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.

Pm1#
16392

Pit, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

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
- ☐ Modification to an existing permit/or registration
- ☐ Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.
Operator: Williams Four Corners LLC OGRID #:
Address: 1755 Arroyo Drive, Bloomfield, NM 87413
Facility or well name: Thompson 005M
API Number: 30-045-24020 OCD Permit Number: 16208
U/L or Qtr/Qtr NE/SE (I) Section 33 Township 31N Range 12W County: Rio Arriba County
Center of Proposed Design: Latitude 36.853547 Longitude -108.097819 NAD: ☐1927 ■ 1983
Surface Owner: ■ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

NMOCD JUN 11 2013 DISTRICT III

2.
☐ **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 Drilling Fluid ☐ yes ☐ no
☐ Lined ☐ Unlined Liner type: Thickness _____mil ☐ 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: 45 bbl Type of fluid: Produced 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 40 mil ■ HDPE ☐ PVC ☐ Other _____

4.
☐ **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office 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 residence, school, hospital, institution or church)*
Four foot height, four strands of barbed wire evenly spaced between one and four feet
☐ Alternate. Please specify _____

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6.

Netting: Subsection E of 19.15.17.11 NMAC *(Applies to permanent pits and permanent open top tanks)*

■ Screen ☐ Netting ☐ Other_____

☐ 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:

■ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

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 acceptable source material are provided below. **Siting criteria does not apply to drying pads or above-grade tanks.**

General siting	
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank. - ■ NM Office of the State Engineer - iWATERS database search; ■ USGS; ☐ Data obtained from nearby wells	☐ Yes ☒ No ☐ NA
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	☐ Yes ☐ No ■ 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. **(Does not apply to below grade tanks)** - 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
Within an unstable area. **(Does not apply to below grade tanks)** - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ 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. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
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 watering 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	☐ 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
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

10.
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

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

11.
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 19.15.17.9 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: _____

12.
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 attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B 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 H_2S, 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

13.
Proposed Closure: 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 Fluid Management Pit ☐ 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

14.
Waste Excavation and Removal 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.***

- ☒ 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 source material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 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	☐ Yes ☐ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☐ No

16.

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 19.15.17.11 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
- ☐ Site Reclamation 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 belief.

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:** 6/12/18

Title: Environmental Spec. **OCD Permit Number:** _____

19.

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:** 4/12/2018

20.

Closure Method:

Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)

☐ If different from approved plan, please explain.

21.

Closure Report Attachment Checklist: ***Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.***

- ■ Proof of Closure Notice (surface owner and division)
- ☐ Proof of Deed Notice (required for on-site closure for private land only)
- ☐ Plot Plan (for on-site closures and temporary pits)
- ■ Confirmation Sampling Analytical Results (if applicable)
- ☐ Waste Material Sampling Analytical Results (required for on-site closure)
- ☐ Disposal Facility Name and Permit Number
- ☐ Soil Backfilling and Cover Installation
- ☐ Re-vegetation Application Rates and Seeding Technique
- ■ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude _____ Longitude _____ NAD: ☐1927 ☐ 1983

22.

Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): Kijun Hong Title: Environmental Specialist

Signature: Date: 6/7/2018

e-mail address: kijun.hong@williams.com Telephone: 505-632-4475

Williams Four Corners LLC
Below Grade Tank Closure Report
Facility Name: Thompson 005M
API Number: 30-045-24020
Permit Number: 16208

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.

Notification was made to the NMOCD Aztec District Office by email on 2/19/2018.

Land owner notification was not given prior to the BGT removal. Notice was made post removal on 4/25/2018 by email.

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

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.

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.

Soils were sampled and analyzed for TPH, BTEX and chlorides. Sample results are attached to the C-144 Closure Form and are part of the closure documentation. Please note, historical impacts where encountered during removal and have been remediated as required.

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

Historical impacts where encountered during removal and have been remediated as required.

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

Clean soil (as defined) was used to return the BGT area to grade and was contoured/leveled consistent with the Pit Rule criteria.

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

As this BGT was removed from an area where production operations will continue, the area was reclaimed in such a way to minimize dust and erosion to the extent practicable.

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.

Hong, Kijun

From: Hong, Kijun
Sent: Monday, February 19, 2018 5:12 PM
To: 'Smith, Cory, EMNRD'; Fields, Vanessa, EMNRD (Vanessa.Fields@state.nm.us)
Cc: Christopher Lucero (Christopher.Lucero@Williams.com); Bell, Lloyd
Subject: BGT Removal - Thompson 5M

Williams plans to remove the Thompson 5M BGT this Thursday 2/22/2018.

Please let us know if you would like to witness and we can coordinate.

API# 30-045-24020

Kijun Hong | Williams | Environmental Specialist | West – Four Corners Area
Office: 505-632-4475 | Cell: 505-436-8457 | 1755 Arroyo Dr., Bloomfield, NM 87413

Hong, Kijun

From: Hong, Kijun
Sent: Wednesday, April 25, 2018 2:40 PM
To: l1thomas@blm.gov
Cc: 'aadeloye@blm.gov'
Subject: Williams BGT Removal - Thompson 005M and Kernaghan Compressor Station

Whitney,

Pursuant to the requirements of the New Mexico Oil Conservation District (OCD), Williams hereby provides notice of intent to remove the following below grade tanks (BGT) located on BLM land:

Location Name: Kernaghan Compressor Station - BGT 1
BLM Serial Number: NMNM96333 (Serial number belongs to BP as this equipment is on a BP location).
Tank Description: 18BBL Produced Water BGT
Legal Description: Unit E, Section 29, Township 31N, Range 8W
GPS Coordinates: 36.869783, -107.707055
Closure plan: Approved by OCD on February 16, 2018
Closure complete: April 13, 2018

Location Name: Thompson 005M BGT
BLM Serial Number: NMNM41694
Tank Description: 45BBL Produced Water BGT
Legal Description: Unit I, Section 33, Township 31N, Range 12W
GPS Coordinates: 36.853547, -108.097819
Closure plan: Approved by OCD on January 26, 2018
Closure complete: April 12, 2018

Please note that removal of these BGTs have already been completed. Williams apologizes for submitting this notice after the fact and for any inconvenience this may have caused.

