

# **AE Order Number Banner**

### **Report Description**

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



**App Number:** pCS1731039100

144B - 13127
WILLIAMS FOUR CORNERS

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

# State of New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division 1220 South St. Francis Dr. Santa Fe. NM 87505

Form C-144 Revised June 6, 2013

For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office.

For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Sunta 10, 1111 07505	
TRACK: 05# Pit, Below-Grade Tank, or 13975 Proposed Alternative Method Permit or Closure Plan Applicant	
13975 Proposed Alternative Method Permit or Closure Plan Application	tion
Type of action:  Below grade tank registration Permit of a pit or proposed alternative method Closure of a pit, below-grade tank, or proposed alternative method	OIL CONS. DIV DIST. 3
Modification to an existing permit/or registration  Closure plan only submitted for an existing permitted or non-permitted pi	it holow grade tank
or proposed alternative method	it, below-grade talik,
Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alter	rnative reauest
Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface	
environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority.	
Operator: Williams Four Corners LLC OGRID #:	
Address: 188 County Road 4900, Bloomfield, NM 87413	
Facility or well name: 31-6 CDP	
API Number: OCD Permit Number:	
U/L or Qtr/Qtr SW/4 SW/4 Section 01 Township 30N Range 06W County: San Ju	uan
Center of Proposed Design: Latitude 36.835452 Longitude -107.420297	NAD: □1927 ■ 1983
Surface Owner: Federal State Private Tribal Trust or Indian Allotment	NAD. [_1927 <b>=</b> 1903
2.  Dit: Subsection F. G. or I. of 10.15.17.11 NIMAC.	
Pit: Subsection F, G or J of 19.15.17.11 NMAC	
Temporary: Drilling Workover	
Permanent Emergency Cavitation P&A Multi-Well Fluid Management Low Chloride Drillin	
Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other	
String-Reinforced	
Liner Seams: Welded Factory Other Volume: bbl Dimensions: L	x W x D
3.	
Below-grade tank: Subsection I of 19.15.17.11 NMAC	
Volume: 165bbl Type of fluid: Waste Water	
Tank Construction material: Steel	
Secondary containment with leak detection  Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other	
Liner type: Thickness mil  HDPE PVC Other	
Life type. Thicklessinit [ ] TIDLE [ ] TVC [ ] Onici	
4.  Alternative Method:	
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for	for consideration of approval.
5.	
Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)	
Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residinstitution or church)	dence, school, hospital,
Four foot height, four strands of barbed wire evenly spaced between one and four feet	
Alternate. Please specify eight foot fence surrounds facility	

Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)	
Screen Netting Other Covered top	
■ Monthly inspections (If netting or screening is not physically feasible)	
7.	
Signs: Subsection C of 19.15.17.11 NMAC	
■ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers	
☐ Signed in compliance with 19.15.16.8 NMAC	
8. Variances and Exceptions:	
Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.	
Please check a box if one or more of the following is requested, if not leave blank:	
<ul> <li>□ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.</li> <li>□ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.</li> </ul>	
9. Siting Criteria (regarding permitting): 19.15.17.10 NMAC	
Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of accematerial are provided below. Siting criteria does not apply to drying pads or above-grade tanks.	ptable source
General siting	
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.  - In NM Office of the State Engineer - iWATERS database search; In USGS; In Data obtained from nearby wells	Yes No
	☐ Yes ☐ No
Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit.  NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	□ NA
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. ( <b>Does not apply to below grade tanks</b> )  - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within the area overlying a subsurface mine. (Does not apply to below grade tanks)  - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
<ul> <li>Within an unstable area. (Does not apply to below grade tanks)</li> <li>Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</li> </ul>	☐ Yes ☐ No
Within a 100-year floodplain. (Does not apply to below grade tanks) - FEMA map	☐ Yes ☐ No
Below Grade Tanks	
Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured	
from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	Yes No
Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;.  - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ■ No
Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)	
Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.)  - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.	☐ Yes ☐ No
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	
Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application.  NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No

