Wescom Inc.
1224 Standpipe Road
Carlsbad, New Mexico 88220

(575) 840-3940
wescominc.com

November 02, 2021

Robert Hamlet, Victoria Venegas, and/or Chad Hensley
State of New Mexico
Energy, Minerals, and Natural Resources
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

Re: Closure Request

Company:	Kaiser Francis Oil Company
Location:	NBL 4-15 SWD Produced Water Line
API:	30-025-24771
PLSS:	Unit K Sec 08 T23S R34E
GPS:	32.3173599, -103.4942551
Incident ID:	NAPP2107043534

Background

Wescom, Inc., hereafter referred to as Wescom, has prepared this closure request on behalf of Kaiser Francis Oil Company, hereafter referred to as KFOC, regarding the release at the North Bell Lake 4-15 SWD produced water line (Site) located in Unit K, Section 08, Township 23 South and Range 34 East in Lea County, New Mexico. The GPS coordinates are as follows: North 32.3173599 and West -103.4942551. Surface owner of the site is Basin Properties. The Site falls within New Mexico Oil Conservation Division (NMOCD), District 2 Artesia.

On March 09, 2021, a leak developed on a produced water line. The source of the leak was isolated immediately upon discovery. KFOC estimates the amount of fluid released to be approximately ten barrels (bbls) of produced water. Five bbls of produced water was recovered from the spill area. Wescom conducted soil sampling on March 10, March 17 through March 19 and again on March 24, 2021, to determine the horizontal and vertical extent of the contamination from the ten bbl spill. Excavation of contaminated soils surrounding the produced water line began on March 09, 2021.

On May 25, 2021, KFOC formally requested a 90-day extension for the remediation of the soil associated with this Site in order to determine depth to water (DTW) within a half-mile radius. The extension was approved by the New Mexico Energy, Minerals and Natural Resources Department - Oil Conservation District on May 27, 2021. On July 23, 2021, Atkins Engineering filed a Well Plugging Plan of Operations through NMOSE (Attachment D) on behalf of KFOC. KFOC received confirmation that the permit to drill CP-1886-POD1 was approved by NMOSE on July 29, 2021 (Attachment C). CP-1886-POD1 is located in Section 07, Township 23 South and Range 34 East in Lea County, New Mexico and is 0.32 miles from the

spill Site. The GPS coordinates for CP-1886-POD1 are as follows: North 32.316919 and West -103.505894. The temporary water well was drilled on September 09, 2021. The well was plugged on September 15, 2021. Confirmation samples were collected on September 29, 2021, and October 15, 2021. Approximately 600 yards of contaminated soil was removed from the spill area and disposed of at an approved facility.

Surface & Ground Water

The New Mexico Office of the State Engineer (OSE) records indicates nearest ground water measurement in the area is greater than 110 feet below ground surface (bgs) (Attachment D) and is 0.32 miles East of the location, shown in Attachment E. No playas, lakes, ponds, riverines or wetlands are located within a half-mile radius of this site (see Attachment E).

Karst Potential

According to data from the Bureau of Land Management, this Site is located within low karst potential as shown in Attachment F. There are no indicators of karst around the Site surface.

Target Remedial Levels

The target cleanup levels are determined using the NMOCD Closure Criteria (19.15.29.12.B(4)) and Table 1 NMAC, inserted below) including karst guidelines from the Bureau of Land Management. The applicable Recommended Remediation Action Levels (RRAL) are 10 parts per million (ppm) Benzene, 50 ppm combined benzene, toluene, ethyl benzene, and total xylenes (BTEX), 2500 ppm Total Petroleum Hydrocarbons and 1000 ppm combined GRO and DRO. Characterization of vertical and horizontal extent of chloride concentration to a level of 20000 ppm is also required.

