where elevated concentrations were observed in the soil column.
 - o MW-4 will be installed near existing SB-23 to monitor COC concentrations to the southeast.
 - MW-5 will be installed to the northwest of former SB-13 to monitor COC concentrations to the west.
 - MW-6 and MW-7 will at the two proposed soil boring locations to the south to monitor COC concentrations near the distal extent of the plume.
- The anticipated total depth of the monitoring wells is 50 feet bgs or a minimum of 5 feet below the measured water table.
- Drilling will be advanced using best available techniques to obtain adequate samples and observe unsaturated and saturated lithology;
- Wells will be constructed as follows:
 - o 2-inch diameter, schedule 40 PVC casing,
 - o 5 feet of 2-inch diameter, 0.010-inch machine slotted, schedule 40 PVC well screen,
 - 20/40 silica filter sand extending from terminus of the borehole to 2 feet above the top of the well screen,
 - A minimum of 2 feet of bentonite chip annular seal on top of the filter pack,
 - Fill the remaining annulus space with bentonite grout or chips to 1 foot from the surface,
 - Installation of either flush-mount or well box surface completion.
- The monitoring wells will be developed to improve the hydraulic communication between the well and the surrounding formation; and,
- The wells will be surveyed to the site benchmark.

2.4 GROUNDWATER SAMPLING

Groundwater sampling activities will be performed a minimum of 2 weeks following well installation and development. This time period will allow the formation to equilibrate following the disturbance and assure the potentiometric surface and groundwater samples are representative of the site condition.

Specifically, the scope of work includes:

Lowery Remedial Assessment Work Plan Lowery Tank Battery Rio Arriba County, New Mexico January 18, 2018



- Recording the depth to groundwater (and LNAPL if present) in all monitoring wells using an interface probe capable of measuring to 0.01 feet;
- Purging each well of three well volumes;
- Collecting groundwater samples and analyzing the samples for BTEX using method 8260B and TPH-GRO (C6-C10), TPH-DRO (C10-C20), and TPH-MRO (C28-C40) using method 8015M;
- Collect groundwater samples from all monitoring wells for biological process parameters. Parameters to be measured in the field include oxidation-reduction potential (ORP), pH, temperature, conductivity, dissolved oxygen (DO), and ferrous iron. Additional parameters to be included and analyzed by the laboratory include alkalinity, nitrate, sulfate, and manganese.

One blind duplicate sample will be collected during each sampling event. The duplicate sample will be analyzed for the same chemical suite as the record samples. Each sample cooler will contain a trip blank that will be analyzed for BTEX. Samples will be maintained under chain-of-custody procedures and delivered to the designated laboratory.

2.5 DECONTAMINATION

All equipment that has the potential to come into contact with the sample media will be decontaminated prior to and following use. This includes, but is not limited to, hand auger, discrete samplers, mixing bowls, etc.

Decontamination of the groundwater samplers, sample rods, hand auger, and small sampling equipment will be conducted using new 5-gallon buckets or equivalent to contain decontamination fluids. Equipment will be cleaned using an Alconox/water solution, then rinsed with deionized (DI) water prior to and following use.

Decontamination fluids will be changed frequently based on visual observation. Waste decontamination fluids will be placed in an appropriately labeled 55-gallon drum for temporary storage

2.6 REPORTING

Within 30 days following receipt of final analytical results for these delineation activities, a delineation report will be prepared and will include description of activities performed, figures of soil analytical results, figures of groundwater flow and analytical results, along with proposed plans for additional delineation actions required.

Lowery Remedial Assessment Work Plan Lowery Tank Battery Rio Arriba County, New Mexico January 18, 2018



3.0 IMPLEMENTATION SCHEDULE

The schedule is anticipated to be sequenced in the following manner upon approval:

- 1. Soil boring and monitoring well installation initiated within 30 days following authorization to proceed.
- 2. Monitoring well sampling approximately 14 days following well installation.
- 3. Delineation Reporting and Preliminary Remedial Design within 30 days following receipt of final analytical results.









TABLE 1 SOIL ANALYTICAL RESULTS

LOWERY TANK BATTERY RIO ARRIBA 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)
				Bo	rehole Samp	les					
SB-16 @ 25' - 30'	12/11/2017	2,850	0.71	25	4.4	57	87.11	1,500	350	<46	1,850
SB-16 @ 47' - 50'	12/11/2017	1,601	11	51	7.5	75	144.5	3,000	68	<49	3,068
SB-17 @ 0' - 5'	12/11/2017	1.9	< 0.023	< 0.047	< 0.047	< 0.093	< 0.210	<4.7	<9.7	<48	<62.4
SB-17 @ 40' - 45'	12/11/2017	0.2	< 0.023	< 0.047	< 0.047	< 0.093	< 0.210	<4.7	<9.1	<45	<58.8
SB-18 @ 13' - 15'	12/14/2017	0	< 0.024	< 0.049	< 0.049	< 0.097	< 0.219	<4.9	<9.5	<48	<62.4
SB-18 @ 38' - 40'	12/14/2017	0	< 0.023	< 0.046	< 0.046	< 0.091	< 0.206	<4.6	<9.9	<50	<64.5
SB-19 @ 23' - 25'	12/15/2017	1.2	< 0.024	< 0.049	< 0.049	< 0.097	< 0.219	<4.9	<9.5	<48	<62.5
SB-19 @ 43' - 45'	12/15/2017	0	< 0.024	< 0.048	< 0.048	< 0.095	< 0.215	<4.8	<9.6	<48	<62.4
SB-20 @ 35' - 40'	12/11/2017	2,269	< 0.024	< 0.047	< 0.047	< 0.095	< 0.213	9.6	<9.1	<46	9.5
SB-20 @ 40' - 45'	12/11/2017	558	< 0.024	< 0.047	< 0.047	< 0.095	< 0.213	<4.7	<9.5	<47	<61.2
SB-21 @ 33' - 35'	12/14/2017	2,038	2.5	30	5.0	48	85.5	2,400	55	<47	2,455
SB-21 @ 43' - 45'	12/14/2017	346	< 0.023	< 0.047	< 0.047	0.13	0.13	<4.7	<10	<50	<64.7
SB-22 @ 28' - 30'	12/15/2017	1,425	0.51	<0.48	1.0	7.9	9.41	1,200	42	<47	1,242
SB-22 @ 33' - 35'	12/15/2017	24.1	< 0.023	< 0.047	< 0.047	< 0.094	< 0.211	<4.7	<9.4	<47	<61.1
SB-23 @ 18' - 20'	12/14/2017	4.1	< 0.024	< 0.049	< 0.049	< 0.098	< 0.220	<4.9	<9.3	<47	<61.2
SB-23 @ 43' - 45'	12/14/2017	0	< 0.025	< 0.050	< 0.050	< 0.099	< 0.224	<5.0	<10	<50	<65.0
NMOCD Closure Cr	iteria	NE	10	NE	NE	NE	50	NE	NE	NE	100

NOTES:

BTEX - benzene, toluene, ethylbenzene, total xylenes

DRO - diesel range organics

GRO - gasoline range organics

MRO - motor oil range organics

mg/kg - milligrams per kilogram

NMOCD - New Mexico Oil Conservation Division

NE - not established

ppm - parts per million

TPH - total petroleum hydrocarbons

 \leq - indicates result is less than the stated laboratory reporting limit

BOLD indicates result exceeds applicable standard



ATTACHMENT 1

SOIL BORING LOGS



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Casing Type: Schedule 4	0 PVC						Diameter:	Length: 2"	Hole Diameter: 7,5	Depth to Liquid:
Screen Type: Schedule 4	0 PVC		Slot: 0.0	10"			Diameter:	Length: 2"	Total Depth: 50	Depth to Water: 49
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					49					+	
					50					-	
				×	51					- - -	
					52					+	
					53					+	
					54					Ŧ	
					55					+	
					57						
					58					+	
					59					Ť	

			LE?	Compliance E LT Environme 848 E. 2nd Av Durango, Cole	ingineering _« Rem ental, Inc. e orado 81301	nediation
		Bori	ORING LOG/MO	DNITORING W	ELL COMPLETIO	N DIAGRAM
and for some star		Date	· 12/15/1-	. 14	Lowery Tan	k Battery
	and the second	Log	ged By:	rroll	Drilled By:	014
Elevation: Detector: 6,450	PID	Drill	lling Method: Hollow Ster	m Auger	Sampling Method: Continuous/S	plit Spoon
Gravel Pack: 10-20 Silica Sand Casing Type:		Seal: Be	l: Bentonite Chips meter: Le	ngth:	Grout: Bentonite Slurry Hole Diameter:	Depth to Liquid:
Schedule 40 PVC	Slot:	Dian	2" meter: Let	N/A	Total Depth:	NA Depth to Water:
Schedule 40 PVC	0.010"		2"	MA	45	N/B
Penetratio Resistanc Moisturv Content Vapor (pp Staining	Depth Sample (ft. bgs.) Run	Recover. Soil/Roc	Type	Lithology/Rem	arks	- Well Completion
pry 0.0 NP		5	loose, 1	t brown, med	- fn Sand -	-
		50%	No	Stain/odor		- - -
	5					-
	6		SAA	ł	-	_
Dry 0.0 NP	8 - 2	\$ 5	PNO	Stain /od	pr -	
	9 +	R			-	-
		+-	- Famo		meden	-
	12		Sand	icoj i orown	-	
Dry O.O NO		10 3	No Ste	nin/adar		
	14 15				-	

							-		Boring/Well #	SB-19	
P	F/	Comp	liance "	Engine	ering "	Remedia	atio	n	Project:	Lowery Tank Batter	у
		LT En	vironn	nental,	Inc.				Project #	034017014	
Denetration	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery '	Soil/Rock Type	Litho	logy/Remarks	Well Completion
	Dry	0.0	No	2 - A	15 16 17 18 19	4	100%	SM- Si ²	O Compact, o Sano ¹ NO Stain,	lark brown, Silby	
	Dry	1.2	MO	23' -25' 10:00	20 21 22 23 24 25	5	000%	5M-	SAA No Stain,	lodor	
	Dγ	0.0	No		26 27 28 29 30	5	100 V =	5.m- 59	Compace dari W/ White me No Stair	k brown Silby Sand octions Woder	
) M	0.0	No		31 32 33 34 35	7	00 20	5M- 5P	SAA NO Stain/	Odor -	
					36 37	8		sm- sP	SAA	24	

			_								
		Co	Kanaa	Frantis		0			Boring/Well #	Lowery Topk Better	
	12	LTE	liance "	Engine	ering	Kemedia	atio	п	Project #	034017014	y
		LIEN	vironn	nental,	INC.				Date		
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Litho	ology/Remarks	Well Completion
					_3/						
	moist	0.0	NO		38 39 40	8	100%	51	NO Stain,	Podor 10dor	-
					41	-		×	1005e 16 bro	wn course sand	-
	moist	0.0	NP	43'- 45' 10:45	42 43 44 45 46 47 48 49 50 51 52	9	800		NO Star	in/odo;	
					52 53 54 55 56 57 58 59						

		er H					Ľ	P	Compliance T Environm 248 E. 2nd A Durango, Col	Engineering _* Ren ental, Inc. ve lorado 81301	nediation
							BORI	NG LOG/MO	NITORING W	ELL COMPLETIO	ON DIAGRAM
				4.2 Con 15			Boring/We	Il Number: SB -	20	Project: Lowery Tan	k Battery
and the second		and a second s	linte de la com	2.6	S.A.		Date:	12/11/17		Project Number: 034017	7014
				-30 Ja	e Anglesto - G	2000	Logged By	Eric Car	roll	Drilled By: Geon	nat
Elevation: 6,45	0	Detector:	2 Mar of some second data	PID			Drilling Me	thod: Hollow Sterr	Auger	Sampling Method: Continuous/S	plit Spoon
Gravel Pack:	a Sand						Seal: Bentor	ite Chips		Grout: Bentonite Slurry	
Casing Type:	IO PVC		_				Diameter:	Len	ath:	Hole Diameter:	Depth to Liquid:
Screen Type:			Slot:	10			Diameter:	Leng	th:	Total Depth: 45'	Depth to Water:
	Ê		0.0	10					1011		
Penetratio Resistanc Moisture	Vapor (ppr	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type		Lithology/Rer	narks	Well Completion
				0				10050, b.	rown med	En Sand -	
Moise	17,1	No		1 2 3 4 5	7	80%	SP	NO 56	ain/odor		
Dry	12,1	NO		6 7 8 9	2	70%	SP	Compact No St	, it brown,	Med-fn Sand	
Dry	10.1	N/10		11 12 13 14 15	3	100 %	58	1004e, 18 No 5	brown, fn	Sand	

		Comp	lianco	Engine	oring	Ramadi	atio		Boring/Well #	58-20 Lowery Tank Batter	v
1	Z	LTEn	vironn	nental.	Inc.	nemeuk	100	//	Project #	034017014	
									Date	12/11/17	
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Litho	ology/Remarks	Well Completion
	Dry	8.7	NO		15 16 17 18 19 20 21 22 23 24 25	- 4	100% 80%	5P 5P	Compact, 1t No Stain SAA NO Stain	brown, Med-sn sand lodor	
	Dry	G.7 9.5	Nο		26 27 28 29 30 31 32 33 34 35 36	7	100%	sP SP	Very compace, Fn Sand W/ NO Stain/ Compace, It Purple motellin NO Stain/oc	It reddisn brown tnin Shale lenses Odor reddish brown fn Sand 9 doc	
					37					Ī	