Within 100 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No										
Temporary Pit Non-low chloride drilling fluid											
Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No										
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No										
Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock vatering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;  NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site											
Within 300 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No										
Permanent Pit or Multi-Well Fluid Management Pit											
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No										
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No										
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.  - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No										
Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No										
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC  Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.  Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC											
11.  Multi-Well Fluid Management Pit Checklist: Subsection B of 19.15.17.9 NMAC											
Multi-Well Fluid Management Pit Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.  Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC A List of wells with approved application for permit to drill associated with the pit. Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.10 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Previously Approved Design (attach copy of design) API Number: or Permit Number:											

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC  Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the	documents are
### Author Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.9 NMAC    Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC    Climatological Factors Assessment   Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC    Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC    Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC    Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC    Quality Control/Quality Assurance Construction and Installation Plan    Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC    Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC    Nuisance or Hazardous Odors, including H₂S, Prevention Plan    Emergency Response Plan    Oil Field Waste Stream Characterization    Monitoring and Inspection Plan    Erosion Control Plan    Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	
<u>Proposed Closure</u> : 19.15.17.13 NMAC Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.	
Type: Drilling Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Multi-well F Alternative  Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Trench Burial Alternative Closure Method	luid Management Pit
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be closure plan. Please indicate, by a check mark in the box, that the documents are attached.  Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC  Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC  Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)  Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC	
15. Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable sour provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. F 19.15.17.10 NMAC for guidance.	
Ground water is less than 25 feet below the bottom of the buried waste.  - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is between 25-50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste.  - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application.  - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	

adopted pursuant to NMSA 1978, Section 3-27-3, as amended.  - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No										
Within the area overlying a subsurface mine Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No										
Within an unstable area.  - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map											
Within a 100-year floodplain FEMA map	☐ Yes ☐ No ☐ Yes ☐ No										
1 23.11.1 1.11.p											
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.  Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC  Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.11 NMAC  Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.13 NMAC  Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC  Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC  Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC  Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)  Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC											
17. Operator Application Certification:											
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and beli	ef.										
Name (Print): Title:											
Signature: Date:											
e-mail address: Telephone:											
18.  OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment)											
OCD Representative Signature:  Approval Date: 11/6	1/17										
Title: Environmental Sec OCD Permit Number: 13/27											
Closure Report (required within 60 days of closure completion): 19.15.17.13 NMAC Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.											
☐ Closure Completion Date: 02/03/201											
20.  Closure Method:  Waste Excavation and Removal  On-Site Closure Method  Alternative Closure Method  Waste Removal (Closed-lo If different from approved plan, please explain.											

22.	
Operator Closure Certification:	
I hereby certify that the information and attachments submitted with this closure report belief. I also certify that the closure complies with all applicable closure requirements	
Name (Print): Kelsey Christiansen	Title: Environmental Specialist
Signature: XMY / Much	Date: 02/03/2016
e-mail address: kelsey.christiansen@williams.com	Telephone: 505-632-4606



Williams Four Corners LLC Below Grade Tank Closure Report Facility Name: 31-6 CDP

The following provides information related to the retirement and closure of the below grade tank (BGT) at the named location. All work was performed in accordance with Rule 19.15.17.13 NMAC and was consistent with the Williams BGT Closure Plan approved by NMOCD.

**Requirement:** Provide notices to NMOCD and landowner prior to closure actions.

<u>Action:</u> Notification made to landowner by mail and to NMOCD Aztec District Office by either mail (included with C-144) or by email.

**Requirement:** Eliminate discharge to BGT and remove free-standing liquids from BGT and or containment.

<u>Action:</u> Discharge to the BGT was eliminated and liquids, when present, were removed by a licensed hauler and taken to a NMOCD-permitted facility listed in the aforementioned closure plan.

Requirement: Remove ancillary equipment including piping, liner material, and fencing.

<u>Action:</u> Piping, liner material, and fencing were removed in advance or at the time of BGT retirement work. Scrap steel was recycled or placed in a Williams-owned storage area to allow evaluation for final disposition.

Requirement: Sample and test soils beneath the BGT to determine if there was hydrocarbon impact.

<u>Action:</u> Soils were sampled and analyzed for TPH, BTEX and chlorides. Results are attached to the C-144 Closure Form and are part of the closure documentation.

**Requirement:** Address contamination consistent with the Closure Plan or Remedial Action Plan/Protocol.

Action: Contaminated soil was encountered during the BGT, and was removed and disposed of at approved disposal facility.

**Requirement:** Backfill containment/excavation with acceptably clean materials and return area to grade such that ponding and erosion are mitigated.