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
NBL 4-15 SWD Produced Water Line -- 32.3173599, -103.4942551						
Depth to Groundwater		**Closure Criteria (units in mg/kg)**				
		Chloride * numerical limit or background, whichever is greater	**TPH**	**GRO+DRO**	**BTEX**	**Benzene**
Based on high karst potential		600	100		50	10
less than 50 ft bgs or no water data within 1/2 mile		600	100		50	10
51 ft to 100 ft		10000	2500	1000	50	10
greater than 100 ft		20000	2500	1000	50	10
Surface water	**yes or no**	**If yes, then**				
< 300 feet from continuously flowing watercourse or other significant watercourse?	no					
< 200 feet from lakebed, sinkhole or playa lake?	no					
Water Well or Water Source						
< 500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?	no					
< 1000 feet from fresh water well or spring?	no					
Human and Other Areas						
< 300 feet from an occupied permanent residence, school, hospital, institution or church?	no					
within incorporated municipal boundaries or within a defined municipal fresh water well field?	no					
< 100 feet from wetland?	no					
within area overlying a subsurface mine?	no					
within an unstable area?	no					
within a 100-year floodplain?	no					

Site Assessment & Delineation Activities

Beginning March 10, 2021, KFOC contracted Wescom to conduct soil sampling, to determine the horizontal and vertical extent of the contamination from the ten bbl spill. Wescom completed delineation sampling on March 24, 2021 as shown in Figure 1. A background sample BG01 was collected 50 feet to the East of the spill area at zero feet bgs. Wescom personnel returned to the Site on March 24, 2021, to collect four additional background samples, BG01-1', BG01-2', BG02-1', and BG02-2'.

A total of 30 soil samples were jarred and sent to Envirotech, Inc, for laboratory analysis over the course of the five-day sampling period and all samples were below the applicable RRAL for the Site. Delineation sample points are presented in Figure 1; laboratory analysis results are listed in Table 1 and laboratory analytical reports are included in Attachment G.

Confirmation Sampling

The required 48-hour confirmation sampling notifications were sent on September 23 and October 13, 2021, to Victoria Venegas, Robert Hamlet, Chad Hensley, and Mike Bratcher with the NMOCD in Santa Fe, New Mexico. Approximately 600 yards of contaminated soil was removed from the spill area and disposed

of at an approved facility. Confirmation samples were collected following removal of impacted soils and the drilling of temporary water well, CP-1886-POD1.

A total of 18 confirmation composite samples were obtained on September 29, 2021. All soil samples were properly packaged, preserved, and transported to Envirotech, Inc. by chain of custody, and analyzed for Total Petroleum Hydrocarbons, or TPH, —Method 8015D, BTEX—Method 8021B, and Chlorides—Method 300.0/9056A. The confirmation sample results are presented in Table 2; laboratory analytical reports are included in Attachment G. Locations of confirmation samples are shown in Figure 2. Three of the confirmation samples collected on September 29, 2021, exceeded the RRAL for the Site. Wescom personnel returned to the Site on October 15, 2021, to scrape the walls of the spill area and resample CONF15-Wall, CONF17-Wall and CONF18-Wall. Laboratory analysis of samples CONF15A-Wall, CONF17A-Wall and CONF18A-Wall showed results below closure criteria levels (Table 2).

Request for Closure

Based on the confirmation sample laboratory data, depth to ground water, the fact this release has been delineated both horizontally and vertically and impacted material has been removed and properly disposed of, KFOC hereby requests closure for incident number NAPP2107043534. KFOC also requests that no further action be taken at this time.

If you have any questions or comments, please do not hesitate to call Mrs. Ashley Giovengo at (505) 382-1211.

Sincerely,

Wescom, Inc.