	-								Paring (Wall #	5 4 2 2	
IT		Compl	ianca	Engine	orina	Romodia	itio		Project:	Lowery Tank Battery	/
	Z	IT Fn	vironn	Liiyiiit Vantal	Inc	nemeula	1110	"	Project #	034017014	
			an onn	iciitai,	л				Date	12/11	
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Litho	ology/Remarks	Well Completion
					31				Company It an		
	Dry	2269	үе5 111	35-40	38 39 40	-		5p 5p	Sand. Green Stain, S.	light odor Silby Sand	- - - - -
p)ry	558	NO	40-45	41 - 42 - 43 - 44 -			5p 5w- 5p	NO Stain/ SI Compace dark NO Stain, SI	ight odor red Silby Sand ight odor	
					46 47 48 49 50 51 52 53 54 55 56 57 58 59						

		ie)					Ľ	Compliance LT Environm 848 E. 2nd Au Durango, Col	Engineering " Ren ental, Inc. ve lorado 81301	nediation
							BORI	NG LOG/MONITORING W	ELL COMPLETIC	ON DIAGRAM
		si de la construcción Si de la construcción de la constru		2. Pront		196	Boring/We	11 Number: 5B - 21	Project: Lowery Tan	k Battery
and a start of the second start	1		entra po				Date:	12/14/17	Project Number: 034017	/014
	e de la composition de la comp			18 1			Logged By	Eric Carroll	Drilled By: Geor	nat
Elevation:	50	Detector:		PID			Drilling Me	Hollow Stem Auger	Sampling Method:	nlit Spoon
Gravel Pack:	ica Sand					-	Seal:	honow Stem Augu	Grout: Rentonite Slurry	pin opoon
Casing Type:	AO DVC						Diameter:	Length:	Hole Diameter:	Depth to Liquid:
Screen Type:	40 PVC		Slot:	10"	-		Diameter:	Length:	Total Depth:	Depth to Water:
Schedule	40 PVC		0.0						10	90
Penetratio Resistanc Moisture	Vapor (ppr	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Roch Type	Lithology/Ren	narks	Well Completion
					1		59	loose, it readish b Sand	vown, med-sn	-
	0.0	No		3	-	100%		NO Stain/ato	- -	-
				5	-					
				6	-	10	10	SAA	-	-
	0.0	NO		8	2	100 1		No stain/odor		-
				10 1				Compace, dork bro	river med a	
meïs	0.0	470	Ŷ	12 13 14 15	3	70%	51"	Sand Ng Stain/oder		

	pliance " nvironn	Engine nental,	ering " I Inc.	Remedia	atio	n	Boring/Well # Project: Project # Date	58-21 Lowery Tank Batter 034017014 12/14/17	y
Penetration Resistance Moisture Content Vapor	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Litho	ology/Remarks	Well Completion
	No		15 16 17 18 19 20		100 90	SP	SAA No stair	1/edor	
	Are .		20 21 22 23 24 25	5	100 %	5.M- 59	Compaze, Q Siley sand, NO Stally	are brown wigney some clay /odor	
moise 0, U	٩٥		26 27 28 29 30	ç	100%	5м- 5Р	SAA No stain,	lodos	
miii 2038	Yes		31 32 33 34 35	7	100%0	5.M- 51 ²	Compact, D Silby Sand, Staining Q Strong odd	ark red brown 32 ¹ down or	
			36 37						

							1.10	Boring/Well #	512-21	
ITE	Comp	liance "	Engine	erina "	Remedia	ntio	n	Project:	Lowery Tank Batter	у
	LTEn	vironn	nental,	Inc.				Project #	034017014	
								Date	12114/17	
Penetration Resistance Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithc	ology/Remarks	Well Completion
				37		-				
	1777	Yes		38 39 40	+ + -			Smith Stowning / s	itrang odor .	+ - -
								Guine 1.		-
	346	NO		41 42 43 44 45			5.м- Sp	Shitched to 1005e, Satur Silty Sano No Stain,	ss abed, It brown ador	-
				46 47 48 49 50 51 52 53 54 55 56 57 58				TD = 45 Water San From Suil Water It brow W/ Strong a	n cloady burbid	

							Ľ	Com LT E 848 Dura	pliance " E nvironme E. 2nd Av engo, Col	Engineering « Ren ental, Inc. ve forado 81301	nediation
L.		and the second	i Det				BORIN	NG LOG/MONIT	ORING W	ELL COMPLETIC	ON DIAGRAM
- 	5 //			2. 20A			Boring/Wel	5 <u>B-</u> 22		Project: Lowery Tan	k Battery
and the second					and and a start of the second s		Date:	12/15/17		Project Number: 034017	/014
				10 A	<u>G</u>	ood	Logged By:	Eric Carroll		Drilled By: Geom	nat
Elevation: 6,450		Detector:		PID			Drilling Me	thod: Hollow Stem Aug	ger	Sampling Method: Continuous/S	plit Spoon
Gravel Pack: 10-20 Silica	Sand						Seal: Benton	ite Chips		Grout: Bentonite Slurry	
Casing Type: Schedule 40	PVC						Diameter:	Length: 2"	NA	Hole Diameter: 7.5"	Depth to Liquid:
Screen Type: Schedule 40	PVC		Slot: 0.0)10"			Diameter:	Length: 2"	NA	Total Depth: 35 1	Depth to Water:
Penetration Resistance Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Litl	hology/Rem	narks	Well Completion
Moist	0.5	NO		0 1 2 3 4 5	1	40%	Sp	1005e lt bre NO Sta	in lodo.	ed- \$n Sand 	
	0.0	No		6 7 8 9 10	2	60 %	SP	SAA NO Sto	nin/od	lor	
Mase	6-0	Ne		11 12 13 14 15	3	100 90	5m- 5p	Compact Silty Sa NA Sta	dork 1 nd in/odo	brown	

i

										Boring/Well #	58-22	
IT		Con	npl	iance .	Engine	ering "	Remedia	atio	n	Project:	Lowery Tank Batter	у
		LTL		vironn	nental,	Inc.				Date	12/15/17	
Penetration Resistance Moisture	Content	Vapor	(mdd)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Litho	ology/Remarks	Well Completion
						15 16	-		5M-	SAA	-	-
m	015-1	D.	0	NO		17	4	70 70	Sp	NO Stail	nlodar	-
						18 - 19 -	-	1				-
						20						-
						21	-			1005e, 1t b	rown, coarse	-
mo	ist	0.0		NP		23	5	30	SP	Sand_	-	-
						24		8		NO Stair	1/10dar	-
						²⁵ 26		-		Compati red	dish brown	-
						27			5M.	Silby Sand		
me	50	1425	5	Yes	38-30'	28		-	SP	Staining @ 7	<i>в'</i>	-
						29]				strong odor	+	-
						31				Compact Das	CK bigun gub	
						32		2	5M-	Sand	Sity	
moi	SE	24.1	ž	No	33'-35'	33		100	1	Stain ends 6	31'	
						³⁴ 35				No oder	teder t	
						36						
						37						

							Ľ	Compliance « E LT Environme 848 E. 2nd Av Durango, Colo	Engineering " Ren ental, Inc. ve orado 81301	nediation
		Street.	an Saka Sakaran				BORIN	G LOG/MONITORING W	ELL COMPLETIC	DN DIAGRAM
				an days in			Boring/Wel	Number: 5B-23	Project: Lowery Tan	k Battery
		and and a	Soz. P	م معنی میں میں ایک میں میں میں میں میں میں میں میں میں میں میں میں میں میں میں			Date:	12/14/17	Project Number: 034017	014
		2.55 45.55			en possion Alexistance	e coord	Logged By:	Eric Carroll	Drilled By: Geom	at
Elevation: 6,450		Detector:		PID			Drilling Me	thod: Hollow Stem Auger	Sampling Method: Continuous/S	plit Spoon
Gravel Pack: 10-20 Silica	Sand						Seal: Benton	ite Chips	Grout: Bentonite Slurry	
Casing Type:	PVC						Diameter:	Length:	Hole Diameter:	Depth to Liquid:
Screen Type:	PVC		Slot:	10"			Diameter:	Length:	Total Depth: 45'	Depth to Water:
E e e	Î		0.0	10				2/VR		
Penetratic Resistanc Moisture Content	apor (pp	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rocl Type	Lithology/Rem	arks	Well Completion
	-			0	1			tooring in the second	ed-la cont -	
Dry	0.0	No		1	1	50%	SP	NO Stain/odor	er - th Scind 	
 Dry	0.0	No		6 7 8 9 10	2	50%		SAA No Stain/Od	lor	
Dry	0.0	No		11 12 13 14 15	3	100 %		SAA No Stain/ador	~	

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Boring/Well # 5B-23												
	=	Compl	iance "	Engine	ering	Remedia	atio	n	Project:	Lowery Tank Batter	У	
	12	LT En	vironn	nental,	Inc.				Project #	034017014		
5 0	T	1				r	T		Date	12/14/1		
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Litho	Lithology/Remarks		
	Dry	4.1	No		15 16 17 18 19	4	00%	SP	It brown CC Some white NO St			
	Moise	0.0	No		20 21 22 23 24 25	5	iec	5M- 5P	Compace Da Siley Sc NO Sea	in/odor		
	Maisr	0.0	M		26 27			SM- SP	SAA			
	im Oise	1.2	Ne		28 29 30	6	100	SP	100se lt brown NO Grain/a	n, medium in sand dor		
y	ncise	0,Ü	No		31 32 33 34 35	7	1CC		Compute It r Mel-fn sand Rust Mote MO Sta	eddisn brown - Hirg in/odor		
					36 37						-	

		11	F		D			Boring/Well #	5B-23	
	Comp	liance M	Engine	ering M	Kemedia	atio.	n	Project #	034017014	y
		vironn	nental,	INC.				Date	12/14/17	
Penetration Resistance Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Litho	ology/Remarks	Well Completion
	-			37					- 17	
moise	0.0	WP		38 39 40	G	100	5P	SAA No Stair	n/ador	+ + + + +
moise	- 0,ĝ	Ne		41 42 43 44	9	101	5P	Compact 9re med - sn sc NO Sta	wish brown th and, trace Silt/clay min/oder	
				45	-					-
				46 47 48 49 50 51 52 53 54 55 56 57 58				TD = 45		

ATTACHMENT 2

LABORATORY ANALYTICAL REPORTS



HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 21, 2017

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

RE: Lowery Tank Battery

OrderNo.: 1712A54

Dear Aaron Galer:

Hall Environmental Analysis Laboratory received 6 sample(s) on 12/16/2017 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 Analys	sis Laborat	ory, In	с.		Analytical Report Lab Order 1712A54 Date Reported: 12/21/20	017					
CLIENT: Williams Four Corners Project: Lowery Tank Battery Lab ID: 1712A54-001	Matrix: S	Client Sample ID: SB-18 13'-15' Collection Date: 12/14/2017 9:30:00 AM Matrix: SOIL Received Date: 12/16/2017 9:00:00 AM									
Analyses	Result	PQL O	Qual Units	DF	Date Analyzed	Batch					
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analyst	том					
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	12/20/2017 8:23:08 PM	35589					
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	12/20/2017 8:23:08 PM	35589					
Surr: DNOP	85.0	70-130	%Rec	1	12/20/2017 8:23:08 PM	35589					
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst:	NSB					
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	12/20/2017 7:45:21 PM	35592					
Surr: BFB	107	15-316	%Rec	1	12/20/2017 7:45:21 PM	35592					
EPA METHOD 8021B: VOLATILES					Analyst:	NSB					
Methyl tert-butyl ether (MTBE)	ND	0.097	mg/Kg	1	12/20/2017 7:45:21 PM	35592					
Benzene	ND	0.024	mg/Kg	1	12/20/2017 7:45:21 PM	35592					
Toluene	ND	0.049	mg/Kg	1	12/20/2017 7:45:21 PM	35592					
Ethylbenzene	ND	0.049	mg/Kg	1	12/20/2017 7:45:21 PM	35592					
Xylenes, Total	ND	0.097	mg/Kg	1	12/20/2017 7:45:21 PM	35592					
Surr: 4-Bromofluorobenzene	97.0	80-120	%Rec	1	12/20/2017 7:45:21 PM	35592					

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 9
	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	nvironmental Analy	sis Laborat	ory, Inc	•		Lab Order 1712A54 Date Reported: 12/21/20	017
CLIENT:	Williams Four Corners			Client Sample	e ID: SE	3-18 38'-40'	
Project:	Lowery Tank Battery			Collection I	Date: 12	/14/2017 10:00:00 AM	[
Lab ID:	1712A54-002	Matrix: S	SOIL	Received I	Date: 12	/16/2017 9:00:00 AM	
Analyses		Result	PQL Q	ual Units	DF	Date Analyzed	Batch
EPA MET	HOD 8015M/D: DIESEL RAN	IGE ORGANICS	į.			Analyst	том
Diesel Ra	ange Organics (DRO)	ND	9.9	mg/Kg	1	12/20/2017 8:44:55 PM	35589
Motor Oil	I Range Organics (MRO)	ND	50	mg/Kg	1	12/20/2017 8:44:55 PM	35589
Surr: D	ONOP	95.7	70-130	%Rec	1	12/20/2017 8:44:55 PM	35589
EPA MET	HOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline	Range Organics (GRO)	ND	4.6	mg/Kg	1	12/20/2017 8:09:06 PM	35592
Surr: E	3FB	108	15-316	%Rec	1	12/20/2017 8:09:06 PM	35592
EPA MET	HOD 8021B: VOLATILES					Analyst	NSB
Methyl te	ert-butyl ether (MTBE)	ND	0.091	mg/Kg	1	12/20/2017 8:09:06 PM	35592
Benzene		ND	0.023	mg/Kg	1	12/20/2017 8:09:06 PM	35592
Toluene	Toluene		0.046	mg/Kg	1	12/20/2017 8:09:06 PM	35592
Ethylben	Ethylbenzene		0.046	mg/Kg	1	12/20/2017 8:09:06 PM	35592
Xylenes,	Total	ND	0.091	mg/Kg	1	12/20/2017 8:09:06 PM	35592
Surr: 4	-Bromofluorobenzene	98.3	80-120	%Rec	1	12/20/2017 8:09:06 PM	35592

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 2 of 0
	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	sis Laborat	tory, Inc.			Lab Order 1712A54 Date Reported: 12/21/	2017
CLIENT: Williams Four CornersProject:Lowery Tank BatteryLab ID:1712A54-003	Matrix:	Soil	Client Sampl Collection	e ID: SB Date: 12/ Date: 12/	-21 33'-35' '14/2017 11:15:00 A '16/2017 9:00:00 AM	M 1
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS				Analy	st: TOM
Diesel Range Organics (DRO)	55	9.5	mg/Kg	1	12/20/2017 9:06:51 P	M 35589
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	12/20/2017 9:06:51 P	M 35589
Surr: DNOP	98.1	70-130	%Rec	1	12/20/2017 9:06:51 P	M 35589
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	st: NSB
Gasoline Range Organics (GRO)	2400	93	mg/Kg	20	12/20/2017 11:01:04	AM 35592
Surr: BFB	234	15-316	%Rec	20	12/20/2017 11:01:04	AM 35592
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Methyl tert-butyl ether (MTBE)	ND	1.9	mg/Kg	20	12/20/2017 11:01:04 /	AM 35592
Benzene	2.5	0.46	mg/Kg	20	12/20/2017 11:01:04 /	AM 35592
Toluene	30	0.93	mg/Kg	20	12/20/2017 11:01:04 /	AM 35592
Ethylbenzene	5.0	0.93	mg/Kg	20	12/20/2017 11:01:04 /	AM 35592
Xylenes, Total	48	1.9	mg/Kg	20	12/20/2017 11:01:04 /	AM 35592
Surr: 4-Bromofluorobenzene	112	80-120	%Rec	20	12/20/2017 11:01:04 /	AM 35592

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 3 of 9
	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 1712A54 Date Reported: 12/21/2	2017
CLIENT:Williams Four CornersProject:Lowery Tank BatteryLab ID:1712A54-004	Matrix:	SOIL	Client Sampl Collection	e ID: SE Date: 12 Date: 12	B-21 43'-45' /14/2017 12:00:00 PM /16/2017 9:00:00 AM	1
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	5			Analys	t: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/20/2017 9:28:41 PM	1 35589
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	12/20/2017 9:28:41 PM	1 35589
Surr: DNOP	98.5	70-130	%Rec	1	12/20/2017 9:28:41 PM	35589
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	12/20/2017 8:32:56 PM	35592
Surr: BFB	113	15-316	%Rec	1	12/20/2017 8:32:56 PM	35592
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Methyl tert-butyl ether (MTBE)	ND	0.093	mg/Kg	1	12/20/2017 8:32:56 PM	1 35592
Benzene	ND	0.023	mg/Kg	1	12/20/2017 8:32:56 PM	35592
Toluene	ND	0.047	mg/Kg	1	12/20/2017 8:32:56 PM	1 35592
Ethylbenzene	ND	0.047	mg/Kg	1	12/20/2017 8:32:56 PM	35592
Xylenes, Total	0.13	0.093	mg/Kg	1	12/20/2017 8:32:56 PM	35592
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	12/20/2017 8:32:56 PM	35592