<u>Action:</u> BGT's were replaced with similar tanks while the facility is still in operation, backfill will occur once the new BGTs are no longer necessary and removed.

Requirement: Reclaim and re-seed the area consistent with the Pit Rule and Closure Plan criteria.

Action: This requirement was not completed and will be done so once the facility is out of operation and all equipment removed..

Any additional work performed and not described herein was completed consistent with the BGT Closure Plan and/or applicable NMOCD requirements. Further information is provided in the C-144 Closure Form as specified in the Pit Rule.

### Ruybalid, Tristen

From:

Christiansen, Kelsey

Sent:

Tuesday, November 24, 2015 2:19 PM

To:

Smith, Cory, EMNRD; kdiemer@blm.gov Ruybalid. Tristen; Webre, Matt; Rothlisberger, Vern

Cc: Subject:

**BGT** Removal Notification.

Attachments:

BGT Removal Notification, 31-6 CDP.pdf

Cory,

Pursuant to the requirements of the New Mexico Oil Conservation District (OCD), Williams hereby provides notice of the intent to remove two BGT's at the following location:

Willaims 31-6 CDP

Section 07, Township 31N, Range 11W

Williams operated the BGT to capture liquids from the 31-6 CDP operating system. The BGT's (165 bbl Used Oil and 165 bbl Waste Water Tanks) will be replaced with like kind tanks once sample results have been determined to meet standards.

BGT removal is schedule to begin on Monday, November 30<sup>th</sup>, 2015.

Katherina,

A hardcopy of the attached notification will be mailed to your office today.

Please contact me if you have any questions regarding the proposed BGT removals and/or schedule.

-Kelsey

Kelsey Christiansen | Environmental Specialist, Environmental Services - FCA | Operational Excellence | Williams O: 505-632-

kelsey.christiansen@williams.com

<sup>&</sup>quot;Achieving environmental excellence through stewardship, common sense, and innovation for our company, customers and communities."



Environmental Affairs 188 County Road 4900 Bloomfield, NM 87413 505/632-4600 505/632-4781 Fax

November 24, 2015

Ms. Katherina E Diemer USBLM – Farmington Field Office 6251 College Blvd. Suite A Farmington, New Mexico 87402

RE: Notification of Below Ground Tank Closure – 31-6 CDP

Dear Ms. Diemer:

Pursuant to the requirements of the New Mexico Oil Conservation Division (OCD), Williams hereby provides notice of the intent to close two BGT's at the following location:

31-6 CDP

SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub>, S01, T30N, R06W

The BGT's will be replaced with another like kind tank.

Lelay Chrotum

The BGT will be closed consistent with the Williams BGT Closure Plan that was approved by the NMOCD on October 12, 2015 via email response from Mr. Cory Smith. Removal of the BGT's is schedule to commence on November 30, 2015.

You may contact me at (505) 632-4606 with any questions regarding this notification.

Sincerely,

Kelsey Christiansen

**Environmental Specialist** 



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

OrderNo.: 1512181

December 07, 2015

Kelsey Christiansen
Williams Field Services
188 Co. Rd 4900
Bloomfield, NM 87413
TEL:
FAX

RE: 31-6 Tank Change Out

Dear Kelsey Christiansen:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/4/2015 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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 qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