Ashley Giovengo
Environmental Manager - Permian

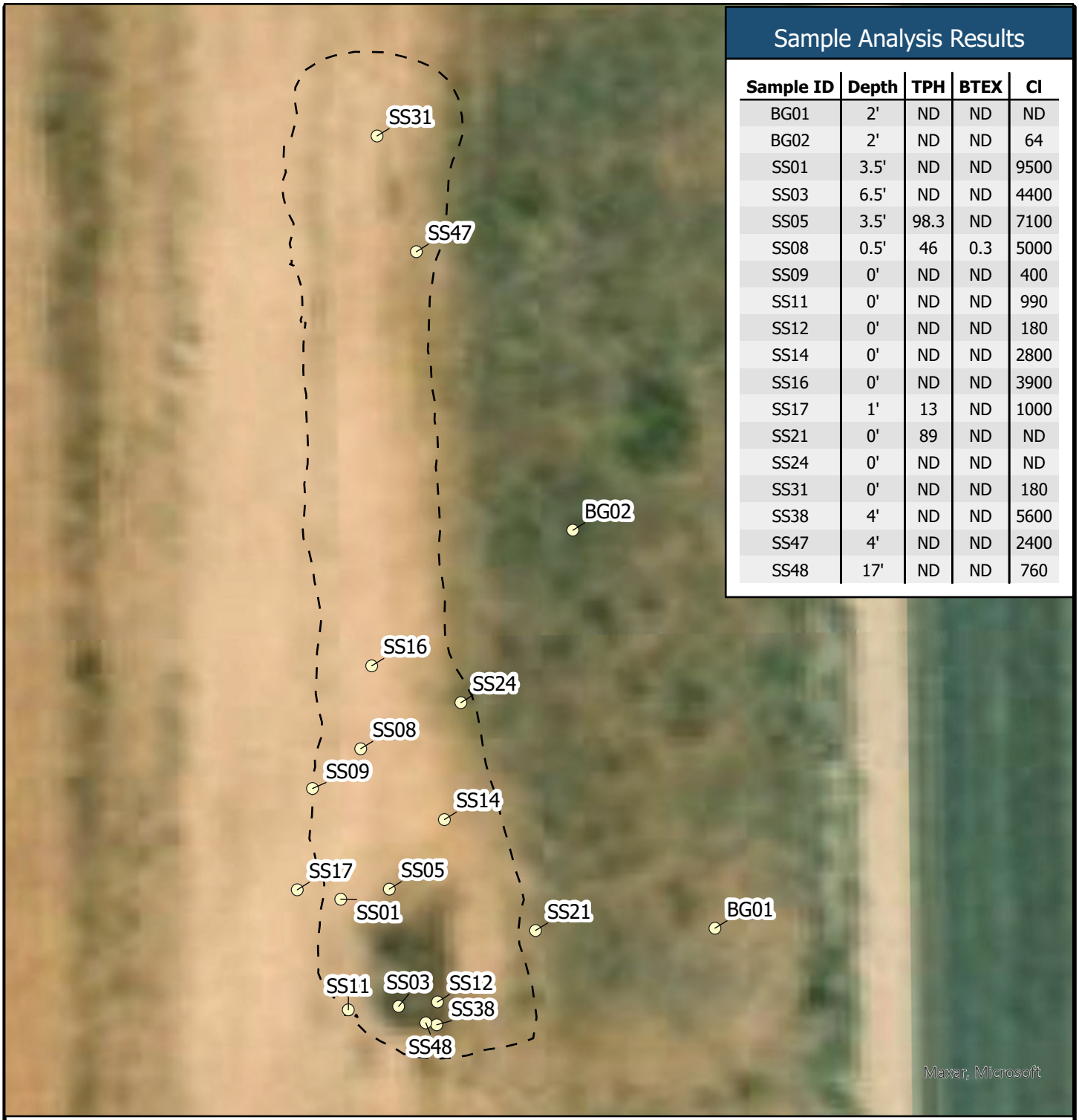
Figures

Tables

Attachments

Attachment E.	Closure Criteria Research
Attachment F.	Karst Map
Attachment G.	Envirotech, Inc. Laboratory Analysis Reports