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 9
	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 E	nvironmental Analy		Analytical Report Lab Order 1712A54 Date Reported: 12/21/2	017			
CLIENT:	Williams Four Corners			Client Sampl	e ID: SB	-23 18'-20'	
Project:	Lowery Tank Battery			Collection I	Date: 12/	/14/2017 2:00:00 PM	
Lab ID:	1712A54-005	Matrix: S	SOIL	Received I	Date: 12/	/16/2017 9:00:00 AM	
Analyses		Result	PQL Q	ual Units	DF	Date Analyzed	Batch
EPA MET	HOD 8015M/D: DIESEL RAI	NGE ORGANICS				Analys	TOM
Diesel R	ange Organics (DRO)	ND	9.3	mg/Kg	1	12/20/2017 10:12:31 P	M 35589
Motor Oi	I Range Organics (MRO)	ND	47	mg/Kg	1	12/20/2017 10:12:31 P	M 35589
Surr: [DNOP	91.9	70-130	%Rec	1	12/20/2017 10:12:31 P	M 35589
EPA MET	HOD 8015D: GASOLINE RA	NGE				Analys	NSB
Gasoline	Range Organics (GRO)	ND	4.9	mg/Kg	1	12/20/2017 8:56:36 PM	35592
Surr: E	BFB	108	15-316	%Rec	1	12/20/2017 8:56:36 PM	35592
EPA MET	HOD 8021B: VOLATILES					Analys	NSB
Methyl te	ert-butyl ether (MTBE)	ND	0.098	mg/Kg	1	12/20/2017 8:56:36 PN	35592
Benzene		ND	0.024	mg/Kg	1	12/20/2017 8:56:36 PM	35592
Toluene		ND	0.049	mg/Kg	1	12/20/2017 8:56:36 PM	35592
Ethylben	zene	ND	0.049	mg/Kg	1	12/20/2017 8:56:36 PN	35592
Xylenes,	Total	ND	0.098	mg/Kg	1	12/20/2017 8:56:36 PM	35592
Surr: 4	4-Bromofluorobenzene	97.6	80-120	%Rec	1	12/20/2017 8:56:36 PM	35592

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 9
	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	sis Labora	tory, Inc.			Lab Order 1712A54 Date Reported: 12/21	/2017			
CLIENT: Williams Four Corners Project: Lowery Tank Battery Lab ID: 1712A54-006	Matrix:	SOIL	Client Sample ID: SB-33 43'-45' Collection Date: 12/14/2017 2:40:00 PM Received Date: 12/16/2017 9:00:00 AM						
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch			
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANICS	5			Analy	st: TOM			
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/20/2017 10:34:24	PM 35589			
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	12/20/2017 10:34:24	PM 35589			
Surr: DNOP	98.5	70-130	%Rec	1	12/20/2017 10:34:24	PM 35589			
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	st: NSB			
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	12/20/2017 9:20:24 F	PM 35592			
Surr: BFB	110	15-316	%Rec	1	12/20/2017 9:20:24 F	PM 35592			
EPA METHOD 8021B: VOLATILES					Analy	st: NSB			
Methyl tert-butyl ether (MTBE)	ND	0.099	mg/Kg	1	12/20/2017 9:20:24 F	PM 35592			
Benzene	ND	0.025	mg/Kg	1	12/20/2017 9:20:24 F	PM 35592			
Toluene	ND	0.050	mg/Kg	1	12/20/2017 9:20:24 F	PM 35592			
Ethylbenzene	ND	0.050	mg/Kg	1	12/20/2017 9:20:24 F	PM 35592			
Xylenes, Total	ND	0.099	mg/Kg	1	12/20/2017 9:20:24 F	PM 35592			
Surr: 4-Bromofluorobenzene	100	80-120	%Rec	1	12/20/2017 9:20:24 F	PM 35592			

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 6 of 9
	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.

Client: Williams Four Corners **Project:** Lowery Tank Battery =

Sample ID LCS-35589	SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics									
Client ID: LCSS	Batch	ID: 35	589	F	RunNo: 4	7873				
Prep Date: 12/19/2017	Analysis Da	ate: 12	2/20/2017	SeqNo: 1535639 Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.5	73.2	114			
Surr: DNOP	4.9		5.000		97.8	70	130			
	SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics									
Sample ID MB-35589	SampTy	/pe: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Sample ID MB-35589 Client ID: PBS	SampTy Batch	/pe: ME	3LK 589	Tes F	tCode: El RunNo: 4	PA Method 7873	8015M/D: Di	esel Rang	e Organics	
Sample ID MB-35589 Client ID: PBS Prep Date: 12/19/2017	SampTy Batch Analysis Da	/pe: ME ID: 35 ate: 12	3LK 589 2/20/2017	Tes F S	tCode: El RunNo: 4 SeqNo: 1	PA Method 7873 535640	8015M/D: Di Units: mg/H	esel Range (g	e Organics	
Sample ID MB-35589 Client ID: PBS Prep Date: 12/19/2017 Analyte	SampTy Batch Analysis Da Result	/pe: ME ID: 35 ate: 12 PQL	3LK 589 2/20/2017 SPK value	Tes R S SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC	PA Method 7873 535640 LowLimit	8015M/D: Di Units: mg/F HighLimit	esel Rango (g %RPD	e Organics RPDLimit	Qual
Sample ID MB-35589 Client ID: PBS Prep Date: 12/19/2017 Analyte Diesel Range Organics (DRO)	SampTy Batch Analysis Da Result ND	/pe: ME ID: 359 ate: 12 PQL 10	3LK 589 2/20/2017 SPK value	Tes R S SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC	PA Method 7873 535640 LowLimit	8015M/D: Di Units: mg/F HighLimit	esel Rango (g %RPD	e Organics RPDLimit	Qual
Sample ID MB-35589 Client ID: PBS Prep Date: 12/19/2017 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)	SampTy Batch Analysis Da Result ND ND	/pe: ME ID: 35 ate: 12 PQL 10 50	3LK 589 2/20/2017 SPK value	Tes F S SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC	PA Method 7873 535640 LowLimit	8015M/D: Di Units: mg/F HighLimit	esel Rango (g %RPD	e Organics RPDLimit	Qual

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
- 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
- W Sample container temperature is out of limit as specified

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1712A54

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: William	s Four Corne	rs										
Project: Lowery	Tank Battery											
Sample ID MB-35592	SampTy	be: ME	BLK	Test	tCode: E	PA Method	8015D: Gaso	line Rang	e			
Client ID: PBS	PBS Batch ID: 35592				RunNo: 47915							
Prep Date: 12/19/2017	Analysis Da	te: 12	2/20/2017	S	SeqNo: 1	535301	Units: mg/M	(g				
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-35592	SampTyp	be: LC	s	Test	tCode: El	PA Method	8015D: Gaso	line Rang	e			
Client ID: LCSS	Batch I	D: 35	592	R	aunNo: 4	7915						
Prep Date: 12/19/2017	Date: 12/19/2017 Analysis Date: 12/20/2017 SeqNo: 1535302 Units: mg/Kg											
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO)	31	5.0	25.00	0	123	75.9	131					
Surr: BFB	1200		1000		121	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

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WO#: 1712A54

21-Dec-17

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Williams Four Corners **Project:** Lowery Tank Battery

Sample ID MB-35592	SampType: MBLK TestCode: EPA Method 8021B: Volatiles												
Client ID: PBS	Batc	h ID: 35	592	F	RunNo: 47915								
Prep Date: 12/19/2017	Analysis Date: 12/20/2017 SeqNo: 1535333 Unit						Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Methyl tert-butyl ether (MTBE)	ND	0.10											
Benzene	ND	0.025											
Toluene	ND	0.050											
Ethylbenzene	ND	0.050											
Xylenes, Total	ND	0.10											
Surr: 4-Bromofluorobenzene	0.98		1.000		97.8	80	120						
Sample ID LCS-35592	Samp	Type: LC	S	Tes	tCode: El	PA Method	8021B: Volat	tiles					
Sample ID LCS-35592 Client ID: LCSS	Samp1 Batcl	Гуре: LC h ID: 35	S 592	Tes R	tCode: El RunNo: 4	PA Method 7915	8021B: Volat	tiles					
Sample ID LCS-35592 Client ID: LCSS Prep Date: 12/19/2017	SampT Batcl Analysis E	Гуре: LC h ID: 35 Date: 12	:S 592 2/20/2017	Tes R S	tCode: El RunNo: 4 SeqNo: 1	PA Method 7915 535334	8021B: Volat	tiles					
Sample ID LCS-35592 Client ID: LCSS Prep Date: 12/19/2017 Analyte	Samp1 Batcl Analysis D Result	Гуре: LC h ID: 35 Date: 12 PQL	: S 592 2/20/2017 SPK value	Tes F S SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC	PA Method 7915 535334 LowLimit	8021B: Volat Units: mg/K HighLimit	tiles Kg %RPD	RPDLimit	Qual			
Sample ID LCS-35592 Client ID: LCSS Prep Date: 12/19/2017 Analyte Methyl tert-butyl ether (MTBE)	SampT Batcl Analysis E Result 0.86	Fype: LC h ID: 35 Date: 12 PQL 0.10	S 592 2/20/2017 SPK value 1.000	Tes F S SPK Ref Val 0	tCode: El RunNo: 4 SeqNo: 1 %REC 86.5	PA Method 7915 535334 LowLimit 70.1	8021B: Volat Units: mg/K HighLimit 121	tiles Kg %RPD	RPDLimit	Qual			
Sample ID LCS-35592 Client ID: LCSS Prep Date: 12/19/2017 Analyte Methyl tert-butyl ether (MTBE) Benzene	SampT Batcl Analysis E Result 0.86 0.91	Type: LC h ID: 35 Date: 12 PQL 0.10 0.025	S 592 2/20/2017 SPK value 1.000 1.000	Tes F S SPK Ref Val 0 0	tCode: El RunNo: 4 BeqNo: 1 %REC 86.5 91.0	PA Method 7915 535334 LowLimit 70.1 77.3	8021B: Volat Units: mg/K HighLimit 121 128	tiles Sg %RPD	RPDLimit	Qual			
Sample ID LCS-35592 Client ID: LCSS Prep Date: 12/19/2017 Analyte Methyl tert-butyl ether (MTBE) Benzene Toluene	SampT Batcl Analysis E Result 0.86 0.91 0.94	Fype: LC h ID: 35 Date: 12 PQL 0.10 0.025 0.050	S 592 2/20/2017 SPK value 1.000 1.000 1.000	Tes F SPK Ref Val 0 0 0	tCode: El RunNo: 4 SeqNo: 1 %REC 86.5 91.0 93.8	PA Method 7915 535334 LowLimit 70.1 77.3 79.2	8021B: Volat Units: mg/K HighLimit 121 128 125	tiles (g %RPD	RPDLimit	Qual			
Sample ID LCS-35592 Client ID: LCSS Prep Date: 12/19/2017 Analyte Methyl tert-butyl ether (MTBE) Benzene Toluene Ethylbenzene	SampT Batcl Analysis E Result 0.86 0.91 0.94 0.94	Fype: LC h ID: 35 Date: 12 PQL 0.10 0.025 0.050 0.050	S 592 2/20/2017 SPK value 1.000 1.000 1.000 1.000	Tes F SPK Ref Val 0 0 0 0 0 0	tCode: El RunNo: 4 SeqNo: 1 %REC 86.5 91.0 93.8 94.0	PA Method 7915 535334 LowLimit 70.1 77.3 79.2 80.7	8021B: Volat Units: mg/K HighLimit 121 128 125 127	tiles (g %RPD	RPDLimit	Qual			
Sample ID LCS-35592 Client ID: LCSS Prep Date: 12/19/2017 Analyte Methyl tert-butyl ether (MTBE) Benzene Toluene Ethylbenzene Xylenes, Total	SampT Batcl Analysis E Result 0.86 0.91 0.94 0.94 2.8	Fype: LC h ID: 35 Date: 12 0.10 0.025 0.050 0.050 0.10	S 592 2/20/2017 SPK value 1.000 1.000 1.000 3.000	Tes F SPK Ref Val 0 0 0 0 0 0 0	tCode: El RunNo: 4 SeqNo: 1 %REC 86.5 91.0 93.8 94.0 93.3	PA Method 7915 535334 LowLimit 70.1 77.3 79.2 80.7 81.6	8021B: Volat Units: mg/K HighLimit 121 128 125 127 129	tiles (g %RPD	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
- 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
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