Please feel free to contact me if you have any questions regarding this issue at 505-632-4475 or by email at kijun.hong@williams.com.

Thank You!
Kijun

Kijun Hong | Williams | Environmental Specialist | West – Four Corners Area
Office: 505-632-4475 | Cell: 505-436-8457 | 1755 Arroyo Dr., Bloomfield, NM 87413

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

March 02, 2018

Lloyd Bell
Williams Field Services
188 Co. Rd 4900
Bloomfield, NM 87413
TEL:
FAX

RE: Thompson 5M OrderNo.: 1803001

Dear Lloyd Bell:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/1/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Field Services
Project: Thompson 5M
Lab ID: 1803001-001 **Matrix:** SOIL

Client Sample ID: BOTTOM
Collection Date: 2/27/2018 2:45:00 PM
Received Date: 3/1/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	3/1/2018 11:14:50 AM	36786
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **MAB**	
Diesel Range Organics (DRO)	76	9.2		mg/Kg	1	3/1/2018 10:01:04 AM	36781
Motor Oil Range Organics (MRO)	55	46		mg/Kg	1	3/1/2018 10:01:04 AM	36781
Surr: DNOP	101	70-130		%Rec	1	3/1/2018 10:01:04 AM	36781
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	3/1/2018 10:06:27 AM	36774
Surr: BFB	98.9	15-316		%Rec	1	3/1/2018 10:06:27 AM	36774
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.017		mg/Kg	1	3/1/2018 10:06:27 AM	36774
Toluene	ND	0.034		mg/Kg	1	3/1/2018 10:06:27 AM	36774
Ethylbenzene	ND	0.034		mg/Kg	1	3/1/2018 10:06:27 AM	36774
Xylenes, Total	ND	0.069		mg/Kg	1	3/1/2018 10:06:27 AM	36774
Surr: 4-Bromofluorobenzene	95.7	80-120		%Rec	1	3/1/2018 10:06:27 AM	36774

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Field Services
Project: Thompson 5M
Lab ID: 1803001-002 **Matrix:** SOIL

Client Sample ID: WALL
Collection Date: 2/27/2018 2:47:00 PM
Received Date: 3/1/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	3/1/2018 11:52:03 AM	36786
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **MAB**	
Diesel Range Organics (DRO)	300	9.6		mg/Kg	1	3/1/2018 10:23:12 AM	36781
Motor Oil Range Organics (MRO)	120	48		mg/Kg	1	3/1/2018 10:23:12 AM	36781
Surr: DNOP	106	70-130		%Rec	1	3/1/2018 10:23:12 AM	36781
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	20		mg/Kg	5	3/1/2018 10:29:53 AM	36774
Surr: BFB	97.9	15-316		%Rec	5	3/1/2018 10:29:53 AM	36774
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.10		mg/Kg	5	3/1/2018 10:29:53 AM	36774
Toluene	ND	0.20		mg/Kg	5	3/1/2018 10:29:53 AM	36774
Ethylbenzene	ND	0.20		mg/Kg	5	3/1/2018 10:29:53 AM	36774
Xylenes, Total	ND	0.40		mg/Kg	5	3/1/2018 10:29:53 AM	36774
Surr: 4-Bromofluorobenzene	96.2	80-120		%Rec	5	3/1/2018 10:29:53 AM	36774

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803001**

02-Mar-18

Client: Williams Field Services

Project: Thompson 5M

Sample ID	**MB-36786**	SampType:	**mblk**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**36786**		RunNo:	**49482**				
Prep Date:	**3/1/2018**	Analysis Date:	**3/1/2018**		SeqNo:	**1599880**	Units:	**mg/Kg**		

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

Sample ID	**LCS-36786**	SampType:	**lcs**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**36786**		RunNo:	**49482**				
Prep Date:	**3/1/2018**	Analysis Date:	**3/1/2018**		SeqNo:	**1599881**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.9	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803001**

02-Mar-18

Client: Williams Field Services

Project: Thompson 5M

Sample ID **MB-36781**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **36781**	RunNo: **49471**
Prep Date: **3/1/2018**	Analysis Date: **3/1/2018**	SeqNo: **1597812** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		101	70	130			

Sample ID **LCS-36781**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **36781**	RunNo: **49471**
Prep Date: **3/1/2018**	Analysis Date: **3/1/2018**	SeqNo: **1597814** 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	93.0	70	130			
Surr: DNOP	4.5		5.000		89.1	70	130			

Sample ID **1803001-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BOTTOM**	Batch ID: **36781**	RunNo: **49471**
Prep Date: **3/1/2018**	Analysis Date: **3/1/2018**	SeqNo: **1598429** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	110	10	49.75	76.05	62.0	55.8	125			
Surr: DNOP	4.4		4.975		88.1	70	130			