Figures



Sample Analysis Results

Sample ID	Depth	TPH	BTEX	Cl
BG01	2'	ND	ND	ND
BG02	2'	ND	ND	64
SS01	3.5'	ND	ND	9500
SS03	6.5'	ND	ND	4400
SS05	3.5'	98.3	ND	7100
SS08	0.5'	46	0.3	5000
SS09	0'	ND	ND	400
SS11	0'	ND	ND	990
SS12	0'	ND	ND	180
SS14	0'	ND	ND	2800
SS16	0'	ND	ND	3900
SS17	1'	13	ND	1000
SS21	0'	89	ND	ND
SS24	0'	ND	ND	ND
SS31	0'	ND	ND	180
SS38	4'	ND	ND	5600
SS47	4'	ND	ND	2400
SS48	17'	ND	ND	760

Legend

- Sample Points
- Excavation Area

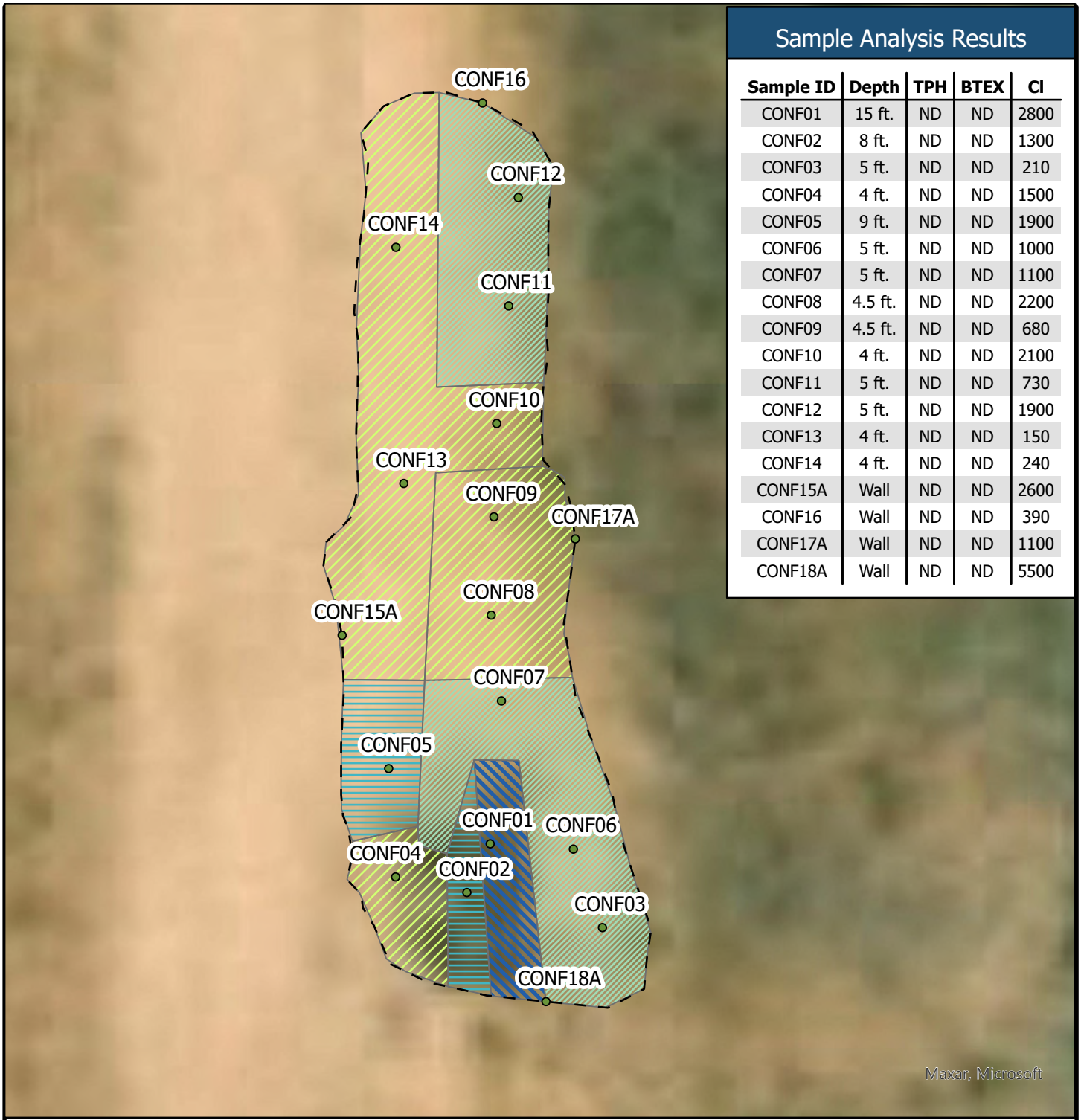
0 25 50 75 100 Feet

N

Figure 1. Delineation Samples

NBL 4-15 SWD Produced Water Line
Incident ID: NAPP2107043534
API: 30-025-24771
GPS Coordinates: 32.3173599, -103.4942551
Lea County, New Mexico
Kaiser-Francis Oil Company

WESCOM



Sample Analysis Results

Sample ID	Depth	TPH	BTEX	Cl
CONF01	15 ft.	ND	ND	2800
CONF02	8 ft.	ND	ND	1300
CONF03	5 ft.	ND	ND	210
CONF04	4 ft.	ND	ND	1500
CONF05	9 ft.	ND	ND	1900
CONF06	5 ft.	ND	ND	1000
CONF07	5 ft.	ND	ND	1100
CONF08	4.5 ft.	ND	ND	2200
CONF09	4.5 ft.	ND	ND	680
CONF10	4 ft.	ND	ND	2100
CONF11	5 ft.	ND	ND	730
CONF12	5 ft.	ND	ND	1900
CONF13	4 ft.	ND	ND	150
CONF14	4 ft.	ND	ND	240
CONF15A	Wall	ND	ND	2600
CONF16	Wall	ND	ND	390
CONF17A	Wall	ND	ND	1100
CONF18A	Wall	ND	ND	5500

Legend

- Sample Points
- Excavation Area

Excavation Depth

- Less than 5 ft.
- 5 ft.
- Between 8 and 9 ft.
- 15 ft.

0 15 30 45 60 Feet

N

Figure 2. Confirmation Samples
NBL 4-15 SWD Produced Water Line
Incident ID: NAPP2107043534
API: 30-025-24771