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21-Dec-17

Client Name: WILLIAMS FOUR CORN Work Order Number: 1712454 Repline: 1 Received By: Isalah Ortiz 12/16/2017 9:00:00 AM Image: Completed By: Michelle Garcia 12/16/2017 3:36:21 PM Reviewed By: Image: Completed By: Michelle Garcia 12/16/2017 3:36:21 PM Michelle Garcia 12/16/2017 3:36:21 PM Chain of Custody Image: Completed By: Image: Complete By: <t< th=""><th></th><th>HALL ENVIR ANAL LABO</th><th>CONMENTAL Ysis Ratory</th><th>Ha TE</th><th colspan="5">Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com</th><th colspan="6">Sample Log-In Check List</th></t<>		HALL ENVIR ANAL LABO	CONMENTAL Ysis Ratory	Ha TE	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					
Received By: Isalah Ortiz 12/16/2017 9:00:00 AM Image: Completed By: Michelle Garcia 12/16/2017 3:36:21 PM Reviewed By: Image: Completed By: Image:	CI	ient Name:	WILLIAMS FOU	R CORN Work	Order Number:	1712	A54			RcptNo:	1				
Completed By: Michelle Garcia 12/18/2017 3:36:21 PM Michelle Garcia Reviewed By: Serie (2) (3) (4) (5) Chain of Custody 1. Custody seals intact on sample bottles? Yes No Not Present (2) 1. Custody complete? Yes No Not Present (2) 16. Custody complete? Yes No Not Present (2) 3. How was the sample delivered? Courier Courier Courier (2) <t< td=""><td>Re</td><td>ceived By:</td><td>Isaiah Ortiz</td><td>12/16/2</td><td>017 9-00-00 AM</td><td></td><td></td><td>IG</td><td>20-</td><td>-</td><td></td></t<>	Re	ceived By:	Isaiah Ortiz	12/16/2	017 9-00-00 AM			IG	20-	-					
Reviewed By: Image: Control of Custody 1. Custody seals intact on sample bottles? Yes No Not Present 2. Is Chain of Custody complete? Yes No Not Present No 3. How was the sample delivered? Courier Loc 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 NA 7. Sufficient sample volume for indicated test(s)? Yes No NA 8. Are samples (except VOA and ONG) properly preserved? Yes No Na 10. VOA vials have zero headspace? Yes No Ma 11. Were any sample containers received broken? Yes No Adjusted? 12. Oose paperwork match bottle labels? Yes No Adjusted? 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted? 14. Is Clear what analyses were requested? Yes No Adjusted? 15. Were all inotified of all discrepancies with this order? Yes No Adjusted?	Co	moleted By:	Michelle Garcia	12/18/2	017 3:36:21 PN			mis	ul C						
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 Load In ************************************	Re	viewed By:	JMO	12/18	^{רי}			-	P						
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	Ch	ain of Cus	tody												
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 NA 7. Sufficient sample volume for indicated test(s)? Yes No NA 8. Are samples (except VOA and ONG) properly preserved? Yes No NA 9. Was preservative added to bottles? Yes No NA 10. VOA viais have zero headspace? Yes No Mo Ma 12. Does paperwork match bottle labels? Yes No Mo Adjusted? 14. Is to dear what analyses were requested? Yes No Adjusted? 14. Is to dear were requested? Yes No Adjusted? 15. Were all holding times able to be met? Yes No Adjusted? 14. Is to dear were requested? Yes No Adjusted? 15. Were all holding times able to be met? Yes No Na	1.	Custody sea	ls intact on sample	e bottles?		Yes		No	•	Not Present					
3. How was the sample delivered? Courier Loa 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 NA 7. Sufficient sample volume for indicated test(s)? Yes No NA 8. Are samples (except VOA and ONG) properly preserved? Yes No NA 9. Was preservative added to bottles? Yes No NA 10. VOA vials have zero headspace? Yes No No 11. Were any sample containers received broken? Yes No Ma 12. Does paperwork match bottle labels? Yes No Adjusted? 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted? 14. Is it clear what analyses were requested? Yes No Adjusted? 15. Were all holding times able to be met? Yes No Adjusted? 16. Was client notified of all discrepancies with this order? Yes No Na Person Notified:	2.	Is Chain of C	Custody complete?			Yes	✓	No		Not Present					
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 NA 7. Sufficient sample volume for indicated test(s)? Yes No NA 8. Are samples (except VOA and ONG) properly preserved? Yes No NA 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 No VOA Vials 12. Does paperwork match bottle labels? Yes No Ho of preserved bottles checked 12. Does paperwork match bottle labels? Yes No Adjusted? 14. Is it clear what analyses were requested? Yes No Adjusted? 14. Is it clear what analyses were requested? Yes No Checked by: 15. Were all holding times able to be met? Yes No Na Person Notified: 9. Whom: Person Notified: Date Person Na Person <td>3.</td> <td>How was the</td> <td>sample delivered</td> <td>?</td> <td></td> <td>Cour</td> <td>rier</td> <td></td> <td></td> <td></td> <td></td>	3.	How was the	sample delivered	?		Cour	rier								
4. Was an attempt made to cool the samples? Yes Ø No NA 5. Were all samples received at a temperature of >0° C to 6.0°C Yes Ø No NA 6. Sample(s) in proper container(s)? Yes Ø No NA 7. Sufficient sample volume for indicated test(s)? Yes Ø No NA 8. Are samples (except VOA and ONG) properly preserved? Yes Ø No NA 9. Was preservative added to bottles? Yes Ø No NA 10. VOA vials have zero headspace? Yes Ø No No VA 11. Were any sample containers received broken? Yes Ø No Ho Ho 12. Does papervork match bottle labels? Yes Ø No Ho Ho 12. Does papervork match bottle labels? Yes Ø No Ho Ho 13. Are matrices correctly identified on Chain of Custody? Yes Ø No Adjusted? Adjusted? 14. Is it clear what analyses were requested? Yes Ø No Checked by:	Lo	g In													
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 No 7. Sufficient sample volume for indicated test(s)? Yes No No 8. Are samples (except VOA and ONG) properly preserved? Yes No NA 9. Was preservative added to bottles? Yes No NA 10. VOA vials have zero headspace? Yes No No 11. Were any sample containers received broken? Yes No No 12. Does paperwork match bottle labels? Yes No diff of preserved bottles checked for pH: (<2 or >12 unless noted) 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted? 14. Is it clear what analyses were requested? Yes No Checked by: 15. Were all holding times able to be met? (ff no, notify customer for authorization.) Yes No Na	4 .	Was an atte	mpt made to cool	the samples?		Yes	\checkmark	N	•	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 10. VOA vials have zero headspace? Yes No 11. Were any sample containers received broken? Yes No 12. Does paperwork match bottle labels? Yes No 12. Does paperwork match bottle labels? 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? Yes No (If no, notify customer for authorization.) Special Handling (If applicable) 16. Was client notified of all discrepancies with this order? Yes No Na Person Notified:	5.	Were all san	nples received at a	temperature of >0° (C to 6.0°C	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 Mo VOA Vials 12. Does paperwork match bottle labels? Yes No # of preserved bottles checked for pri: (Note discrepancies on chain of custody) (<2 or >12 unless noted) Adjusted? 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted? 14. Is it clear what analyses were requested? Yes No Checked by: 15. Were all holding times able to be met? Yes No Checked by: (If no, notify customer for authorization.) Date	6.	Sample(s) ir	n proper container(s)?		Yes		N	o 🗌						
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 Mo VOA Vials 12. Does paperwork match bottle labels? Yes No # of preserved bottles checked for pH: (Note discrepancies on chain of custody) (<2 or >12 unless noted) (<2 or >12 unless noted) 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted? 14. Is it clear what analyses were requested? Yes No Checked by:	7.	Sufficient sa	mple volume for in	dicated test(s)?		Yes	V	No							
9. Was preservative added to bottles? Yes No Na 10. VOA vials have zero headspace? Yes No No No VOA Vials ✓ 11. Were any sample containers received broken? Yes No ✓ # of preserved bottles checked 12. Does paperwork match bottle labels? Yes No ✓ # of preserved bottles checked 12. Does paperwork match bottle labels? Yes ✓ No ✓ 13. Are matrices correctly identified on Chain of Custody? Yes ✓ No Adjusted? 14. Is it clear what analyses were requested? Yes ✓ No Adjusted? 15. Were all holding times able to be met? Yes ✓ No Checked by: (If no, notify customer for authorization.) Yes No No Na Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Yes No Na ✓ 19. Whom: Via: eMail Phone Fax In Person Regarding:	8.	Are samples	(except VOA and	ONG) properly preser	ved?	Yes	\checkmark	No							
10. VOA vials have zero headspace? Yes No No VOA Vials Image: Containers received broken? 11. Were any sample containers received broken? Yes No Image: Containers received broken? # of preserved bottles checked 12. Does paperwork match bottle labels? Yes No Image: Containers received broken? # of preserved bottles checked 12. Does paperwork match bottle labels? Yes No Image: Containers received broken? # of preserved bottles checked 12. Does paperwork match bottle labels? Yes No Image: Containers received broken? # of preserved bottles checked 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted? 14. Is it clear what analyses were requested? Yes No Adjusted? 15. Were all holding times able to be met? Yes No Checked by: (If no, notify customer for authorization.) Special Handling (if applicable) In Person Notified: 16. Was client notified of all discrepancies with this order? Yes No NA Person Notified: Date By Whom: In Person Regarding: Client Instructions: Client Instructions: In Person	9.	Was preserv	ative added to bot	tles?		Yes		No		NA 🗌	. ⁴				
11. Were any sample containers received broken? Yes No # of preserved bottles checked 12. Does paperwork match bottle labels? Yes No # of preserved bottles checked 12. Does paperwork match bottle labels? Yes No # of preserved bottles checked 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted? 14. Is it clear what analyses were requested? Yes No Adjusted? 15. Were all holding times able to be met? Yes No Checked by: (If no, notify customer for authorization.) Yes No Na Special Handling (if applicable) 16. Was client notified: Date Date By Whom: Via: eMail Regarding: Client Instructions:	10	VOA vials ha	ive zero headspac	e?		Yes		No		No VOA Vials 🗹					
12. Does paperwork match bottle labels? Yes No bottles criecked (Note discrepancies 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?	11.	Were any sa	mple containers re	aceived broken?		Yes		No	•	# of preserved					
13. Are matrices correctly identified on Chain of Custody? Yes Yes No 14. Is it clear what analyses were requested? Yes No 15. Were all holding times able to be met? Yes No (If no, notify customer for authorization.) Yes No Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Yes No No Na Person Notified: By Whom: Regarding: Client Instructions: Image: Client Instructions: Image: Client Instructions: Image: Client Instructions:	12	Does paperw	vork match bottle la	abels? f custody)		Yes		No		for pH:	or >12 unless noted)				
14. Is it clear what analyses were requested? Yes ♥ No	13	Are matrices	correctly identified	on Chain of Custody	?	Yes		No		Adjusted?					
15. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No Checked by: Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Yes No NA Person Notified: Date	14.	Is it clear what	at analyses were n	equested?		Yes	~	No							
Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Yes No NA Person Notified: By Whom: Regarding: Client Instructions:	15.	Were all hold	ling times able to b customer for author	pe met?		Yes	\checkmark	No		Checked by:					
Special Handling (If applicable) 16. Was client notified of all discrepancies with this order? Yes No NA Person Notified: Date	0		1												
Person Notified: Date By Whom: Via: Regarding: Client Instructions:	16	Was client no	tified of all discrer	DIE	?	Yes		No							
By Whom: Via: eMail Phone Fax In Person Regarding: Client Instructions:	10.	Parace	Notified:		Data jim				international contraction of the	141.52					
Regarding: Client Instructions:		Person By M/b			Via:	eMa	ul 🗆 🗖	hone	Fav	In Person					
Client Instructions:		Regard	ling:	an gan aga aga ang ang ang ang ang ang a	VIG.										
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1 (. Additional remarks:	17	Additional re	marks:												

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good	Yes			

Chain-of-Custody Record				Turn-Around	Time:											20	RIR				
Client:	willi	ams	Four Coiners	🕱 Standard	🗆 Rush			and an			N					AF	30	DA	TO	AL DV	/
	10.000	(-01	0.4	Project Name):							/ hai	lonv	iron	nont						1
Mailing	Address	1770	5 Array Da	Lowery	Tank	Battery		100	01 Ц	awki							M 87	100			
	Biony	n field	NAA 87413	Project #:			Tel. 505-345-3975 Fax 505-345-4107														
Phone	#:	1100		Dann	y Burns	-LTE	Analysis Request														
email o	r Fax#:	aaron	. conter @ williams_ com	Project Mana	ger:	-	() () () () () () () () () () () () () (Τ					
QA/QC	Package:							as or	/ MF			ŝ		4,SC	CB's						
🛐 Stan	dard		Level 4 (Full Validation)					Ű	RO			SIM	*	PO	2 PC						
	itation		r	Sampler: E	Carroll	の大学がないではないないないないないないないないないないです。	TME	H		.	Ē.	270		NO.	808						Î
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g LDD			AND A	Campic Linia			ATB	ATB	5B (thod	thoo	310	Meta	Ū,	sticic	(VA)	mi-\				es (
Date	Time	Matrix	Sample Request ID	Container	Preservative	HEAL No.	+	+	801	(Me	(Me	s (8;	A 8	IS (F	Pes	B	(Se				lddu
				Type and #	Туре	1712 44	BTE)	3TE)	TPH	표	EDB	AH	RCR	Anio	3081	3260	3270				Air B
Dialin	09:30	Sal	SB-18 13'-15'	1402	Cooi	001	X	_	X		A CONT	-									
Î	10:00		SB-19 38'-40')	002	x		x												
	11:15		5B-21 33'-35'			063	x		x												
	12:00		5B-21 43'-45'			004	\mathbf{x}		X												
	14:00		68-23 18'-20'			015	×		x												T
V	14:40	V	5B-33 43'-45'	V	V	(74)	X		x												T
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Date:	Time:	Relinquish	ed by:	Received by:	1	Date Time	Rer	nark	s:						1						
12/15/17	14:40	Ele	à lacest	1hh	12	12/11/17 1440			Plea	ise	CĹ	10	2 6	\$60	ing	ie I	ten	v.c	e m		
Date:	Time:	Relinquish	ed by:	Received by:	0	Date Time															
715/17	1 1844		hve	1-6	the second	12/16/17 09:00	2														

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 27, 2017

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

RE: Lowery Tank Battery

OrderNo.: 1712A56

Dear Aaron Galer:

Hall Environmental Analysis Laboratory received 4 sample(s) on 12/16/2017 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 Analys		Date Reported: 12/27/2017								
CLIENT: Williams Four Corners Client Sample ID: SB-19 23'-25' Project: Lowery Tank Battery Collection Date: 12/15/2017 10:00:00 AM Lab ID: 1712A56-001 Matrix: SOIL Received Date: 12/16/2017 9:00:00 AM										
Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch				
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS				Analy	st: TOM				
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	12/20/2017 10:56:20	PM 35589				
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	12/20/2017 10:56:20	PM 35589				
Surr: DNOP	100	70-130	%Rec	1	12/20/2017 10:56:20	PM 35589				
EPA METHOD 8015D: GASOLINE RAN	IGE				Analy	st: NSB				
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	12/20/2017 10:55:43	PM 35592				
Surr: BFB	111	15-316	%Rec	1	12/20/2017 10:55:43	PM 35592				
EPA METHOD 8021B: VOLATILES					Analy	st: NSB				
Methyl tert-butyl ether (MTBE)	ND	0.097	mg/Kg	1	12/20/2017 10:55:43	PM 35592				
Benzene	ND	0.024	mg/Kg	1	12/20/2017 10:55:43	PM 35592				
Toluene	ND	0.049	mg/Kg	1	12/20/2017 10:55:43	PM 35592				
Ethylbenzene	ND	0.049	mg/Kg	1	12/20/2017 10:55:43	PM 35592				
Xylenes, Total	ND	0.097	mg/Kg	1	12/20/2017 10:55:43	PM 35592				
Surr: 4-Bromofluorobenzene	100	80-120	%Rec	1	12/20/2017 10:55:43	PM 35592				