Sample ID **1803001-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BOTTOM**	Batch ID: **36781**	RunNo: **49471**
Prep Date: **3/1/2018**	Analysis Date: **3/1/2018**	SeqNo: **1598430** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	110	10	49.95	76.05	77.1	55.8	125	6.93	20	
Surr: DNOP	4.3		4.995		85.5	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803001**

02-Mar-18

Client: Williams Field Services

Project: Thompson 5M

Sample ID **MB-36774**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **36774**	RunNo: **49480**
Prep Date: **2/28/2018**	Analysis Date: **3/1/2018**	SeqNo: **1598958** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	960		1000		96.1	15	316			

Sample ID **LCS-36774**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **36774**	RunNo: **49480**
Prep Date: **2/28/2018**	Analysis Date: **3/1/2018**	SeqNo: **1598959** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	110	75.9	131			
Surr: BFB	1100		1000		114	15	316			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803001**

02-Mar-18

Client: Williams Field Services

Project: Thompson 5M

Sample ID **MB-36774**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **36774**	RunNo: **49480**
Prep Date: **2/28/2018**	Analysis Date: **3/1/2018**	SeqNo: **1598981** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		97.0	80	120			

Sample ID **LCS-36774**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **36774**	RunNo: **49480**
Prep Date: **2/28/2018**	Analysis Date: **3/1/2018**	SeqNo: **1598982** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	106	77.3	128			
Toluene	1.1	0.050	1.000	0	106	79.2	125			
Ethylbenzene	1.0	0.050	1.000	0	105	80.7	127			
Xylenes, Total	3.2	0.10	3.000	0	107	81.6	129			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.7	80	120			

Sample ID **1803001-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BOTTOM**	Batch ID: **36774**	RunNo: **49480**
Prep Date:	Analysis Date: **3/1/2018**	SeqNo: **1598983** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.67	0.017	0.6854	0.007745	96.8	80.9	132			
Toluene	0.68	0.034	0.6854	0.01871	97.1	79.8	136			
Ethylbenzene	0.67	0.034	0.6854	0.009047	96.0	79.4	140			
Xylenes, Total	2.1	0.069	2.056	0.03948	98.8	78.5	142			
Surr: 4-Bromofluorobenzene	0.61		0.6854		88.8	80	120			

Sample ID **1803001-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BOTTOM**	Batch ID: **36774**	RunNo: **49480**
Prep Date:	Analysis Date: **3/1/2018**	SeqNo: **1598984** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.65	0.017	0.6854	0.007745	93.5	80.9	132	3.43	20	
Toluene	0.66	0.034	0.6854	0.01871	94.2	79.8	136	2.94	20	
Ethylbenzene	0.65	0.034	0.6854	0.009047	93.1	79.4	140	3.06	20	
Xylenes, Total	2.0	0.069	2.056	0.03948	95.3	78.5	142	3.53	20	
Surr: 4-Bromofluorobenzene	0.62		0.6854		90.7	80	120	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: WILLIAMS FIELD SERVI Work Order Number: 1803001 RcptNo: 1

Received By: Anne Thorne 3/1/2018 7:00:00 AM Anne Thorne
Completed By: Anne Thorne 3/1/2018 7:23:01 AM Anne Thorne
Reviewed By: JMO 3/1/18

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified: _____ Date _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: WFS

Mailing Address: 1755 ARROYO DR

Phone #:

email or Fax#: LLOYD BELL

QA/QC Package: NICK Higgins

☐ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☐ Standard ☑ Rush Same Day

Project Name: THOMPSON 5M

Project #:

Project Manager: LLOYD BELL

Sampler: Nick Higgins

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and # (02/01/18 mc)	Preservative Type	HEAL No. 1803001	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE				Air Bubbles (Y or N)
2-27-18	2:45 pm	SOIL	BOTTOM	1-402	COOL	001	X		X									X				
2-27-18	2:47 pm	SOIL	WALL	1-402	COOL	002	X		X									X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
2-28	9:45 am	Nick Higgins		2/28/18	945
2/28/18	1827	Christine Walters		03/01/18	0700

Remarks:

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.