GPS Coordinates: 32.3173599, -103.4942551
Lea County, New Mexico
Kaiser-Francis Oil Company

WESCOM

Tables

North Bell Lake Unit 4-15 SWD 3/9/2021 Spill
Kaiser-Francis Oil Company
November 02, 2021

Table 1. Laboratory Analysis Results: Delineation Samples

Sample Description			Petroleum Hydrocarbons			Inorganic
			Volatile		Extractable	
Sample ID	Depth (ft.)	Date	Benzene (mg/kg)	BTEX (total) (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
Closure Criteria			**10**	**50**	**100**	**20000**
Hall Environmental Analysis Laboratory Inc.						
SS01	3.5	3/9/2021	ND	ND	ND	9500
SS03	3.5	3/9/2021	ND	ND	ND	4900
SS03	6.5	3/18/2021	ND	ND	ND	4400
SS05	3.5	3/9/2021	ND	ND	98.3	7100
SS08	0.5	3/9/2021	ND	0.30	46	5000
SS09	0	3/9/2021	ND	ND	ND	400
SS11	0	3/9/2021	ND	ND	ND	990
SS12	0	3/9/2021	ND	ND	ND	180
SS14	0	3/9/2021	ND	ND	ND	2800
SS16	0	3/9/2021	ND	ND	ND	3900
SS17	1	3/17/2021	ND	ND	13	1000
SS21	0	3/17/2021	ND	ND	89	ND
SS24	0	3/17/2021	ND	ND	ND	ND
SS31	1	3/17/2021	ND	ND	ND	180
SS33	0	3/17/2021	ND	ND	ND	ND
SS38	4	3/17/2021	ND	ND	ND	5600
SS47	4	3/18/2021	ND	ND	ND	2400
SS48	9	3/18/2021	ND	ND	ND	3100
SS48	12	3/19/2021	-	-	-	3600
SS48	13	3/19/2021	-	-	-	1800
SS48	14	3/19/2021	-	-	-	2200
SS48	16	3/19/2021	-	-	-	2300
SS48	17	3/19/2021	ND	ND	ND	760
SS49	0.5	3/19/2021	ND	ND	10	630
SS50	6	3/19/2021	ND	ND	120	1100
BG01	0	3/19/2021	ND	ND	ND	ND
BG01	1	3/24/2021	ND	ND	ND	ND
BG01	2	3/24/2021	ND	ND	ND	ND
BG02	1	3/24/2021	ND	ND	ND	ND
BG02	2	3/24/2021	ND	ND	ND	64