Analytical Report Lab Order 1712A56

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 deter		Analyte detected below quantitation limits Page 1 of 7
	NDNot Detected at the Reporting LimitPQLPractical Quanitative Limit		Р	Sample pH Not In Range
			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		Lab Order 1712A56 Date Reported: 12/27	/2017					
CLIENT: Williams Four Corners	e ID: SB	-19 43'-45'						
Project: Lowery Tank Battery			Collection I	Date: 12/	/15/2017 10:45:00 A	М		
Lab ID: 1712A56-002	Matrix: SOIL Received Date: 12/16/2017 9:00:00 AM							
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS				Analy	st: TOM		
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	12/20/2017 11:18:01	PM 35589		
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	12/20/2017 11:18:01	PM 35589		
Surr: DNOP	99.3	70-130	%Rec	1	12/20/2017 11:18:01	PM 35589		
EPA METHOD 8015D: GASOLINE RAN	IGE				Analy	st: NSB		
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	12/20/2017 11:19:30	PM 35592		
Surr: BFB	109	15-316	%Rec	1	12/20/2017 11:19:30	PM 35592		
EPA METHOD 8021B: VOLATILES					Analy	st: NSB		
Methyl tert-butyl ether (MTBE)	ND	0.095	mg/Kg	1	12/20/2017 11:19:30	PM 35592		
Benzene	ND	0.024	mg/Kg	1	12/20/2017 11:19:30	PM 35592		
Toluene	ND	0.048	mg/Kg	1	12/20/2017 11:19:30	PM 35592		
Ethylbenzene	ND	0.048	mg/Kg	1	12/20/2017 11:19:30	PM 35592		
Xylenes, Total	ND	0.095	mg/Kg	1	12/20/2017 11:19:30	PM 35592		
Surr: 4-Bromofluorobenzene	98.5	80-120	%Rec	1	12/20/2017 11:19:30	PM 35592		

The second se				
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 2 of 7
N		O Not Detected at the Reporting Limit		Sample pH Not In Range
	PQL	QL Practical Quanitative Limit		Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix W Sample of			Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.Lab Order 1712A56Date Reported: 12/27/2017									
CLIENT: Williams Four CornersProject:Lowery Tank BatteryLab ID:1712A56-003	Client Sample ID: SB-22 28'-30' Collection Date: 12/15/2017 11:30:00 AM Matrix: SOIL Received Date: 12/16/2017 9:00:00 AM								
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch			
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS				Anal	yst: TOM			
Diesel Range Organics (DRO)	42	9.4	mg/Kg	1	12/21/2017 12:17:34	PM 35589			
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	12/21/2017 12:17:34	PM 35589			
Surr: DNOP	105	70-130	%Rec	1	12/21/2017 12:17:34	PM 35589			
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	yst: NSB			
Gasoline Range Organics (GRO)	1200	48	mg/Kg	10	12/20/2017 11:43:17	PM 35592			
Surr: BFB	255	15-316	%Rec	10	12/20/2017 11:43:17	PM 35592			
EPA METHOD 8021B: VOLATILES					Analy	st: NSB			
Methyl tert-butyl ether (MTBE)	ND	0.97	mg/Kg	10	12/20/2017 11:43:17	PM 35592			
Benzene	0.51	0.24	mg/Kg	10	12/20/2017 11:43:17	PM 35592			
Toluene	ND	0.48	mg/Kg	10	12/20/2017 11:43:17	PM 35592			
Ethylbenzene	1.0	0.48	mg/Kg	10	12/20/2017 11:43:17	PM 35592			
Xylenes, Total	7.9	0.97	mg/Kg	10	12/20/2017 11:43:17	PM 35592			
Surr: 4-Bromofluorobenzene	110	80-120	%Rec	10	12/20/2017 11:43:17	PM 35592			

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
	H 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
	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 liv		

Hall Environmental Analy	Lab Order 1712A56 Date Reported: 12/27/2017						
CLIENT: Williams Four CornersClient Sample ID: SB-22 33'-35'Project: Lowery Tank BatteryCollection Date: 12/15/2017 12:00:00 PNLab ID: 1712A56-004Matrix: SOILReceived Date: 12/16/2017 9:00:00 AM							
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch	
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANICS	5			Anal	yst: TOM	
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	12/21/2017 12:02:01	AM 35589	
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	12/21/2017 12:02:01	AM 35589	
Surr: DNOP	102	70-130	%Rec	1	12/21/2017 12:02:01	AM 35589	
EPA METHOD 8015D: GASOLINE RA	NGE				Anal	yst: NSB	
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	12/21/2017 12:07:05	AM 35592	
Surr: BFB	112	15-316	%Rec	1	12/21/2017 12:07:05	AM 35592	
EPA METHOD 8021B: VOLATILES					Anal	yst: NSB	
Methyl tert-butyl ether (MTBE)	ND	0.094	mg/Kg	1	12/21/2017 12:07:05	AM 35592	
Benzene	ND	0.023	mg/Kg	1	12/21/2017 12:07:05	AM 35592	
Toluene	ND	0.047	mg/Kg	1	12/21/2017 12:07:05	AM 35592	
Ethylbenzene	ND	0.047	mg/Kg	1	12/21/2017 12:07:05	AM 35592	
Xylenes, Total	ND	0.094	mg/Kg	1	12/21/2017 12:07:05	AM 35592	
Surr: 4-Bromofluorobenzene	99.6	80-120	%Rec	1	12/21/2017 12:07:05	AM 35592	

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		Analyte detected below quantitation limits Page 4 of 7	
	ND Not Detected at the Reporting Limit		Р	Sample pH Not In Range	
PQL Practi		Practical Quanitative Limit	RL Reporting Detection Limit		
	S	% Recovery outside of range due to dilution or matrix	nge due to dilution or matrix W Sample container temperature is out of limit		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1712A56 27-Dec-17

Client: Project:	William Lowery	s Four Corners Tank Battery								
Sample ID	LCS-35589	SampType: L	_CS	Test	Code: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	LCSS	Batch ID: 3	5589	R	unNo: 47	7873				
Prep Date:	12/19/2017	Analysis Date:	12/20/2017	S	eqNo: 1	535639	Units: mg/K	g		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	46 10	0 50.00	0	91.5	73.2	114			
Surr: DNOP		4.9	5.000		97.8	70	130			
Sample ID	Sample ID MB-35589 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics									
Client ID:	PBS	Batch ID: 3	5589	R	unNo: 47	7873				
Prep Date:	12/19/2017	Analysis Date:	12/20/2017	S	eqNo: 1	535640	Units: mg/K	g		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	ND 10	0							
Motor Oil Rang	e Organics (MRO)	ND 50	0							
Surr: DNOP		10	10.00		102	70	130			
Sample ID	LCS-35648	SampType: L	.cs	Test	Code: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	LCSS	Batch ID: 3	5648	R	unNo: 47	7948				
Prep Date:	12/21/2017	Analysis Date:	12/21/2017	S	eqNo: 15	536262	Units: %Red	;		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		4.6	5.000		91.5	70	130			
Sample ID	MB-35648	SampType: N	IBLK	Test	Code: EF	PA Method	8015M/D: Die	sel Range	e Organics	
Client ID:	PBS	Batch ID: 3	5648	R	unNo: 47	7948				
Prep Date:	12/21/2017	Analysis Date:	12/21/2017	S	eqNo: 15	536263	Units: %Red	:		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		9.3	10.00		92.7	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 5 of 7
Hall Environmental Analysis Laboratory, Inc.

Client: Williams Four Corners **Project:** Lowery Tank Battery

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
- W Sample container temperature is out of limit as specified

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1712A56

WO#:

Sample ID MB-35592	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 35592			F	RunNo: 47915					
Prep Date: 12/19/2017	Analysis [Date: 12	2/20/2017	S	SeqNo: 1	535301	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BEB	1100		1000		108	15	316			
oun. Di D			1000		100	10	0.0			
					100					
Sample ID LCS-35592	Samp	Type: LC	S	Tes	tCode: El	PA Method	8015D: Gase	line Rang	e	
Sample ID LCS-35592 Client ID: LCSS	Samp [¬] Batcl	Гуре: LC h ID: 35	S 592	Tes	tCode: El	PA Method 7915	8015D: Gase	oline Rang	9	
Sample ID LCS-35592 Client ID: LCSS Prep Date: 12/19/2017	Samp Batcl Analysis [Гуре: LC h ID: 35 Date: 12	S 592 2/20/2017	Tes F S	tCode: El RunNo: 4 SeqNo: 1	PA Method 7915 535302	8015D: Gaso	bline Rang	e	
Sample ID LCS-35592 Client ID: LCSS Prep Date: 12/19/2017 Analyte	Samp] Batcl Analysis [Result	Гуре: LC h ID: 35 Date: 12 PQL	S 592 2/20/2017 SPK value	Tes F S SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC	PA Method 7915 535302 LowLimit	8015D: Gaso Units: mg/P HighLimit	oline Rang (g %RPD	e RPDLimit	Qual
Sample ID LCS-35592 Client ID: LCSS Prep Date: 12/19/2017 Analyte Gasoline Range Organics (GRO)	SampT Batch Analysis E Result 31	Гуре: LC h ID: 35 Date: 12 PQL 5.0	S 592 2/20/2017 SPK value 25.00	Tes F S SPK Ref Val 0	tCode: El RunNo: 4 SeqNo: 1 %REC 123	PA Method 7915 535302 LowLimit 75.9	8015D: Gaso Units: mg/k HighLimit 131	oline Rang (g %RPD	e RPDLimit	Qual

Hall Environmental Analysis Laboratory, Inc.

Client: Williams Four Corners **Project:** Lowery Tank Battery

Sample ID MB-35592	Samp	SampType: MBLK TestCode: EPA Method				PA Method	8021B: Volat	tiles		
Client ID: PBS	Batc	h ID: 35	592	R	RunNo: 47915					
Prep Date: 12/19/2017	Analysis [Date: 12	2/20/2017	S	SeqNo: 1	535333	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		97.8	80	120			
Sample ID LCS-35592	Samp	Type: LC	S	Test	Code: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batc	h ID: 35	592	RunNo: 47915						
Prep Date: 12/19/2017	Analysis [ate 1	2/20/2017	2017 SeqNo: 1535334			Units: ma/K	a		
	, and yord a		120/2011		oqito. I	000004	ornior mgri	.9		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Analyte Methyl tert-butyl ether (MTBE)	Result 0.86	PQL 0.10	SPK value 1.000	SPK Ref Val	%REC 86.5	LowLimit 70.1	HighLimit 121	%RPD	RPDLimit	Qual
Analyte Methyl tert-butyl ether (MTBE) Benzene	Result 0.86 0.91	PQL 0.10 0.025	SPK value 1.000 1.000	SPK Ref Val 0 0	%REC 86.5 91.0	LowLimit 70.1 77.3	HighLimit 121 128	%RPD	RPDLimit	Qual
Analyte Methyl tert-butyl ether (MTBE) Benzene Toluene	Result 0.86 0.91 0.94	PQL 0.10 0.025 0.050	SPK value 1.000 1.000 1.000	SPK Ref Val 0 0 0	%REC 86.5 91.0 93.8	LowLimit 70.1 77.3 79.2	HighLimit 121 128 125	%RPD	RPDLimit	Qual
Analyte Methyl tert-butyl ether (MTBE) Benzene Toluene Ethylbenzene	Result 0.86 0.91 0.94 0.94	PQL 0.10 0.025 0.050 0.050	SPK value 1.000 1.000 1.000 1.000 1.000	SPK Ref Val 0 0 0 0	%REC 86.5 91.0 93.8 94.0	LowLimit 70.1 77.3 79.2 80.7	HighLimit 121 128 125 127	%RPD	RPDLimit	Qual
Analyte Methyl tert-butyl ether (MTBE) Benzene Toluene Ethylbenzene Xylenes, Total	Result 0.86 0.91 0.94 0.94 2.8	PQL 0.10 0.025 0.050 0.050 0.10	SPK value 1.000 1.000 1.000 1.000 3.000	SPK Ref Val 0 0 0 0 0	%REC 86.5 91.0 93.8 94.0 93.3	LowLimit 70.1 77.3 79.2 80.7 81.6	HighLimit 121 128 125 127 129	%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
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

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27-Dec-17

WO#: 1712A56

	HALL ENVIRONMENTAL ANALYSIS LABORATORY		Hall Environmental Anaiysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com			oratory kins NE 187109 15-4107 tal.com	Sample Log-In Check List			
Cli	ent Name:	WILLIAMS F	OUR CORN	Work Order N	Number: 171	2A58			RcptNo: 1	
Rec	ceived By:	Isaiah Ortiz		12/16/2017 9:0	0:00 AM		T	G	-	
Cor	npleted By:	Michelle Ga	ircia	12/18/2017 3:4	5:09 PM		m	linell G	mue	
Rev	viewed By:	DDS		12/19/	17			,		
Cha	ain of Cus	tody								
1.	Custody sea	Is intact on sa	mple bottles?		Ye	5		No 🗌	Not Present	
2.	Is Chain of C	ustody comple	ate?		Ye	5 1		No 🗌	Not Present	
3.	How was the	sample delive	ered?		Co	urier				
Lo	g In							_		
4.	Was an atte	mpt made to c	ool the samples?		Ye	s 🗹		No 🗌		
5.	Were all san	nples received	at a temperature	of >0° C to 6.0°	C Yes	V	l	No 🗌	NA 🗔	
6.	Sample(s) ir	proper contai	ner(s)?		Ye	5 🔽		No 🗌		
7,	Sufficient sa	mple volume fo	or indicated test(s)?	Ye			No 🗌		
8.	Are samples	(except VOA a	and ONG) proper	y preserved?	Ye	· 🗸		No		
9.	Was preserv	ative added to	bottles?		Ye	5		No 🗹	NA	
10.	VOA vials ha	ve zero heads	pace?		Ye	;		Na	No VOA Viais 🗹	
11.	Were any sa	mple containe	rs received broke	in?	Ye	s		No 🔽	# of preserved	
12.	Does paperw (Note discret	ork match bot	te labels? in of custody)		Ye	· 🗸		No 🗌	for pH; (<2 or >12 unless no	ater
13.	Are matrices	correctly ident	ified on Chain of	Custody?	Yes	V		No 🗌	Adjusted?	
14.	is it clear wh	at analyses we	re requested?		Ye	~		No 🗌		
15.	Were all hold (If no, notify (ling times able customer for a	to be met? uthorization.)		Yes	V		Na 🗌	Checked by:	
Spa	cial Hand	ling (if ann	icab(a)							
16.	Was client no	otified of all dis	crepancies with t	his order?	Yes			No 🗌	NA 🗹	
	Person	Notified:			Date			ing har i generation of the		
	By Who	om:			via: 🗌 eN	lail	Phone	Fax	In Person	
	Regard	ing [and an automotion	1991 a	And the second second			
	Client I	nstructions:								
17.	Additional re	marks:								
18.	Cooler Info	mation					1			
	Cooler No	Temp °C	Condition Se	al Intact Seal I	No Seal E)ate	Signe	ad By		
	I'	2.0	Good Yes							