Remediation Excavation and Sampling Form

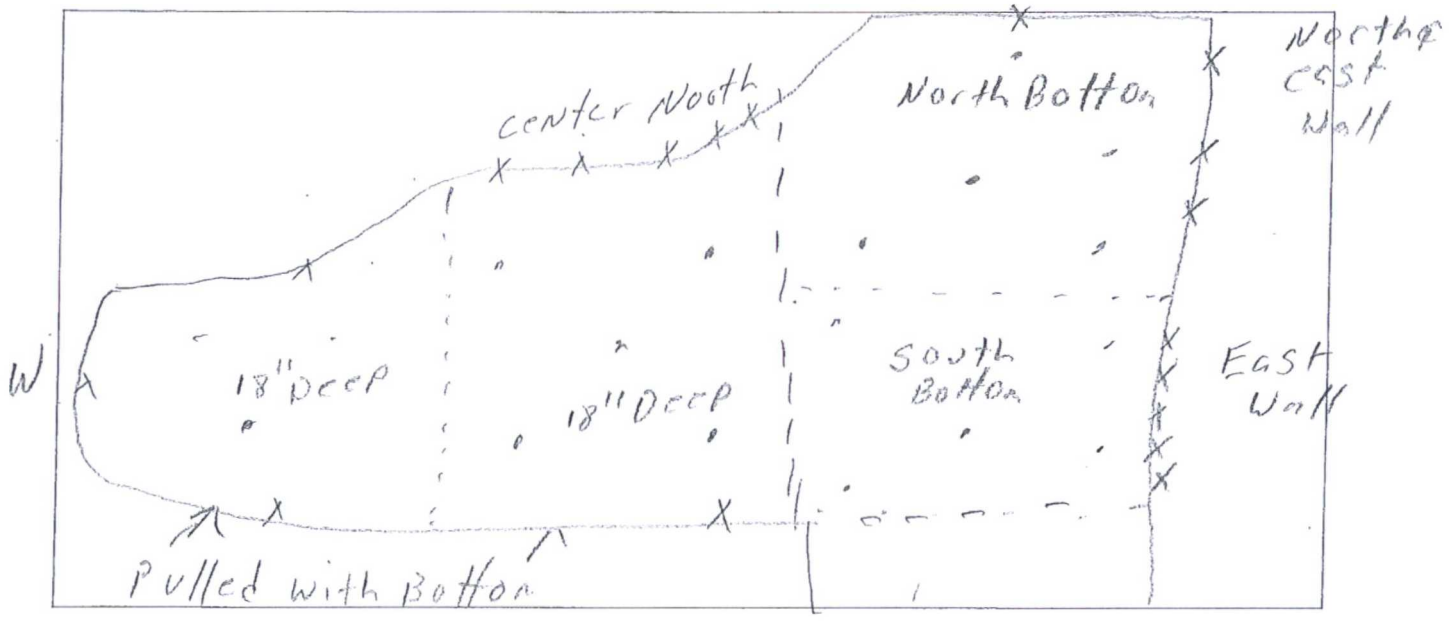
Site Name Thompson 5M

Excavation Dimensions (feet)

82' Length 80' Width 18"-10' Depth

Excavation Diagram and Sample Locations

(Depict notable site features, excavation extents, visual observations, sample locations, north arrow, etc.)



Sample Information

OCD Witness Sampling (Yes) or No

Agency(s) Representative(s) Cory Smith

Sample ID	Sample Date	Type (Composite, Grab)	Location (Floor, Sidewall)	Comments
West Wall & Botton	3-7-18	comp	Floor & Sidewalls	
center	3-7-18	comp	Floor & Sidewall	
cent North	3-7-18	comp	sidewalls	
North East	3-7-18	comp	Sidewalls	
North	3-7-18	comp	Floor	
East	3-7-18	comp	sidewalls	
South	3-7-18	comp	Floor	

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

March 12, 2018

Kijun Hong
Williams Field Services
188 Co. Rd 4900
Bloomfield, NM 87413
TEL:
FAX

RE: Thompson 5 M

OrderNo.: 1803440

Dear Kijun Hong:

Hall Environmental Analysis Laboratory received 7 sample(s) on 3/8/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1803440**
Date Reported: **3/12/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Field Services
Project: Thompson 5 M
Lab ID: 1803440-001 **Matrix:** SOIL

Client Sample ID: Thompson M-5 West Wall & Bot
Collection Date: 3/7/2018 10:00:00 AM
Received Date: 3/8/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	30		mg/Kg	20	3/9/2018 4:18:04 PM	36930
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	5.1	3.7		mg/Kg	1	3/8/2018 11:53:48 AM	G49637
Surr: BFB	120	70-130		%Rec	1	3/8/2018 11:53:48 AM	G49637
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	3/9/2018 12:51:57 PM	36917
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	3/9/2018 12:51:57 PM	36917
Surr: DNOP	90.2	70-130		%Rec	1	3/9/2018 12:51:57 PM	36917
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	0.18	0.018		mg/Kg	1	3/8/2018 11:53:48 AM	R49637
Toluene	0.40	0.037		mg/Kg	1	3/8/2018 11:53:48 AM	R49637
Ethylbenzene	ND	0.037		mg/Kg	1	3/8/2018 11:53:48 AM	R49637
Xylenes, Total	0.43	0.074		mg/Kg	1	3/8/2018 11:53:48 AM	R49637
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	3/8/2018 11:53:48 AM	R49637
Surr: Toluene-d8	90.7	70-130		%Rec	1	3/8/2018 11:53:48 AM	R49637

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Field Services
Project: Thompson 5 M
Lab ID: 1803440-002 **Matrix:** SOIL

Client Sample ID: Thompson M-5 Center Bottom
Collection Date: 3/7/2018 10:10:00 AM
Received Date: 3/8/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	30		mg/Kg	20	3/9/2018 4:30:28 PM	36930
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	3/8/2018 12:16:40 PM	G49637
Surr: BFB	123	70-130		%Rec	1	3/8/2018 12:16:40 PM	G49637
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/9/2018 1:14:31 PM	36917
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/9/2018 1:14:31 PM	36917
Surr: DNOP	90.3	70-130		%Rec	1	3/9/2018 1:14:31 PM	36917
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.021		mg/Kg	1	3/8/2018 12:16:40 PM	R49637
Toluene	ND	0.042		mg/Kg	1	3/8/2018 12:16:40 PM	R49637
Ethylbenzene	ND	0.042		mg/Kg	1	3/8/2018 12:16:40 PM	R49637
Xylenes, Total	ND	0.085		mg/Kg	1	3/8/2018 12:16:40 PM	R49637
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	1	3/8/2018 12:16:40 PM	R49637
Surr: Toluene-d8	88.5	70-130		%Rec	1	3/8/2018 12:16:40 PM	R49637

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Field Services
Project: Thompson 5 M
Lab ID: 1803440-003 **Matrix:** SOIL