Abbreviations:
BTEX - Benzene, Toluene, Ethylbenzene, Xylene
TPH - Total Petroleum Hydrocarbons
ft. - feet
mg/kg - milligrams per kilogram
ND - Non-detect

wescominc.com

North Bell Lake Unit 4-15 SWD 3/9/2021 Spill
Kaiser-Francis Oil Company
November 02, 2021

Table 2. Laboratory Analysis Results: Confirmation Samples

Sample Description			Petroleum Hydrocarbons			Inorganic
			Volatile		Extractable	
Sample ID	Depth (ft.)	Date	Benzene (mg/kg)	BTEX (total) (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
Closure Criteria			**10**	**50**	**2500**	**20000**
Hall Environmental Analysis Laboratory Inc.						
CONF01	15	9/29/2021	ND	ND	ND	2800
CONF02	8	9/29/2021	ND	ND	ND	1300
CONF03	5	9/29/2021	ND	ND	ND	210
CONF04	4	9/29/2021	ND	ND	ND	1500
CONF05	9	9/29/2021	ND	ND	ND	1900
CONF06	5	9/29/2021	ND	ND	ND	1000
CONF07	5	9/29/2021	ND	ND	ND	1100
CONF08	4.5	9/29/2021	ND	ND	ND	2200
CONF09	4.5	9/29/2021	ND	ND	ND	680
CONF10	4	9/29/2021	ND	ND	ND	2100
CONF11	5	9/29/2021	ND	ND	ND	730
CONF12	5	9/29/2021	ND	ND	ND	1900
CONF13	4	9/29/2021	ND	ND	ND	150
CONF14	4	9/29/2021	ND	ND	ND	240
CONF15	Wall	9/29/2021	ND	ND	ND	**22000**
CONF15A	Wall	10/19/2021	**ND**	**ND**	**ND**	**2600**
CONF16	Wall	9/29/2021	ND	ND	ND	390
CONF17	Wall	9/29/2021	ND	ND	ND	**28000**
CONF17A	Wall	10/19/2021	**ND**	**ND**	**ND**	**1100**
CONF18	Wall	9/29/2021	ND	ND	ND	**35000**
CONF18A	Wall	10/19/2021	**ND**	**ND**	**ND**	**5500**

Abbreviations:
BTEX - Benzene, Toluene, Ethylbenzene, Xylene
TPH - Total Petroleum Hydrocarbons
ft. - feet
mg/kg - milligrams per kilogram
ND - Non-detect

Notes:
Red Bold - Results are greater than closure criteria.
Black Bold - Resampled Confirmation area; results are below closure criteria.