Chain-of-Custody Reco	Turn-Around Time:	HALL ENVIRONMENTAL ANALYSIS LABORATORY						
Aaran Galar	Project Name:	www.hallenvironmental.com						
Mailing Address: 17755 Arcovo Dr	Lowery Tank Battery	4901 Hawkins NE - Albuquerque, NM 87109						
Bloomfield NM 87413	Project #:	Tel. 505-345-3975 Fax 505-345-4107						
Phone #:	3	Analysis Request						
email or Fax#: Oaron. sour @ williams. co	n Project Manager:							
QA/QC Package:	Danny Burns - LTE	(8021) (8021) (8021) (802) (80						
Accreditation	Sampler E Caccell							
NELAP Other	_ On Ice: Wrest Di Ne	A) 8/21 / 1/2 / 1/						
Dx EDD (Type) PDF	Sample Temperature 2.0	A) A						
Date Time Matrix Sample Requ	st ID Container Type and # Type HEAL No.	BTEX + MT BTEX + MT BTEX + MT TPH 8015B TPH (Metho EDB (Metho EDB (Metho EDB (Metho F,C Anions (F,C Anions (F,C 8081 Pestic 8260B (VO, 8270 (Semi						
12/15/17 10:00 Soil 58-19 231-	25' 140Z COOI (0)	X X						
1 10:45 SB-19 43'-	15 0 02	X X IIIIII						
11:30 58-22 28'-	6 (DB	X X IIIIIII						
- 12:00 - 5B-22 33'-	5	× × ·						
-								
Date: Time: Relinquished by:	Received by: Date Time	Remarks:						
12/15/17 H:40 Ecte Lacent	12/15/17 1443	rlease cc to: aburnseitenv.com						
12/15/17 1844 relinduisped by:	I. Date Ime	0						

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 20, 2017

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

RE: Lowery Tank Battery

OrderNo.: 1712737

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 6 sample(s) on 12/13/2017 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,

and

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analy		Lab Order 1712737 Date Reported: 12/20/2017								
CLIENT: Williams Four Corners			C	lient Samp	e ID: SB	9: SB-16 25'-30'				
Project: Lowery Tank Battery				Collection	Date: 12/	/11/2017 11:00:00 AN	1			
Lab ID: 1712737-001	Matrix: SOIL Received Date: 12/13/2017 7:00:0					/13/2017 7:00:00 AM				
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch			
EPA METHOD 8015M/D: DIESEL RAM	IGE ORGANICS					Analyst	TOM			
Diesel Range Organics (DRO)	350	9.2		mg/Kg	1	12/19/2017 4:48:33 PN	35562			
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/19/2017 4:48:33 PN	35562			
Surr: DNOP	104	70-130		%Rec	1	12/19/2017 4:48:33 PM	35562			
EPA METHOD 8015D: GASOLINE RA	NGE					Analyst	NSB			
Gasoline Range Organics (GRO)	1500	46		mg/Kg	10	12/14/2017 7:41:23 PM	35496			
Surr: BFB	571	15-316	S	%Rec	10	12/14/2017 7:41:23 PM	35496			
EPA METHOD 8021B: VOLATILES						Analyst	NSB			
Benzene	0.71	0.23		mg/Kg	10	12/14/2017 7:41:23 PM	35496			
Toluene	25	0.46		mg/Kg	10	12/14/2017 7:41:23 PM	35496			
Ethylbenzene	4.4	0.46		mg/Kg	10	12/14/2017 7:41:23 PM	35496			
Xylenes, Total	57	0.93		mg/Kg	10	12/14/2017 7:41:23 PM	35496			
Surr: 4-Bromofluorobenzene	139	80-120	S	%Rec	10	12/14/2017 7:41:23 PM	35496			

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 11
	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

					Analytical Report Lab Order 1712737	
Hall Environmental Analy	sis Labora	tory, Inc.			Date Reported: 12/20/20	017
CLIENT: Williams Four Corners			Client Sampl	e ID: SB	-16 47'-50'	
Project: Lowery Tank Battery			Collection I	Date: 12/	/11/2017 11:30:00 AM	
Lab ID: 1712737-002	Matrix:	SOIL	Received I	Date: 12/	/13/2017 7:00:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAM	IGE ORGANICS				Analyst	том
Diesel Range Organics (DRO)	68	9.9	mg/Kg	1	12/19/2017 5:54:47 PM	35562
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/19/2017 5:54:47 PM	35562
Surr: DNOP	97.6	70-130	%Rec	1	12/19/2017 5:54:47 PM	35562
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	3000	96	mg/Kg	20	12/15/2017 2:07:14 PM	35496
Surr: BFB	214	15-316	%Rec	20	12/15/2017 2:07:14 PM	35496
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	11	0.48	mg/Kg	20	12/15/2017 2:07:14 PM	35496
Toluene	51	0.96	mg/Kg	20	12/15/2017 2:07:14 PM	35496
Ethylbenzene	7.5	0.96	mg/Kg	20	12/15/2017 2:07:14 PM	35496
Xylenes, Total	75	1.9	mg/Kg	20	12/15/2017 2:07:14 PM	35496
Surr: 4-Bromofluorobenzene	120	80-120	%Rec	20	12/15/2017 2:07:14 PM	35496

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 11
	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		Lab Order 1712737 Date Reported: 12/20/2017					
CLIENT: Williams Four CornersProject:Lowery Tank BatteryLab ID:1712737-003	Matrix: S	SOIL	Client Sampl Collection I Received I	ample ID: SB-20 35'-40' tion Date: 12/11/2017 1:00:00 PM wed Date: 12/13/2017 7:00:00 AM			
Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch	
EPA METHOD 8015M/D: DIESEL RAM	IGE ORGANICS	5			Analyst	TOM	
Diesel Range Organics (DRO)	ND	9.1	mg/Kg	1	12/19/2017 6:16:40 PM	35562	
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	12/19/2017 6:16:40 PM	35562	
Surr: DNOP	96.5	70-130	%Rec	1	12/19/2017 6:16:40 PM	35562	
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB	
Gasoline Range Organics (GRO)	9.5	4.7	mg/Kg	1	12/15/2017 2:54:22 PM	35496	
Surr: BFB	93.0	15-316	%Rec	1	12/15/2017 2:54:22 PM	35496	
EPA METHOD 8021B: VOLATILES					Analyst	NSB	
Benzene	ND	0.024	mg/Kg	1	12/15/2017 2:54:22 PM	35496	
Toluene	ND	0.047	mg/Kg	1	12/15/2017 2:54:22 PM	35496	
Ethylbenzene	ND	0.047	mg/Kg	1	12/15/2017 2:54:22 PM	35496	
Xylenes, Total	ND	0.095	mg/Kg	1	12/15/2017 2:54:22 PM	35496	
Surr: 4-Bromofluorobenzene	108	80-120	%Rec	1	12/15/2017 2:54:22 PM	35496	

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 11
	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		Lab Order 1712737 Date Reported: 12/20/2017						
CLIENT: Williams Four Corners			Client Sampl	le ID: SE	3-20 40'-45'			
Project: Lowery Tank Battery Lab ID: 1712737-004	Matrix:	SOIL	Received	Date: 12.	ate: 12/11/2017 1:00:00 PM ate: 12/13/2017 7:00:00 AM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 8015M/D: DIESEL RAM	NGE ORGANICS	5			Analyst	том		
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	12/19/2017 6:38:45 PM	35562		
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	12/19/2017 6:38:45 PM	35562		
Surr: DNOP	83.2	70-130	%Rec	1	12/19/2017 6:38:45 PM	35562		
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB		
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	12/14/2017 8:52:19 PM	35496		
Surr: BFB	118	15-316	%Rec	1	12/14/2017 8:52:19 PM	35496		
EPA METHOD 8021B: VOLATILES					Analyst	NSB		
Benzene	ND	0.024	mg/Kg	1	12/14/2017 8:52:19 PM	35496		
Toluene	ND	0.047	mg/Kg	1	12/14/2017 8:52:19 PM	35496		
Ethylbenzene	ND	0.047	mg/Kg	1	12/14/2017 8:52:19 PM	35496		
Xylenes, Total	ND	0.095	mg/Kg	1	12/14/2017 8:52:19 PM	35496		
Surr: 4-Bromofluorobenzene	99.9	80-120	%Rec	1	12/14/2017 8:52:19 PM	35496		

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 4 of 11
	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 Analys	sis Laborat	ory, Inc.			Lab Order 1712737 Date Reported: 12/20/20	017
CLIENT: Williams Four Corners Project: Lowery Tank Battery Lab ID: 1712737-005	Matrix: S	Soil	Client Sampl Collection I Received I	e ID: SB Date: 12/ Date: 12/	-17 0'-5' /11/2017 2:45:00 PM /13/2017 7:00:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analyst	том
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	12/19/2017 7:00:45 PM	35562
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	12/19/2017 7:00:45 PM	35562
Surr: DNOP	74.5	70-130	%Rec	1	12/19/2017 7:00:45 PM	35562
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	12/14/2017 9:15:54 PM	35496
Surr: BFB	116	15-316	%Rec	1	12/14/2017 9:15:54 PM	35496
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.023	mg/Kg	1	12/14/2017 9:15:54 PM	35496
Toluene	ND	0.047	mg/Kg	1	12/14/2017 9:15:54 PM	35496
Ethylbenzene	ND	0.047	mg/Kg	1	12/14/2017 9:15:54 PM	35496
Xylenes, Total	ND	0.093	mg/Kg	1	12/14/2017 9:15:54 PM	35496
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	12/14/2017 9:15:54 PM	35496

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 11
	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	sis Labora	tory, Inc.			Lab Order 1712737 Date Reported: 12/20/2	017
CLIENT: Williams Four Corners			Client Sampl	e ID: SE	8-17 40'-45'	
Project: Lowery Tank Battery			Collection I	Date: 12	/11/2017 3:15:00 PM	
Lab ID: 1712737-006	Matrix:	SOIL	Received I	Date: 12	/13/2017 7:00:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS	5			Analys	том
Diesel Range Organics (DRO)	ND	9.1	mg/Kg	1	12/19/2017 7:22:51 PN	35562
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	12/19/2017 7:22:51 PN	35562
Surr: DNOP	82.4	70-130	%Rec	1	12/19/2017 7:22:51 PM	35562
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	12/14/2017 9:39:35 PN	35496
Surr: BFB	115	15-316	%Rec	1	12/14/2017 9:39:35 PM	35496
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.023	mg/Kg	1	12/14/2017 9:39:35 PM	35496
Toluene	ND	0.047	mg/Kg	1	12/14/2017 9:39:35 PM	35496
Ethylbenzene	ND	0.047	mg/Kg	1	12/14/2017 9:39:35 PM	35496
Xylenes, Total	ND	0.093	mg/Kg	1	12/14/2017 9:39:35 PM	35496
Surr: 4-Bromofluorobenzene	103	80-120	%Rec	1	12/14/2017 9:39:35 PM	35496

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 6 of 11
	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