## **Analytical Report**

Lab Order 1512181

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/7/2015

**CLIENT:** Williams Field Services

Client Sample ID: 31-6 Tank Confirmation

**Project:** 31-6 Tank Change Out

Collection Date: 12/3/2015 11:48:00 AM

**Lab ID:** 1512181-001

Matrix: MEOH (SOIL) Received Date: 12/4/2015 8:00:00 AM

Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH					Analys	t: TOM
Petroleum Hydrocarbons, TR	52	20	mg/Kg	1	12/4/2015 10:04:00 Al	M 22635
EPA METHOD 300.0: ANIONS					Analys	t: LGT
Chloride	ND	30	mg/Kg	20	12/4/2015 12:29:35 PI	M 22638
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS	S			Analys	t: <b>KJH</b>
Diesel Range Organics (DRO)	10	9.6	mg/Kg	1	12/4/2015 10:43:16 Al	M 22634
Surr: DNOP	98.8	70-130	%REC	1	12/4/2015 10:43:16 Al	M 22634
EPA METHOD 8015D: GASOLINE RAI	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	12/4/2015 11:20:45 AM	A A 30626
Surr: BFB	94.8	66.2-112	%REC	1	12/4/2015 11:20:45 AM	A A30626
<b>EPA METHOD 8021B: VOLATILES</b>					Analys	t: NSB
Benzene	ND	0.041	mg/Kg	1	12/4/2015 11:20:45 AM	И B30626
Toluene	ND	0.041	mg/Kg	1	12/4/2015 11:20:45 AM	И B30626
Ethylbenzene	ND	0.041	mg/Kg	1	12/4/2015 11:20:45 AM	M B30626
Xylenes, Total	ND	0.082	mg/Kg	1	12/4/2015 11:20:45 AM	M B30626
Surr: 4-Bromofluorobenzene	121	80-120	S %REC	1	12/4/2015 11:20:45 AM	И В30626

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

### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1512181

07-Dec-15

Client:

Williams Field Services

**Project:** 

31-6 Tank Change Out

Sample ID MB-22638

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

Batch ID: 22638

RunNo: 30634

Prep Date: 12/4/2015 Analysis Date: 12/4/2015

SeqNo: 936263

%REC

Units: mg/Kg

**RPDLimit** 

Qual

Analyte Chloride

Result PQL ND 1.5

Sample ID LCS-22638

12/4/2015

SampType: LCS

TestCode: EPA Method 300.0: Anions

LowLimit

LowLimit

Client ID: LCSS Batch ID: 22638

RunNo: 30634

HighLimit

SeqNo: 936264

Units: mg/Kg

%RPD

%RPD

Analyte

Prep Date:

1.5

Analysis Date: 12/4/2015

SPK value SPK Ref Val

SPK value SPK Ref Val %REC

94.6

**RPDLimit** 

Qual

Chloride

15.00

HighLimit 110

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

R RPD outside accepted recovery limits

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

P Sample pH Not In Range

RL Reporting Detection Limit Page 2 of 7

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1512181

07-Dec-15

Client:

Williams Field Services

Project:

31-6 Tank Change Out

Sample ID MB-22635

SampType: MBLK

TestCode: EPA Method 418.1: TPH

Client ID: **PBS**  Batch ID: 22635

RunNo: 30622

Prep Date: 12/4/2015 Analysis Date: 12/4/2015

20

PQL

SeqNo: 935345

Units: mg/Kg

Analyte

Result ND SPK value SPK Ref Val %REC

LowLimit

HighLimit

%RPD

**RPDLimit** 

Qual

Petroleum Hydrocarbons, TR Sample ID LCS-22635

SampType: LCS

TestCode: EPA Method 418.1: TPH

Client ID: LCSS Prep Date:

RunNo: 30622

12/4/2015

Batch ID: 22635 Analysis Date: 12/4/2015

SeqNo: 935346

Units: mg/Kg

**RPDLimit** 

Analyte Petroleum Hydrocarbons, TR Result PQL

SPK value SPK Ref Val %REC

LowLimit 83.6

TestCode: EPA Method 418.1: TPH

HighLimit

%RPD

99

20 100.0 99.3

116

Qual

Sample ID LCSD-22635

Client ID:

LCSS02

SampType: LCSD Batch ID: 22635

RunNo: 30622

101

Units: mg/Kg

HighLimit

Prep Date: 12/4/2015

Analysis Date: 12/4/2015

SeqNo: 935347 %REC

%RPD

**RPDLimit** 

Qual

Analyte Petroleum Hydrocarbons, TR Result PQL

100

SPK value SPK Ref Val 20

100.0

0

83.6

LowLimit

116

1.35

20

Qualifiers:

ND

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit R RPD outside accepted recovery limits

% 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

P Sample pH Not In Range

RL Reporting Detection Limit Page 3 of 7

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1512181

07-Dec-15

Client:

Williams Field Services

**Project:** 

31-6 Tank Change Out

Sample ID MB-22634	SampT	ype: ME	BLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch	ID: 22	634	R	tunNo: 3							
Prep Date: 12/4/2015	Analysis D	ate: 12	2/4/2015	S	eqNo: 9	35424	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	ND	10										
Surr: DNOP	9.8		10.00		97.7	70	130					