Client Sample ID: Thompson M-5 Center North Wa
Collection Date: 3/7/2018 10:20:00 AM
Received Date: 3/8/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	30		mg/Kg	20	3/9/2018 5:07:42 PM	36930
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	3/8/2018 12:39:46 PM	G49637
Surr: BFB	122	70-130		%Rec	1	3/8/2018 12:39:46 PM	G49637
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	28	10		mg/Kg	1	3/9/2018 1:36:38 PM	36917
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/9/2018 1:36:38 PM	36917
Surr: DNOP	94.9	70-130		%Rec	1	3/9/2018 1:36:38 PM	36917
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.019		mg/Kg	1	3/8/2018 12:39:46 PM	R49637
Toluene	ND	0.038		mg/Kg	1	3/8/2018 12:39:46 PM	R49637
Ethylbenzene	ND	0.038		mg/Kg	1	3/8/2018 12:39:46 PM	R49637
Xylenes, Total	ND	0.076		mg/Kg	1	3/8/2018 12:39:46 PM	R49637
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	3/8/2018 12:39:46 PM	R49637
Surr: Toluene-d8	91.0	70-130		%Rec	1	3/8/2018 12:39:46 PM	R49637

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Field Services
Project: Thompson 5 M
Lab ID: 1803440-004 **Matrix:** SOIL

Client Sample ID: Thompson M-5 North Wall
Collection Date: 3/7/2018 10:30:00 AM
Received Date: 3/8/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	30		mg/Kg	20	3/9/2018 5:20:06 PM	36930
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	6.8	4.9		mg/Kg	1	3/8/2018 1:02:46 PM	G49637
Surr: BFB	120	70-130		%Rec	1	3/8/2018 1:02:46 PM	G49637
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	18	10		mg/Kg	1	3/9/2018 1:58:47 PM	36917
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/9/2018 1:58:47 PM	36917
Surr: DNOP	97.3	70-130		%Rec	1	3/9/2018 1:58:47 PM	36917
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.025		mg/Kg	1	3/8/2018 1:02:46 PM	R49637
Toluene	ND	0.049		mg/Kg	1	3/8/2018 1:02:46 PM	R49637
Ethylbenzene	ND	0.049		mg/Kg	1	3/8/2018 1:02:46 PM	R49637
Xylenes, Total	0.20	0.099		mg/Kg	1	3/8/2018 1:02:46 PM	R49637
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	1	3/8/2018 1:02:46 PM	R49637
Surr: Toluene-d8	91.3	70-130		%Rec	1	3/8/2018 1:02:46 PM	R49637

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Field Services
Project: Thompson 5 M
Lab ID: 1803440-005 **Matrix:** SOIL

Client Sample ID: Thompson M-5 North or Bottom
Collection Date: 3/7/2018 10:40:00 AM
Received Date: 3/8/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	85	30		mg/Kg	20	3/9/2018 5:32:31 PM	36930
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	3/8/2018 1:25:50 PM	G49637
Surr: BFB	125	70-130		%Rec	1	3/8/2018 1:25:50 PM	G49637
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	3/9/2018 2:42:52 PM	36917
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/9/2018 2:42:52 PM	36917
Surr: DNOP	98.4	70-130		%Rec	1	3/9/2018 2:42:52 PM	36917
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.023		mg/Kg	1	3/8/2018 1:25:50 PM	R49637
Toluene	ND	0.045		mg/Kg	1	3/8/2018 1:25:50 PM	R49637
Ethylbenzene	ND	0.045		mg/Kg	1	3/8/2018 1:25:50 PM	R49637
Xylenes, Total	ND	0.091		mg/Kg	1	3/8/2018 1:25:50 PM	R49637
Surr: 4-Bromofluorobenzene	118	70-130		%Rec	1	3/8/2018 1:25:50 PM	R49637
Surr: Toluene-d8	94.6	70-130		%Rec	1	3/8/2018 1:25:50 PM	R49637

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Field Services
Project: Thompson 5 M
Lab ID: 1803440-006 **Matrix:** SOIL

Client Sample ID: Thompson M-5 East Wall
Collection Date: 3/7/2018 10:50:00 AM
Received Date: 3/8/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	30		mg/Kg	20	3/9/2018 5:44:55 PM	36930
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	12	4.6		mg/Kg	1	3/8/2018 1:48:43 PM	G49637
Surr: BFB	119	70-130		%Rec	1	3/8/2018 1:48:43 PM	G49637
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	18	9.1		mg/Kg	1	3/9/2018 3:04:48 PM	36917
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/9/2018 3:04:48 PM	36917
Surr: DNOP	99.6	70-130		%Rec	1	3/9/2018 3:04:48 PM	36917
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.023		mg/Kg	1	3/8/2018 1:48:43 PM	R49637
Toluene	ND	0.046		mg/Kg	1	3/8/2018 1:48:43 PM	R49637
Ethylbenzene	ND	0.046		mg/Kg	1	3/8/2018 1:48:43 PM	R49637
Xylenes, Total	0.11	0.091		mg/Kg	1	3/8/2018 1:48:43 PM	R49637
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	3/8/2018 1:48:43 PM	R49637
Surr: Toluene-d8	95.7	70-130		%Rec	1	3/8/2018 1:48:43 PM	R49637

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Field Services
Project: Thompson 5 M
Lab ID: 1803440-007 **Matrix:** SOIL