Client:	Williams Four Corners
Project:	Lowery Tank Battery

Sample ID LCS-35586	SampType: L	.CS	Tes	tCode: EPA M	ethod 8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batch ID: 3	5586	F	RunNo: 47873				
Prep Date: 12/19/2017	Analysis Date:	1 <mark>2/19/2017</mark>	5	SeqNo: 153222	25 Units: %Re	C		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC Low	vLimit HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5	5.000		89.2	70 130			
Sample ID MB-35586	SampType: N	IBLK	Tes	tCode: EPA M	ethod 8015M/D: Di	esel Range	e Organics	
Client ID: PBS	Batch ID: 3	5586	F	RunNo: 47873				
Prep Date: 12/19/2017	Analysis Date:	12/19/2017	S	SeqNo: 153222	26 Units: %Re	с		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC Low	vLimit HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.9	10.00		89.2	70 130			
Sample ID 1712737-001AMS	SampType: N	IS	Tes	tCode: EPA Me	ethod 8015M/D: Di	esel Range	e Organics	
Client ID: SB-16 25'-30'	Batch ID: 3	5562	F	RunNo: 47873				
Prep Date: 12/18/2017	Analysis Date:	12/19/2017	5	SeqNo: 153448	85 Units: mg/l	٢g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC Low	Limit HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	280 9.3	3 46.25	352.0	-155	55.8 125			S
Surr: DNOP	4.7	4.625		102	70 130			_
Sample ID 1712737-001AMS	D SampType: N	ISD	Tes	tCode: EPA Me	ethod 8015M/D: Di	esel Range	• Organics	
Client ID: SB-16 25'-30'	Batch ID: 3	5562	R	aunNo: 47873				
Prep Date: 12/18/2017	Analysis Date: 1	12/19/2017	S	eqNo: 153448	B6 Units: mg/H	٢g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC Low	Limit HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	420 9.4	47.08	352.0	141	55.8 125	39.6	20	RS
Diesel Range Organics (DRO) Surr: DNOP	420 9.4 4.7	47.08 4.708	352.0	141 99.9	55.8 125 70 130	39.6 0	20 0	RS
Diesel Range Organics (DRO) Surr: DNOP	420 9.4 4.7 SampType: L	47.08 4.708	352.0 Test	141 99.9 Code: EPA Me	55.8 125 70 130 ethod 8015M/D: Di	39.6 0 esel Range	20 0 • Organics	RS
Diesel Range Organics (DRO) Surr: DNOP Sample ID LCS-35562 Client ID: LCSS	420 9.4 4.7 SampType: L Batch ID: 3	47.08 4.708 CS 5562	352.0 	141 99.9 Code: EPA Me cunNo: 47873	55.8 125 70 130 ethod 8015M/D: Di	39.6 0 esel Range	20 0 e Organics	RS
Diesel Range Organics (DRO) Surr: DNOP Sample ID LCS-35562 Client ID: LCSS Prep Date: 12/18/2017	420 9.4 4.7 SampType: Lu Batch ID: 34 Analysis Date: 1	4 47.08 4.708 CS 5562 12/19/2017	352.0 Tesi R S	141 99.9 Code: EPA Me cunNo: 47873 seqNo: 153450	55.8 125 70 130 ethod 8015M/D: Di D6 Units: mg/H	39.6 0 esel Range	20 0	RS
Diesel Range Organics (DRO) Surr: DNOP Sample ID LCS-35562 Client ID: LCSS Prep Date: 12/18/2017 Analyte	420 9.4 4.7 SampType: L Batch ID: 39 Analysis Date: 1 Result PQL	4 47.08 4.708 CS 5562 12/19/2017 SPK value	352.0 Test R SPK Ref Val	141 99.9 Code: EPA Me tunNo: 47873 GeqNo: 153450 %REC Low	55.8 125 70 130 ethod 8015M/D: Di 06 Units: mg/k /Limit HighLimit	39.6 0 esel Range	20 0 • Organics	RS
Diesel Range Organics (DRO) Surr: DNOP Sample ID LCS-35562 Client ID: LCSS Prep Date: 12/18/2017 Analyte Diesel Range Organics (DRO)	420 9.4 4.7 SampType: L Batch ID: 3 Analysis Date: 1 Result PQL 44 10	4 47.08 4.708 55562 12/19/2017 SPK value 0 50.00	352.0 Tesi R SPK Ref Val 0	141 99.9 Code: EPA Me tunNo: 47873 seqNo: 153450 %REC Low 88.3	55.8 125 70 130 ethod 8015M/D: Di 06 Units: mg/P /Limit HighLimit 73.2 114	39.6 0 esel Range (g %RPD	20 0 Porganics RPDLimit	RS
Diesel Range Organics (DRO) Surr: DNOP Sample ID LCS-35562 Client ID: LCSS Prep Date: 12/18/2017 Analyte Diesel Range Organics (DRO) Surr: DNOP	420 9.4 4.7 SampType: L Batch ID: 3 Analysis Date: 1 Result PQL 44 10 4.5	4 47.08 4.708 55562 12/19/2017 SPK value 0 50.00 5.000	352.0 Test R S SPK Ref Val 0	141 99.9 Code: EPA Me tunNo: 47873 seqNo: 153450 %REC Low 88.3 89.9	55.8 125 70 130 ethod 8015M/D: Di 06 Units: mg/k /Limit HighLimit 73.2 114 70 130	39.6 0 esel Range (g %RPD	20 0 • Organics RPDLimit	RS Qual
Diesel Range Organics (DRO) Surr: DNOP Sample ID LCS-35562 Client ID: LCSS Prep Date: 12/18/2017 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID MB-35562	420 9.4 4.7 SampType: L Batch ID: 3 Analysis Date: 1 Result PQL 44 10 4.5 SampType: M	4 47.08 4.708 55562 12/19/2017 SPK value 0 50.00 5.000	352.0 Tesi SPK Ref Val 0 Tesi	141 99.9 Code: EPA Me tunNo: 47873 seqNo: 153450 %REC Low 88.3 89.9 Code: EPA Me	55.8 125 70 130 ethod 8015M/D: Di 06 Units: mg/P /Limit HighLimit 73.2 114 70 130 ethod 8015M/D: Di Di	39.6 0 esel Range %RPD esel Range	20 0 POrganics RPDLimit	RS
Diesel Range Organics (DRO) Surr: DNOP Sample ID LCS-35562 Client ID: LCSS Prep Date: 12/18/2017 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID MB-35562 Client ID: PBS	420 9.4 4.7 SampType: L Batch ID: 3 Analysis Date: 1 Result PQL 44 10 4.5 SampType: M Batch ID: 38	4 47.08 4.708 5562 12/19/2017 SPK value 5.000 5.000	352.0 Tesi SPK Ref Val 0 Tesi R	141 99.9 Code: EPA Me tunNo: 47873 ieqNo: 153450 %REC Low 88.3 89.9 Code: EPA Me unNo: 47873	55.8 125 70 130 ethod 8015M/D: Di 06 Units: mg/k /Limit HighLimit 73.2 114 70 130 ethod 8015M/D: Di Di	39.6 0 esel Range %RPD esel Range	20 0 e Organics RPDLimit	RS Qual
Diesel Range Organics (DRO) Surr: DNOP Sample ID LCS-35562 Client ID: LCSS Prep Date: 12/18/2017 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID MB-35562 Client ID: PBS Prep Date: 12/18/2017	420 9.4 4.7 SampType: L Batch ID: 3 Analysis Date: 1 Result PQL 44 10 4.5 SampType: M Batch ID: 3 Analysis Date: 1	4 47.08 4.708 55562 12/19/2017 SPK value 0 50.00 5.000 1 BLK 55562 12/19/2017	352.0 Tesi SPK Ref Val 0 Tesi R S	141 99.9 Code: EPA Me tunNo: 47873 eqNo: 153450 %REC Low 88.3 89.9 Code: EPA Me unNo: 47873 eqNo: 153450	55.8 125 70 130 ethod 8015M/D: Di 06 Units: mg/P /Limit HighLimit 73.2 114 70 130 ethod 8015M/D: Di ethod 8015M/D: Di 0 130	39.6 0 esel Range %RPD esel Range	20 0 e Organics RPDLimit	RS Qual
Diesel Range Organics (DRO) Surr: DNOP Sample ID LCS-35562 Client ID: LCSS Prep Date: 12/18/2017 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID MB-35562 Client ID: PBS Prep Date: 12/18/2017 Analyte	420 9.4 4.7 SampType: L Batch ID: 3 Analysis Date: 1 Result PQL 44 10 4.5 SampType: M Batch ID: 3 Analysis Date: 1 Result PQL	4 47.08 4.708 5562 12/19/2017 SPK value 5562 12/19/2017 SPK value	352.0 Tesi SPK Ref Val 0 Tesi R SPK Ref Val	141 99.9 Code: EPA Me tunNo: 47873 ieqNo: 153450 %REC Low a83.3 89.9 Code: EPA Me unNo: 47873 eqNo: 153450 %REC Low	55.8 125 70 130 ethod 8015M/D: Di 06 Units: mg/k /Limit HighLimit 73.2 114 70 130 ethod 8015M/D: Di Di pethod 8015M/D: Di Di 0 130 ethod 8015M/D: Di Di 0 130	39.6 0 esel Range %RPD esel Range	20 0 e Organics RPDLimit	Qual
Diesel Range Organics (DRO) Surr: DNOP Sample ID LCS-35562 Client ID: LCSS Prep Date: 12/18/2017 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID MB-35562 Client ID: PBS Prep Date: 12/18/2017 Analyte Diesel Range Organics (DRO)	420 9.4 4.7 SampType: L Batch ID: 3 Analysis Date: 1 Result PQL 44 10 4.5 SampType: M Batch ID: 3 Analysis Date: 1 Result PQL ND 10	4 47.08 4.708 55562 12/19/2017 SPK value 0 50.00 5.000 5.000 1BLK 5562 12/19/2017 SPK value	352.0 Tesi SPK Ref Val 0 Tesi R SPK Ref Val	141 99.9 Code: EPA Me tunNo: 47873 seqNo: 153450 %REC Low 88.3 89.9 Code: EPA Me unNo: 47873 seqNo: 153450 %REC Low	55.8 125 70 130 ethod 8015M/D: Di 06 Units: mg/P /Limit HighLimit 73.2 114 70 130 ethod 8015M/D: Di Di 07 Units: mg/P /Limit HighLimit 70 130	39.6 0 esel Range %RPD esel Range	20 0 e Organics RPDLimit	RS 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 7 of 11

- Р Sample pH Not In Range
- RL Reporting Detection Limit

Sample container temperature is out of limit as specified W

20-Dec-17

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:Williams Four CornersProject:Lowery Tank Battery

Sample ID MB-35562	SampType	MBLK	Tes	tCode: E	EPA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: PBS	Batch ID:	35562	F	RunNo:	47873				
Prep Date: 12/18/2017	Analysis Date:	12/19/2017	S	SeqNo:	1534507	Units: mg/K	g		
Analyte	Result PO	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.4	10.00		94.3	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

ove quantitation range

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20-Dec-17

WO#: 1712737

Client:

Hall Environmental Analysis Laboratory, Inc.

Williams Four Corners

Project: Lowery Tank Battery Sample ID MB-35496 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 35496 RunNo: 47788 Prep Date: 12/13/2017 Analysis Date: 12/14/2017 SeqNo: 1528542 Units: mg/Kg SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual Analyte Result PQL LowLimit Gasoline Range Organics (GRO) 5.0 ND 1300 1000 130 15 316 Surr: BFB TestCode: EPA Method 8015D: Gasoline Range Sample ID LCS-35496 SampType: LCS Client ID: LCSS Batch ID: 35496 RunNo: 47788 Analysis Date: 12/14/2017 SegNo: 1528543 Units: mg/Kg Prep Date: 12/13/2017 SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual Analyte Result PQL LowLimit Gasoline Range Organics (GRO) 30 5.0 25.00 75.9 131 0 118 Surr: BFB 1300 1000 135 316 15 Sample ID 1712737-002AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range SB-16 47'-50' RunNo: 47788 Client ID: Batch ID: 35496 Prep Date: 12/13/2017 Analysis Date: 12/14/2017 SeqNo: 1528549 Units: mg/Kg Analyte Result POL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 3000 49 24.37 2604 1790 77.8 128 ES Surr: BFB 12000 974.7 1220 15 316 S Sample ID 1712737-002AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: SB-16 47'-50' Batch ID: 35496 RunNo: 47788 Prep Date: 12/13/2017 Analysis Date: 12/14/2017 SeqNo: 1528550 Units: mg/Kg SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQL LowLimit HighLimit Qual Gasoline Range Organics (GRO) 3500 4.7 23.32 2604 3640 77.8 128 ES 12.7 20 Surr: BFB 11000 932.8 1170 15 316 0 S 0 Sample ID MB-35517 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 35517 RunNo: 47817 Prep Date: 12/14/2017 Analysis Date: 12/15/2017 SeqNo: 1530380 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC HighLimit %RPD RPDLimit Qual LowLimit Surr: BFB 960 1000 96.2 15 316 TestCode: EPA Method 8015D: Gasoline Range Sample ID LCS-35517 SampType: LCS RunNo: 47817 Client ID: LCSS Batch ID: 35517 Prep Date: Analysis Date: 12/15/2017 SeqNo: 1530381 Units: %Rec 12/14/2017 Analyte Result PQL SPK value SPK Ref Val %REC Lowl imit HighLimit %RPD **RPDLimit** Qual Surr: BFB 970 1000 96.9 15 316

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
- B Analyte detected in the associated Method Blank
 - Value above quantitation range
- J Analyte detected below quantitation limits
- Page 9 of 11

- P Sample pH Not In Range
- RL Reporting Detection Limit

E

W Sample container temperature is out of limit as specified WO#: 1712737 20-Dec-17

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Williams Four Corners **Project:** Lowery Tank Battery