Sample ID LCS-22634	SampTy	ype: LC	S	8015M/D: Di	esel Rang	e Organics					
Client ID: LCSS	Batch	Batch ID: 22634 RunNo: 30624									
Prep Date: 12/4/2015	Analysis Da	Date: 12/4/2015 SeqNo: 935425				Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	45	10	50.00	0	89.6	57.4	139				
Surr: DNOP	4.8		5.000		96.2	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
- R RPD outside accepted recovery limits
- 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

Page 4 of 7

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1512181

07-Dec-15

Client:

Williams Field Services

Project:

31-6 Tank Change Out

Sample ID 5ML RB

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

LowLimit

Client ID:

**PBS** 

Batch ID: A30626

RunNo: 30626

Prep Date:

Analysis Date: 12/4/2015

SeqNo: 935784

Units: mg/Kg

112

Analyte

PQL SPK value SPK Ref Val

%REC

HighLimit

Qual

Gasoline Range Organics (GRO) Surr: BFB

ND 850

Result

1000

84.6

66.2

%RPD

%RPD

SampType: LCS

5.0

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

Sample ID 2.5UG GRO LCS LCSS

Batch ID: A30626

RunNo: 30626

122

112

Prep Date:

Analysis Date: 12/4/2015

25.00

1000

1000

SeqNo: 935785

102

Units: mg/Kg

**RPDLimit** 

Analyte Gasoline Range Organics (GRO) Result 23 1000

PQL SPK value SPK Ref Val

%REC 93.4

LowLimit HighLimit 79.6 66.2

66.2

**RPDLimit** Qual

Surr: BFB

Sample ID MB-22611

SampType: MBLK

5.0

TestCode: EPA Method 8015D: Gasoline Range

Client ID: Prep Date: 12/3/2015

**PBS** 

Batch ID: 22611

Result

Analysis Date: 12/4/2015

RunNo: 30626 SeqNo: 935788

Units: %REC

Analyte Surr: BFB

Client ID:

Prep Date:

**PQL** 

SPK value SPK Ref Val

%REC 90.5

LowLimit HighLimit %RPD

Qual

Sample ID LCS-22611

LCSS

12/3/2015

SampType: LCS

900

Batch ID: 22611

TestCode: EPA Method 8015D: Gasoline Range

RunNo: 30626

Units: %REC

112

Analyte

Analysis Date: 12/4/2015

SeqNo: 935789

LowLimit

%RPD

**RPDLimit** 

**RPDLimit** 

Qual

Surr: BFB

Result 1100

1000

SPK value SPK Ref Val

%REC 111

66.2

**HighLimit** 112

# Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- I Analyte detected below quantitation limits
- P Sample pH Not In Range RL Reporting Detection Limit

Page 5 of 7

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1512181

07-Dec-15

Client:

Williams Field Services

Project:

31-6 Tank Change Out

Sample ID 5ML RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: B30626 RunNo: 30626 Units: mg/Kg Prep Date: Analysis Date: 12/4/2015 SeqNo: 935815 Qual SPK value SPK Ref Val %RPD **RPDLimit** Result **PQL** %REC LowLimit HighLimit Analyte 0.050 Benzene ND Toluene ND 0.050 ND 0.050 Ethylbenzene Xylenes, Total ND 0.10 1.000 110 80 120 Surr: 4-Bromofluorobenzene 1.1

Sample ID 100NG BTEX LCS TestCode: EPA Method 8021B: Volatiles SampType: LCS Client ID: LCSS Batch ID: **B30626** RunNo: 30626 Prep Date: Analysis Date: 12/4/2015 SeqNo: 935816 Units: mg/Kg SPK value SPK Ref Val %RPD **RPDLimit** Analyte Result PQL %REC LowLimit HighLimit Qual Benzene 0.98 0.050 1.000 0 98.2 80 120 0.92 0 91.6 80 Toluene 0.050 1.000 120 Ethylbenzene 0.94 0.050 1.000 0 93.6 80 120 Xylenes, Total 2.7 0.10 3.000 0 90.6 80 120 Surr: 4-Bromofluorobenzene 1.2 1.000 117 80 120