Client Sample ID: Thompson M-5 South Bottom
Collection Date: 3/7/2018 11:00:00 AM
Received Date: 3/8/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	82	30		mg/Kg	20	3/9/2018 5:57:19 PM	36930
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	3/8/2018 2:34:38 PM	G49637
Surr: BFB	124	70-130		%Rec	1	3/8/2018 2:34:38 PM	G49637
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/9/2018 3:27:04 PM	36917
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/9/2018 3:27:04 PM	36917
Surr: DNOP	97.8	70-130		%Rec	1	3/9/2018 3:27:04 PM	36917
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.022		mg/Kg	1	3/8/2018 2:34:38 PM	R49637
Toluene	ND	0.044		mg/Kg	1	3/8/2018 2:34:38 PM	R49637
Ethylbenzene	ND	0.044		mg/Kg	1	3/8/2018 2:34:38 PM	R49637
Xylenes, Total	ND	0.087		mg/Kg	1	3/8/2018 2:34:38 PM	R49637
Surr: 4-Bromofluorobenzene	116	70-130		%Rec	1	3/8/2018 2:34:38 PM	R49637
Surr: Toluene-d8	93.1	70-130		%Rec	1	3/8/2018 2:34:38 PM	R49637

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803440**

12-Mar-18

Client: Williams Field Services

Project: Thompson 5 M

Sample ID	**MB-36930**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**36930**	RunNo:	**49678**					
Prep Date:	**3/9/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606654**	Units:	**mg/Kg**			

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

Sample ID	**LCS-36930**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**36930**	RunNo:	**49678**					
Prep Date:	**3/9/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606655**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.8	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803440**

12-Mar-18

Client: Williams Field Services

Project: Thompson 5 M

Sample ID	LCS-36928	SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS	Batch ID:	36928		RunNo:	49663				
Prep Date:	3/9/2018	Analysis Date:	3/9/2018		SeqNo:	1605981	Units:	%Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.8		5.000		77.0	70	130			

Sample ID	MB-36928	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	36928		RunNo:	49663				
Prep Date:	3/9/2018	Analysis Date:	3/9/2018		SeqNo:	1605982	Units:	%Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.7		10.00		86.8	70	130			

Sample ID	LCS-36917	SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS	Batch ID:	36917		RunNo:	49663				
Prep Date:	3/8/2018	Analysis Date:	3/9/2018		SeqNo:	1606475	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.4	70	130			
Surr: DNOP	4.4		5.000		87.1	70	130			

Sample ID	MB-36917	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	36917		RunNo:	49663				
Prep Date:	3/8/2018	Analysis Date:	3/9/2018		SeqNo:	1606476	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.5		10.00		95.3	70	130			

Sample ID	1803440-001AMS	SampType:	MS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	Thompson M-5 Wes	Batch ID:	36917		RunNo:	49663				
Prep Date:	3/8/2018	Analysis Date:	3/9/2018		SeqNo:	1607035	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.35	1.693	100	55.8	125			
Surr: DNOP	4.3		5.035		84.6	70	130			

Sample ID	1803440-001AMSD	SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	Thompson M-5 Wes	Batch ID:	36917		RunNo:	49663				
Prep Date:	3/8/2018	Analysis Date:	3/9/2018		SeqNo:	1607036	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.2	46.08	1.693	99.0	55.8	125	9.72	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803440**

12-Mar-18

Client: Williams Field Services

Project: Thompson 5 M

Sample ID **1803440-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **Thompson M-5 Wes** Batch ID: **36917** RunNo: **49663**

Prep Date: **3/8/2018** Analysis Date: **3/9/2018** SeqNo: **1607036** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.9		4.608		84.6	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803440**

12-Mar-18

Client: Williams Field Services

Project: Thompson 5 M

Sample ID **100ng lcs**	SampType: **LCS4**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **R49637**	RunNo: **49637**
Prep Date:	Analysis Date: **3/8/2018**	SeqNo: **1604835** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.8	80	120			
Toluene	0.97	0.050	1.000	0	96.7	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.0	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.5	80	120			
Surr: 4-Bromofluorobenzene	0.47		0.5000		94.6	70	130			
Surr: Toluene-d8	0.47		0.5000		94.9	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **R49637**	RunNo: **49637**
Prep Date:	Analysis Date: **3/8/2018**	SeqNo: **1604837** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.55		0.5000		110	70	130			
Surr: Toluene-d8	0.48		0.5000		96.4	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803440**

12-Mar-18

Client: Williams Field Services

Project: Thompson 5 M

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G49637**	RunNo: **49637**
Prep Date:	Analysis Date: **3/8/2018**	SeqNo: **1604832** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	117	70	130			
Surr: BFB	530		500.0		106	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **G49637**	RunNo: **49637**
Prep Date:	Analysis Date: **3/8/2018**	SeqNo: **1604833** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	590		500.0		119	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: WILLIAMS FIELD SERVI Work Order Number: 1803440 RcptNo: 1

Received By: Anne Thorne 3/8/2018 7:00:00 AM Anne Thorne
Completed By: Anne Thorne 3/8/2018 8:31:12 AM Anne Thorne
Reviewed By: ENM 3/8/18

Initialed By DTS

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐ # of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐ Adjusted?
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐ Checked by:

Special Handling (if applicable)

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

Person Notified: ____ Date ____
By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: ____
Client Instructions: ____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Chain-of-Custody Record

Client: WFS

Mailing Address: 1755 Arroyo DR
Bloomfield NM 87413

Phone #: 505-632-4475

email or Fax#: Kijun.Hong@williams.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time: 2da4
☐ Standard ☑ Rush 3-9-18

Project Name: Thompson 5 M

Project #:

Project Manager: Kijun Hong

Sampler: Morgan Killion

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.4 CF-1.0=1.4

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride				Air Bubbles (Y or N)
3/7/18	1000	Soil	Thompson M-5 West walls & Bottom	1-402 Mason kit	Cool	1803440-001	X		X									X				
3/7/18	1010	Soil	Thompson M-5 Center Bottom	1-402		002	X		X									X				
3/7/18	1020	Soil	Thompson M-5 Center North wall	1-402		003	X	X	X									X				
3/7/18	1030	Soil	Thompson M-5 North Wall	1-402		004	X	X	X									X				
3/7/18	1040	Soil	Thompson M-5 North of Bottom	1-402		005	X	X	X									X				
3/7/18	1050	Soil	Thompson M-5 East Wall	1-402		006	X	X	X									X				
3/7/18	11:06	Soil	Thompson M-5 South Bottom	1-402		007	X	X	X									X				
								Cnk 3-7-18														

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/7/18	1524	Morgan Killion	Chad Walker	3/7/18	1524
Date:	Time:	Relinquished by:	Received by:	Date	Time
3/7/18	1844	Chad Walker		03/08/18	8:15

Remarks:

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

April 10, 2018

Kijun Hong
Williams Field Services
1755 Arroyo Dr.,
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Thompson 5M 2nd sct OrderNo.: 1804041

Dear Kijun Hong:

Hall Environmental Analysis Laboratory received 3 sample(s) on 4/3/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Field Services
Project: Thompson 5M 2nd set
Lab ID: 1804041-001 **Matrix:** SOIL

Client Sample ID: South, South East Wall
Collection Date: 4/2/2018 9:10:00 AM
Received Date: 4/3/2018 7:42:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	33	30		mg/Kg	20	4/9/2018 10:08:53 PM	37502
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	14	4.9		mg/Kg	1	4/5/2018 3:57:09 AM	37399
Surr: BFB	125	70-130		%Rec	1	4/5/2018 3:57:09 AM	37399
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	81	9.7		mg/Kg	1	4/4/2018 10:01:59 PM	37405
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/4/2018 10:01:59 PM	37405
Surr: DNOP	96.4	70-130		%Rec	1	4/4/2018 10:01:59 PM	37405
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	4/5/2018 3:57:09 AM	37399
Toluene	ND	0.049		mg/Kg	1	4/5/2018 3:57:09 AM	37399
Ethylbenzene	ND	0.049		mg/Kg	1	4/5/2018 3:57:09 AM	37399
Xylenes, Total	ND	0.098		mg/Kg	1	4/5/2018 3:57:09 AM	37399
Surr: 4-Bromofluorobenzene	120	70-130		%Rec	1	4/5/2018 3:57:09 AM	37399
Surr: Toluene-d8	80.5	70-130		%Rec	1	4/5/2018 3:57:09 AM	37399

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Field Services
Project: Thompson 5M 2nd sct
Lab ID: 1804041-002 **Matrix:** SOIL

Client Sample ID: South, South West Wall
Collection Date: 4/2/2018 9:20:00 AM
Received Date: 4/3/2018 7:42:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	59	30		mg/Kg	20	4/9/2018 10:21:17 PM	37502
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	15	4.7		mg/Kg	1	4/5/2018 4:20:15 AM	37399
Surr: BFB	114	70-130		%Rec	1	4/5/2018 4:20:15 AM	37399
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	120	9.6		mg/Kg	1	4/4/2018 10:24:03 PM	37405
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/4/2018 10:24:03 PM	37405
Surr: DNOP	98.4	70-130		%Rec	1	4/4/2018 10:24:03 PM	37405
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.023		mg/Kg	1	4/5/2018 4:20:15 AM	37399
Toluene	ND	0.047		mg/Kg	1	4/5/2018 4:20:15 AM	37399
Ethylbenzene	ND	0.047		mg/Kg	1	4/5/2018 4:20:15 AM	37399
Xylenes, Total	ND	0.093		mg/Kg	1	4/5/2018 4:20:15 AM	37399
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	4/5/2018 4:20:15 AM	37399
Surr: Toluene-d8	79.4	70-130		%Rec	1	4/5/2018 4:20:15 AM	37399

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Field Services
Project: Thompson 5M 2nd sct
Lab ID: 1804041-003 **Matrix:** SOIL

Client Sample ID: Bottom
Collection Date: 4/2/2018 9:30:00 AM
Received Date: 4/3/2018 7:42:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/5/2018 4:43:26 AM	37399
Surr: BFB	122	70-130		%Rec	1	4/5/2018 4:43:26 AM	37399
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	62	10		mg/Kg	1	4/4/2018 10:46:14 PM	37405
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/4/2018 10:46:14 PM	37405
Surr: DNOP	101	70-130		%Rec	1	4/4/2018 10:46:14 PM	37405
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	4/5/2018 4:43:26 AM	37399
Toluene	ND	0.049		mg/Kg	1	4/5/2018 4:43:26 AM	37399
Ethylbenzene	ND	0.049		mg/Kg	1	4/5/2018 4:43:26 AM	37399
Xylenes, Total	ND	0.097		mg/Kg	1	4/5/2018 4:43:26 AM	37399
Surr: 4-Bromofluorobenzene	123	70-130		%Rec	1	4/5/2018 4:43:26 AM	37399
Surr: Toluene-d8	84.4	70-130		%Rec	1	4/5/2018 4:43:26 AM	37399