Sample ID	MB-35496	Samp	Гуре: МЕ	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	PBS	Batc	h ID: 35	496	F	RunNo: 4	7788				
Prep Date:	12/13/2017	Analysis [Date: 12	2/14/2017	5	SeqNo: 1	528572	Units: mg/l	۲g		
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-Bromo	ofluorobenzene	1.1		1.000		112	80	120			
Sample ID	LCS-35496	Samp	Type: LC	S	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: L	LCSS	Batc	h ID: 35	496	F	RunNo: 4	7788				
Prep Date:	12/13/2017	Analysis [Date: 12	2/14/2017	0	SeqNo: 1	528573	Units: mg/l	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.94	0.025	1.000	0	93.6	77.3	128			
Toluene		0.96	0.050	1.000	0	95.6	79.2	125			
Ethylbenzene		0.96	0.050	1.000	0	95.5	80.7	127			
Xylenes, Total		2.8	0.10	3.000	0	94.3	81.6	129			
Surr: 4-Bromo	fluorobenzene	1.1		1.000		110	80	120			
Sample ID 1	1712737-001AMS	SampT	Type: MS	6	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Sample ID 1 Client ID: 5	1712737-001AMS SB-16 25'-30'	Samp1 Batcl	Type: MS	3 496	Tes	tCode: El RunNo: 4	PA Method 7788	8021B: Vola	tiles		
Sample ID 1 Client ID: 5 Prep Date:	1712737-001AMS SB-16 25'-30' 12/13/2017	Samp Batch Analysis D	Type: MS h ID: 354 Date: 12	3 496 2/14/2017	Tes F	tCode: El RunNo: 4 SeqNo: 1	PA Method 7788 528576	8021B: Vola Units: mg/ł	tiles (g		
Sample ID 1 Client ID: 5 Prep Date: Analyte	1712737-001AMS SB-16 25'-30' 12/13/2017	Samp1 Batcl Analysis [Result	Fype: MS h ID: 35 Date: 12 PQL	3 496 2/14/2017 SPK value	Tes F SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC	PA Method 7788 528576 LowLimit	8021B: Vola Units: mg/k HighLimit	tiles (g %RPD	RPDLimit	Qual
Sample ID 1 Client ID: \$ Prep Date: Analyte Benzene	1712737-001AMS SB-16 25'-30' 12/13/2017	Samp Batcl Analysis E Result 1.7	Type: MS h ID: 354 Date: 12 PQL 0.24	5 496 2/14/2017 SPK value 0.9434	Tes F S SPK Ref Val 0.7144	tCode: El RunNo: 4 SeqNo: 1 %REC 106	PA Method 7788 528576 LowLimit 80.9	8021B: Vola Units: mg/k HighLimit 132	tiles (g %RPD	RPDLimit	Qual
Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene Toluene	1712737-001AMS SB-16 25'-30' 12/13/2017	SampT Batcl Analysis D Result 1.7 21	Fype: MS h ID: 35 Date: 12 PQL 0.24 0.47	5 496 2/14/2017 SPK value 0.9434 0.9434	Tes F SPK Ref Val 0.7144 24.61	tCode: El RunNo: 4 SeqNo: 1 %REC 106 -404	PA Method 7788 528576 LowLimit 80.9 79.8	8021B: Vola Units: mg/k HighLimit 132 136	tiles (g %RPD	RPDLimit	Qual
Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene Toluene Ethylbenzene	1712737-001AMS SB-16 25'-30' 12/13/2017	SampT Batcl Analysis D Result 1.7 21 4.8	Type: MS h ID: 35 Date: 12 PQL 0.24 0.47 0.47	3 496 2/14/2017 SPK value 0.9434 0.9434 0.9434	Tes F SPK Ref Val 0.7144 24.61 4.406	tCode: El RunNo: 4 SeqNo: 1 %REC 106 -404 42.6	PA Method 7788 528576 LowLimit 80.9 79.8 79.4	8021B: Vola Units: mg/k HighLimit 132 136 140	tiles (g %RPD	RPDLimit	Qual S S
Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	1712737-001AMS SB-16 25'-30' 12/13/2017	Samp Batcl Analysis D Result 1.7 21 4.8 50	Type: MS h ID: 35- Date: 12 0.24 0.24 0.47 0.47 0.94	5 496 2/14/2017 SPK value 0.9434 0.9434 0.9434 2.830	Tes F SPK Ref Val 0.7144 24.61 4.406 57.40	tCode: El RunNo: 4 SeqNo: 1 %REC 106 -404 42.6 -274	PA Method 7788 528576 LowLimit 80.9 79.8 79.4 79.4 78.5	8021B: Vola Units: mg/k HighLimit 132 136 140 142	tiles (g %RPD	RPDLimit	Qual S S S
Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromot	1712737-001AMS SB-16 25'-30' 12/13/2017 fluorobenzene	Samp1 Batcl Analysis D Result 1.7 21 4.8 50 13	Type: MS h ID: 35 Date: 12 0.24 0.47 0.47 0.94	5 496 2/14/2017 SPK value 0.9434 0.9434 0.9434 2.830 9.434	Tes F SPK Ref Val 0.7144 24.61 4.406 57.40	tCode: El RunNo: 4 SeqNo: 1 %REC 106 -404 42.6 -274 136	PA Method 7788 528576 LowLimit 80.9 79.8 79.4 78.5 80	8021B: Vola Units: mg/k HighLimit 132 136 140 142 120	tiles (g %RPD	RPDLimit	Qual S S S S S
Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromoto Sample ID 1	1712737-001AMS SB-16 25'-30' 12/13/2017 fluorobenzene 1712737-001AMSD	Samp Batcl Analysis D Result 1.7 21 4.8 50 13	Fype: MS h ID: 35- Date: 12 0.24 0.47 0.47 0.47 0.94	3 496 2/14/2017 SPK value 0.9434 0.9434 0.9434 2.830 9.434 5D	Tes F SPK Ref Val 0.7144 24.61 4.406 57.40 Tes	tCode: El RunNo: 4 SeqNo: 1 %REC 106 -404 42.6 -274 136 tCode: El	PA Method 7788 528576 LowLimit 80.9 79.8 79.4 78.5 80 PA Method	8021B: Vola Units: mg/k HighLimit 132 136 140 142 120 8021B: Vola	tiles (g %RPD	RPDLimit	Qual S S S S
Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromot Sample ID 1 Client ID: 5	1712737-001AMS SB-16 25'-30' 12/13/2017 fluorobenzene 1712737-001AMSD SB-16 25'-30'	Samp1 Batcl Analysis D Result 1.7 21 4.8 50 13 0 Samp1 Batcl	Type: MS h ID: 35- Date: 12 0.24 0.24 0.47 0.47 0.34	 3 496 2/14/2017 SPK value 0.9434 0.9434 0.9434 2.830 9.434 5D 496 	Tes F SPK Ref Val 0.7144 24.61 4.406 57.40 Tes F	tCode: El RunNo: 4 SeqNo: 1 %REC 106 -404 42.6 -274 136 tCode: El RunNo: 4	PA Method 7788 528576 LowLimit 80.9 79.8 79.4 78.5 80 PA Method 7788	8021B: Vola Units: mg/k HighLimit 132 136 140 142 120 8021B: Vola	tiles (g %RPD	RPDLimit	Qual S S S S
Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromol Sample ID 1 Client ID: 5 Prep Date:	1712737-001AMS SB-16 25'-30' 12/13/2017 ifluorobenzene 1712737-001AMSD SB-16 25'-30' 12/13/2017	Samp Batcl Analysis D Result 1.7 21 4.8 50 13 0 Samp Batcl Analysis D	Fype: MS bate: 12 PQL 0.24 0.47 0.47 0.94 Type: MS bate: 12 Date: 12	3 496 2/14/2017 SPK value 0.9434 0.9434 0.9434 2.830 9.434 3D 496 2/14/2017	Tes F SPK Ref Val 0.7144 24.61 4.406 57.40 Tes F S	tCode: El RunNo: 4 SeqNo: 1 %REC 106 -404 42.6 -274 136 tCode: El RunNo: 4 SeqNo: 1	PA Method 7788 528576 LowLimit 80.9 79.8 79.4 78.5 80 PA Method 7788 528577	8021B: Vola Units: mg/k HighLimit 132 136 140 142 120 8021B: Vola Units: mg/k	tiles (g %RPD tiles	RPDLimit	Qual S S S S
Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromot Sample ID 1 Client ID: 5 Prep Date: Analyte	1712737-001AMS SB-16 25'-30' 12/13/2017 ////////////////////////////////////	SampT Batcl Analysis D Result 1.7 21 4.8 50 13 0 SampT Batcl Analysis D Result	Type: MS h ID: 35- Date: 12 0.24 0.47 0.47 0.94 Type: MS o ID: 35- Date: 12 PQL	 496 2/14/2017 SPK value 0.9434 0.9434 0.9434 2.830 9.434 5D 496 2/14/2017 SPK value 	Tes 5 SPK Ref Val 0.7144 24.61 4.406 57.40 Tes F SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC 106 -404 42.6 -274 136 tCode: El RunNo: 4 SeqNo: 1 %REC	PA Method 7788 528576 LowLimit 80.9 79.8 79.4 78.5 80 PA Method 7788 528577 LowLimit	8021B: Vola Units: mg/k HighLimit 132 136 140 142 120 8021B: Vola Units: mg/k HighLimit	tiles (g %RPD tiles (g %RPD	RPDLimit	Qual S S S S Qual
Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromot Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene	1712737-001AMS SB-16 25'-30' 12/13/2017 fluorobenzene 1712737-001AMSD SB-16 25'-30' 12/13/2017	Samp Batcl Analysis D Result 1.7 21 4.8 50 13 0 Samp Batcl Analysis D Result 1.5	Type: MS h ID: 35- Date: 12 0.24 0.47 0.47 0.94 Type: MS o ID: 35- Date: 12 PQL 0.23	 496 2/14/2017 SPK value 0.9434 0.9434 0.9434 2.830 9.434 5D 496 2/14/2017 SPK value 0.9285 	Tes 5 SPK Ref Val 0.7144 24.61 4.406 57.40 Tes F SPK Ref Val 0.7144	tCode: El RunNo: 4 SeqNo: 1: %REC 106 -404 42.6 -274 136 tCode: El RunNo: 4 SeqNo: 1: %REC 86.2	PA Method 7788 528576 LowLimit 80.9 79.8 79.4 78.5 80 PA Method 7788 528577 LowLimit 80.9	8021B: Vola Units: mg/k HighLimit 132 136 140 142 120 8021B: Vola Units: mg/k HighLimit 132	tiles (g %RPD tiles (g %RPD 12.2	RPDLimit RPDLimit 20	Qual S S S S Qual
Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromoo Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene Toluene	1712737-001AMS SB-16 25'-30' 12/13/2017 ifluorobenzene 1712737-001AMSD SB-16 25'-30' 12/13/2017	Samp Batcl Analysis D Result 1.7 21 4.8 50 13 0 Samp Batcl Analysis D Result 1.5 19	Fype: MS h ID: 35- Date: 12 0.24 0.47 0.47 0.94 Fype: MS h ID: 35- Date: 12 PQL 0.23 0.46	3 496 2/14/2017 SPK value 0.9434 0.9434 0.9434 2.830 9.434 30 9.434 50 496 2/14/2017 SPK value 0.9285 0.9285	Tes F SPK Ref Val 0.7144 24.61 4.406 57.40 Tes F SPK Ref Val 0.7144 24.61	tCode: El RunNo: 4 SeqNo: 1 %REC 106 -404 42.6 -274 136 tCode: El RunNo: 4 SeqNo: 1 %REC 86.2 -634	PA Method 7788 528576 LowLimit 80.9 79.8 79.4 78.5 80 PA Method 7788 528577 LowLimit 80.9 79.8	8021B: Vola Units: mg/k HighLimit 132 136 140 142 120 8021B: Vola Units: mg/k HighLimit 132 136	tiles (g %RPD tiles (g %RPD 12.2 10.5	RPDLimit RPDLimit 20 20	Qual S S S S Qual S
Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromoi Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene Toluene Ethylbenzene	1712737-001AMS SB-16 25'-30' 12/13/2017 ifluorobenzene 1712737-001AMSD SB-16 25'-30' 12/13/2017	Samp Batcl Analysis D Result 1.7 21 4.8 50 13 0 Samp Batcl Analysis D Result 1.5 19 4.6	Type: MS b ID: 35- Date: 12 PQL 0.24 0.47 0.47 0.94 Type: MS b ID: 35- Date: 12 PQL 0.23 0.46 0.46	3 496 2/14/2017 SPK value 0.9434 0.9434 0.9434 2.830 9.434 30 496 2/14/2017 SPK value 0.9285 0.9285 0.9285	Tes 5 5 5 5 5 5 5 5 5 5 5 5 5	tCode: El RunNo: 4 SeqNo: 1 %REC 106 -404 42.6 -274 136 tCode: El RunNo: 4 SeqNo: 1 %REC 86.2 -634 17.7	PA Method 7788 528576 LowLimit 80.9 79.8 79.4 78.5 80 PA Method 7788 528577 LowLimit 80.9 79.8 79.8 79.4	8021B: Vola Units: mg/k HighLimit 132 136 140 142 120 8021B: Vola 8021B: Vola Units: mg/k HighLimit 132 136 140	tiles (g %RPD tiles (g %RPD 12.2 10.5 5.07	RPDLimit RPDLimit 20 20 20 20	Qual S S S S Qual S S
Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromol Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	1712737-001AMS SB-16 25'-30' 12/13/2017 ifluorobenzene 1712737-001AMSD SB-16 25'-30' 12/13/2017	Samp Batcl Analysis D Result 1.7 21 4.8 50 13 0 Samp Batcl Analysis D Result 1.5 19 4.6 48	Fype: MS bate: 12 PQL 0.24 0.47 0.47 0.47 0.94 Type: MS bate: 12 PQL 0.23 0.46 0.46 0.93	3 496 2/14/2017 SPK value 0.9434 0.9434 2.830 9.434 30 9.434 30 496 2/14/2017 SPK value 0.9285 0.9285 0.9285 0.9285 2.786	Tes SPK Ref Val 0.7144 24.61 4.406 57.40 Tes F SPK Ref Val 0.7144 24.61 4.406 57.40	tCode: El RunNo: 4 SeqNo: 1 %REC 106 -404 42.6 -274 136 tCode: El RunNo: 4 SeqNo: 1 %REC 86.2 -634 17.7 -348	PA Method 7788 528576 LowLimit 80.9 79.8 79.4 78.5 80 PA Method 7788 528577 LowLimit 80.9 79.8 79.8 79.4 79.4 79.4 78.5	8021B: Vola Units: mg/k HighLimit 132 136 140 142 120 8021B: Vola 8021B: Vola Units: mg/k HighLimit 132 136 140 142	tiles (g %RPD tiles (g %RPD 12.2 10.5 5.07 3.98	RPDLimit RPDLimit 20 20 20 20 20 20	Qual S S S S Qual S S S

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Н
- 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
- Analyte detected below quantitation limits J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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WO#: 1712737

20-Dec-17

Hall Environmental Analysis Laboratory, Inc.

Client: Williams Four Corners **Project:** Lowery Tank Battery

Sample ID MB-35517	BLK T	TestCode: EPA Method 8021B: Volatiles					
Client ID: PBS	Batch ID: 355	517	RunNo: 47817				
Prep Date: 12/14/2017	Analysis Date: 12	2/15/2017	SeqNo: 1530395	Units: %Rec			
Analyte	Result PQL	SPK value SPK Ref Va	al %REC LowLimit	HighLimit %RPD	RPDLimit Qual		
Surr: 4-Bromofluorobenzene	1.1	1.000	114 80	120			
Sample ID LCS-35517	SampType: LC	s T	estCode: EPA Method	8021B: Volatiles			
Client ID: LCSS	Batch ID: 355	517	RunNo: 47817				
Prep Date: 12/14/2017	Analysis Date: 12	2/15/2017	SeqNo: 1530396	Units: %Rec			
Analyte	Result PQL	SPK value SPK Ref Va	al %REC LowLimit	HighLimit %RPD	RPDLimit Qual		
Surr: 4-Bromofluorobenzene	1.1	1.000	110 80	120			

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
- 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

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20-Dec-17

WO#: 1712737

HAI ENV ANA LAB	ITAL (Hal TEI	l Environmen A S05-345-35 Vebsite: www	tal Analysis Labo 4901 Hawk Ilbuquerque, NM 975 FAX: 505-34. hallenvironment	nratory ins NE 87109 Sa 8-4107 al.com	Sample Log-In Check List			
Client Name	: WILLIAI	IS FOUR CORN	Work	Order Numb	er: 1712737			RcptNo: 1	
Received B;	r: Anne 1	home	12/13/20	017 7:00:00	АМ	anne J	1-	-	
Completed E Reviewed By	iy: Michel Michel	le Garcia JS	12/13/20 7	17 9:33:41 13/10	АМ	Minul	Gan	uia)	
Chain of C	ustody								
1. Custody	seals intact o	n sample bottles	?		Yes	No 🗌		Not Present 🗹	
2. Is Chain	of Custody c	omplete?			Yes 🗹	No]	Not Present	
3. How was	the sample of	delivered?			Courier				
Log In									
4. Was an	attempt made	e to cool the sam	ples?		Yes 🗹	No		NA 🗌	
5. Were all	samples reco	aived at a temper	ature of >0° C	to 6.0°C	Yes 🗸	No]	NA	
6. Sample(s) in proper c	ontainer(s)?			Yes 🗹	No			
7. Sufficient	t sample volu	me for indicated	test(s)?		Yes 🗸	No]		
8. Are samp	oles (except \	/OA and ONG) p	roperly preserv	ved?	Yes 🖌	No			
9. Was pres	servative add	ed to bottles?			Yes	No ¥	1	NA	
10.VOA vial	s have zero h	eadspace?			Yes	No		No VOA Vials 🗹	
11, Were an	y sample con	tainers received	broken?		Yes	No 🖄	4	# of preserved bottles checked	
12. Does pap (Note dis	erwork matc crepancies o	h bottle labels? h chain of custod	y)		Yes 🖌	No	_	for pH: (<2 cr >	12 unless noted)
13. Are matri	ces correctly	identified on Cha	in of Custody?	,	Yes 🗸	No]	Adjusted?	
14, Is it clear	what analyse	s were requeste	1?		Yes 🖌	No			
15. Were all (If по, по	holding times lify customer	able to be met? for authorization.)		Yes 🔽	No	-	Checked by:	
Special Ha	ndling (if a	applicable)							
16. Was clier	nt notified of a	III discrepancies	with this order'	?	Yes	No]	NA 🗹	
Per	son Notified:	J	and the second	Date	1	a aliqui puto mbilitza vertano	e.15		
Ву	Whom:			Via:	🗌 eMail 🗌	Phone 🗌 Fa	ax	In Person	
Reg	parding:	ſ							
Clie	ent Instruction	5:							
17. Additiona	al remarks:								
18. Cooler I	nformation						,		
Coole	No Temp	°C Condition	Seal Intact	Seal No	Seal Date	Signed By			
1	1.0	Good	res						

Date: Time: Religioushed by: 12-12-17 130 UNC	Talata 3:30 Geria Cancell	Date: Time: Relinquished by:		61 01 0C 010	15:15 - 21-85 - 21:51	14:45 58-17 0'-5'	13:00 58-20 40'- 45'	13:00 58-20 35'-40'	11:30 58-16 47'-50'	12/11/17 11:00 Soil SB-16 75'-30'	Date Time Matrix Sample Request ID	宮 EDD (Type) PDF	Accreditation	QA/QC Package:	email or Fax#: coron saler@ w: Wans. con	Phone #:	Bioomfield, NM g7413	Mailing Address: 17755 Arroyo Dr.	Aaron Galer	Client: Williams Four Corners	Chain-of-Custody Record
International according to the former to the second	1 pel allego 12-12-17 133	Received by:/ Date Time			- Mr - Mr	- n5	H00 - 004	END - CN3	- 602	1402 6001 - 001	Container Preservative HEAL No Type and # Type 7 273]	Sample Temperature: /.0	Sampler: <u>Erz Carro</u> ∦ On Ice: XYes j⊡ No	Danny Burns-LTE	Project Manager:		Project #:	Lowery Tank Battery	Project Name:	Standard CRush	Turn-Around Time:
	D	Remarks:			<	*	× ×	× ×	× ×	X	BTEX + MT BTEX + MT TPH 8015B TPH (Metho EDB (Metho PAH's (8310 RCRA 8 Me Anions (F,C 8081 Pestic 8260B (VO/ 8270 (Semi-	BE (GI od 4 od 5 0 or ttals ides () VO	+ TMB' + TPH Ro /(OF 18.1) 04.1) 8270 S 03,NO2, 1 / 8082 A)	s (802 (Gas o Rd (MI SIMS) PO4, SC		Analysis Request	Tel. 505-345-3975 Fax 505-345-4107	4901 Hawkins NE - Albuquerque, NM 87109	www.hallenvironmental.com	ANALYSIS LABORATO	
											Air Bubbles	(Y (or N)							RY	•