Sample ID 1512181-001AMS SampType: MS TestCode: EPA Method 8021B: Volatiles Client ID: 31-6 Tank Confirmat Batch ID: **B30626** RunNo: 30626 Units: mg/Kg Prep Date: Analysis Date: 12/4/2015 SeqNo: 935817 Result PQL SPK value SPK Ref Val %REC LowLimit **HighLimit** %RPD **RPDLimit** Qual Analyte 69.6 Benzene 0.79 0.041 0.8217 0 95.6 136 Toluene 0.74 0.041 0.8217 0 90.7 76.2 134 0 Ethylbenzene 0.80 0.041 0.8217 97.9 75.8 137 Xylenes, Total 2.4 0.082 2.465 0.01693 94.9 78.9 133 S Surr: 4-Bromofluorobenzene 1.2 0.8217 145 80 120

Sample ID 1512181-001AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles Client ID: 31-6 Tank Confirmat Batch ID: **B30626** RunNo: 30626 Prep Date: Analysis Date: 12/4/2015 SeqNo: 935818 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Benzene 0.79 0.041 0.8217 95.7 69.6 136 0.136 0.76 76.2 0.041 20 Toluene 0.8217 0 92.3 134 1.79 Ethylbenzene 0.81 0.041 0.8217 0 99.0 75.8 137 1.12 20 0.01693 96.5 78.9 Xylenes, Total 2.4 0.082 2.465 133 1.66 20 Surr: 4-Bromofluorobenzene 1.2 0.8217 140 80 120 0 S

### **Oualifiers:**

- \* 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
- R RPD outside accepted recovery limits
- 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

Page 6 of 7

- F Sample pri Not ili Kange
- RL Reporting Detection Limit

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1512181

07-Dec-15

Client:

Williams Field Services

Project:

31-6 Tank Change Out

Sample ID MB-22611

SampType: MBLK

TestCode: EPA Method 8021B: Volatiles

80

Client ID:

**PBS** 

Batch ID: 22611

RunNo: 30626

Prep Date: 12/3/2015

Analysis Date: 12/4/2015

Units: %REC

Client ID:

SeqNo: 935819

Analyte Surr: 4-Bromofluorobenzene Result 1.2 SPK value SPK Ref Val 1.000

%REC LowLimit 117

%RPD HighLimit 120

%RPD

**RPDLimit** 

Qual

Sample ID LCS-22611

SampType: LCS Batch ID: 22611

PQL

PQL

TestCode: EPA Method 8021B: Volatiles

RunNo: 30626

Units: %REC

Prep Date:

12/3/2015

LCSS

Analysis Date: 12/4/2015

SeqNo: 935820 SPK value SPK Ref Val %REC

HighLimit

**RPDLimit** 

Qual

Analyte Surr: 4-Bromofluorobenzene Result 1.3

1.000

132

LowLimit

120

S

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit Page 7 of 7



Hall Environmental Analysis Laboratory 4901 Hawkins NE

Website: www.hallenvironmental.com

# Sample Log-In Check List

Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Client Name:	WILLIAMS FIELD SERVI	Work Order Number:	1512181		ReptNo	ReptNo: 1							
Received by/dat	te: JA	12/04/15		and the second of the second	-5.5								
Logged By:	Celina Sessa	12/4/2015 8:00:00 AM		Celin Celin	Som	nn ainm chùibhinn add							
Completed By:	Celina Sessa	12/4/2015 9;04:28 AM		Colina	C	illy transport control							
Reviewed By:	- Lily	12/04/15		COURT	,,,,,,								
Chain of Cus	tody	1= 1= ((-)		**************************************									
1. Custody sea	als intact on sample bottles?		Yes 🗌	No 🗆	Not Present								
2, Is Chain of C	Custody complete?		Yes 🔽	No L	Not Present								
3. How was the	e sample delivered?		Courier										
Log In													
4. Was an atte	empt made to cool the sample	es?	Yes 🗹	No 🗆	NA 🗆								
5. Were all san	mples received at a temperati	ure of >0° C to 6.0°C	Yes 🗹	No 🗆	NA 🗍								
6. Sample(s) is	n proper container(s)?		Yes 🗸	No 🗆									
7. Sufficient sa	imple volume for indicated te	st(s)?	Yes 🗸	No 🗆									
8. Are samples	(except VOA and ONG) proj	perly preserved?	Yes 🗹	No 🗌									
9. Was preserv	vative added to bottles?		Yes	No 🗹	NA 🗆								
10.VOA vials ha	ave zero headspace?		Yes 🗌	No 🗆	No VOA Vials								
11, Were any sa	ample containers received br	oken?	Yes	No 🗸	# of preserved								
12 Dave assess	Potental attion datases from		Yes 🗹	No 🗆	bottles checked for pH:								
	work match bottle labels? pancies on chain of custody)		Tes I	NO	Anna te hansani dan	or >12 unless noted)							
13, Are matrices	s correctly identified on Chain	of Custody?	Yes 🗸	No 🗌	Adjusted?								
14. Is it clear wh	nat analyses were requested?		Yes 🗹	No 🗆									
	ding times able to be met? customer for authorization.)		Yes 🗹	No 🗌	Checked by:								
Sanalal Hand	Mag (II applicable)												
	iling (if applicable)	utua a raz			NA V								
The state of the s	notified of all discrepancies wi	In this order?	Yes 🗀	No 🗆	NA 🖭								
0.737.75	n Notified:	Date											
By Wh	-	Via:	eMail	Phone Fa	x In Person								
Regard													
	Instructions:												
17. Additional re	emarks:												
18. Cooler Info	ormation		and the second										
Cooler N	THE RESERVE THE PERSON NAMED IN COLUMN 2 I		Seal Date	Signed By									
lı.	1.3 Good	Yes			1								

Chain-of-Custody Record			Turn-Around Time:						Į-	A		F	NV	TE	20	NI	4F	NTA	AI		
lient: WFS			☐ Standard															i.			
				Project Name:  31-6 Fank Change out  Project #:				ANALYSIS LABORATOR  www.hallenvironmental.com													
Bloom Field Nm 87413				31-6 Fank Chenseout				4901 Hawkins NE - Albuquerque, NM 87109													
				Project #:	Project #:				el. 50	5-34	15-39	975	F	c 505-345-4107							
			15-74 33									А	naly	/sis	Req	uest					
mail o	r Fax#: /	Kelsey	Christian Quillian ca	Project Mana	ger:		=	(ylu	8					04)	rn.						
:A/QC ] Star	Package: idard		☐ Level 4 (Full Validation)	Kelse	Ychris	tical 5 en	+TMB's (8021)	TPH (Gas only)	DRO/MRO)			SIMS)		,PO4,S	2 PCB's						
	itation			Sampler: M	organ Ki	111.00		F	/ D	<del>-</del>	7	8270		NO	808						Î
NEL		□ Othe	er	On Ice:		□ No		+	RO	418	504.1)	r 82	S	O <sub>3</sub>	/ 88		OA)				o
EDE	(Type)	1		Sample Temp	perature: 1, 3	3	#	186	3 (G	po	pol	10 0	etal	CI,N	cide	(A)	>-i	D			S (Y
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE	BTEX + MTBE	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method	PAH's (8310 or	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	Chlonde			Air Bubbles (Y or N)
3/15	1/:48	Soil	31-6 Tank CONFIRMATION	1-402	1001	-001	X		X	$\times$					-			X		1	
	1					701															
		<u> </u>					+	$\vdash$	-								$\Box$		_	+	
		<del> </del>					+									-	$\vdash$			+	-
							-	-									$\vdash$		-	+-	-
							+														$\vdash$
		ļ																	$\perp$		L
							$\top$														Г
																			_	$\top$	
ate:	Time:	Relinquish	ed by: Lellion	Received by:	Jack	Date Time 12/3/15 170:	Rei	nark	s:					1		l					
ate:	Time:	Relinquish	ed by:	Received by:		Date Time															
3/14	1741	m	atullala	Arc. a	4 1	z/04/15 0800	_														
	f necessary,	samples sub	mitted to Hall Environmental may be subd	ontracted to other a	ccredited laboratorie	es. This serves as notice of	this poss	bility.	Any st	ub-con	tracte	d data	will b	e clear	ly nota	ated or	n the a	nalytica	al report.		