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804041**

10-Apr-18

Client: Williams Field Services
Project: Thompson 5M 2nd sct

Sample ID	**MB-37502**	SampType:	**mblk**		TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**37502**		RunNo:	**50408**					
Prep Date:	**4/9/2018**	Analysis Date:	**4/9/2018**		SeqNo:	**1634794**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	**LCS-37502**	SampType:	**lcs**		TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**37502**		RunNo:	**50408**					
Prep Date:	**4/9/2018**	Analysis Date:	**4/9/2018**		SeqNo:	**1634795**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	14	1.5	15.00	0	94.0	90	110				

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804041**

10-Apr-18

Client: Williams Field Services

Project: Thompson 5M 2nd sct

Sample ID **LCS-37405**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **37405**	RunNo: **50301**
Prep Date: **4/3/2018**	Analysis Date: **4/4/2018**	SeqNo: **1630258** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.2	70	130			
Surr: DNOP	4.1		5.000		82.1	70	130			

Sample ID **MB-37405**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **37405**	RunNo: **50301**
Prep Date: **4/3/2018**	Analysis Date: **4/4/2018**	SeqNo: **1630259** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		92.5	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804041**

10-Apr-18

Client: Williams Field Services

Project: Thompson 5M 2nd sct

Sample ID **lcs-37399**	SampType: **LCS4**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **37399**	RunNo: **50305**
Prep Date: **4/3/2018**	Analysis Date: **4/4/2018**	SeqNo: **1630018** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	92.4	80	120			
Toluene	0.98	0.050	1.000	0	98.3	80	120			
Ethylbenzene	1.1	0.050	1.000	0	105	80	120			
Xylenes, Total	3.2	0.10	3.000	0	106	80	120			
Surr: 4-Bromofluorobenzene	0.47		0.5000		94.9	70	130			
Surr: Toluene-d8	0.43		0.5000		86.0	70	130			

Sample ID **mb-37399**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **37399**	RunNo: **50305**
Prep Date: **4/3/2018**	Analysis Date: **4/4/2018**	SeqNo: **1630050** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.57		0.5000		114	70	130			
Surr: Toluene-d8	0.44		0.5000		87.5	70	130			

Sample ID **lcs-37419**	SampType: **LCS4**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **37419**	RunNo: **50360**
Prep Date: **4/4/2018**	Analysis Date: **4/5/2018**	SeqNo: **1631820** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.1	70	130			
Surr: Toluene-d8	0.44		0.5000		87.3	70	130			

Sample ID **mb-37419**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **37419**	RunNo: **50360**
Prep Date: **4/4/2018**	Analysis Date: **4/5/2018**	SeqNo: **1631821** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.64		0.5000		128	70	130			
Surr: Toluene-d8	0.42		0.5000		85.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804041**

10-Apr-18

Client: Williams Field Services

Project: Thompson 5M 2nd sct

Sample ID	lcs-37399	SampType:	LCS		TestCode:	EPA Method 8015D Mod: Gasoline Range				
Client ID:	LCSS	Batch ID:	37399		RunNo:	50305				
Prep Date:	4/3/2018	Analysis Date:	4/4/2018		SeqNo:	1630013	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.4	70	130			
Surr: BFB	510		500.0		103	70	130			

Sample ID	mb-37399	SampType:	MBLK		TestCode:	EPA Method 8015D Mod: Gasoline Range				
Client ID:	PBS	Batch ID:	37399		RunNo:	50305				
Prep Date:	4/3/2018	Analysis Date:	4/4/2018		SeqNo:	1630047	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	570		500.0		114	70	130			

Sample ID	lcs-37419	SampType:	LCS		TestCode:	EPA Method 8015D Mod: Gasoline Range				
Client ID:	LCSS	Batch ID:	37419		RunNo:	50360				
Prep Date:	4/4/2018	Analysis Date:	4/5/2018		SeqNo:	1631732	Units:	%Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	520		500.0		105	70	130			

Sample ID	mb-37419	SampType:	MBLK		TestCode:	EPA Method 8015D Mod: Gasoline Range				
Client ID:	PBS	Batch ID:	37419		RunNo:	50360				
Prep Date:	4/4/2018	Analysis Date:	4/5/2018		SeqNo:	1631733	Units:	%Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	630		500.0		127	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: WILLIAMS FIELD SERVI Work Order Number: 1804041 RcptNo: 1

Received By: Anne Thorne 4/3/2018 7:42:00 AM Anne Thorne

Completed By: Isaiah Ortiz 4/3/2018 8:43:39 AM I Ortiz

Reviewed By: DDS 4/3/18

Labled By: ENM

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: ____ (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? ____
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: ____

ENM 4/3/18

Special Handling (if applicable)

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

Person Notified: ____ Date: ____

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

Regarding: ____

Client Instructions: ____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: WFS

Mailing Address: 1755 ARROYO DR
Bloomfield NM 87413

Phone #: 505-

email or Fax#: Kijun.Hong@Williams.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: Thompson SM 2nd SCT

Project #:

Project Manager: Kijun Hong

Sampler: Morgan Killion

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.0-CF-1.0=1.0

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1804041	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chlorides				Air Bubbles (Y or N)
4/2/18	910	soil	South/South East Wall	1-402		001	X		X									X				
4/2/18	9:20	soil	South/South West Wall	1-402		002	X		X									X				
4/2/18	9:30	soil	Bottom	1-402		003	X		X													

Date	Time	Relinquished by:	Received by:	Date	Time
4/2/18	1630	Morgan Killion		4/2/18	1630
4/2/18	1900			04/03/18	0742

Remarks:

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.