Attachment A

Signed C-141

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-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAPP2107043534
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Kaiser-Francis Oil Company	OGRID 12361
Contact Name Charles Lock	Contact Telephone 918-491-4337
Contact email Charlesl@kfoc.net	Incident # *(assigned by OCD) nAPP2107043534*
Contact mailing address P.O. Box 21468, Tulsa, OK 74121	

Location of Release Source

Latitude 32.317110 Longitude -103.511338
(NAD 83 in decimal degrees to 5 decimal places)

Site Name NBL 4-15 SWD Produced Water Line	Site Type Produced Water Line
Date Release Discovered 3/9/2021	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
				Lea

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name: Basin Properties (Jared Slade)*)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) approximately 10	Volume Recovered (bbls) 5
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☒ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A leak in the produced water line developed. Leaked has been stopped and free liquid picked up. Excavation and sampling has begun.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2107043534
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Charles W. Lock Title: EH&S Manager

Signature: Date: 3/11/2021

email: charlesl@kfoc.net Telephone: 918-491-4337

OCD Only

Received by: Ramona Marcus Date: 4/16/2021

Attachment B

Site Photos

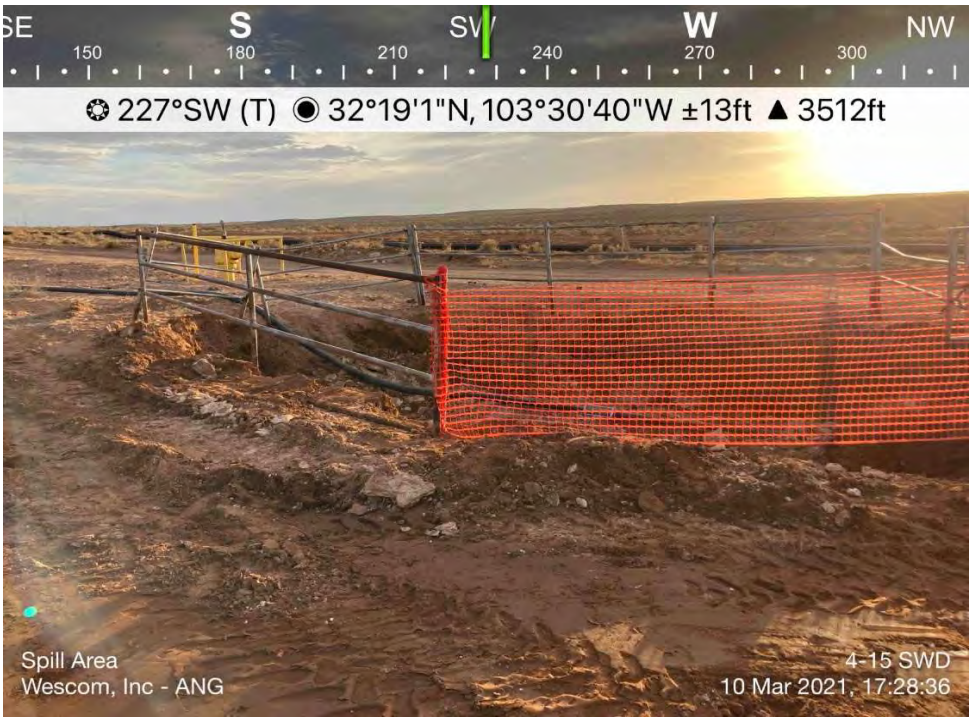
NBL 4-15 SWD
Produced Water Line

Spill Area - Inital Cleanup

Spill Area - Initial Cleanup

NBL 4-15 SWD
Produced Water Line

Spill Area - Inital Cleanup



Spill Area - Inital Cleanup

NBL 4-15 SWD
Produced Water Line

Excavation Area - Entire Spill Area

Excavation Area - North Side

NBL 4-15 SWD
Produced Water Line

Excavation Area - South Side

Excavated Material

NBL 4-15 SWD
Produced Water Line

Excavated Material

Final Confimation Sampling

Attachment C

Well Plugging Plan of Operations

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ROSWELL

John R. D'Antonio Jr., P.E.
State Engineer

DISTRICT II
1900 West Second St.
Roswell, New Mexico 88201
Phone: (575) 622-6521
Fax: (575) 623-8559

July 29, 2021

Kaiser Francis Oil Company
6733 S. Yale Avenue
Tulsa, OK 74136

RE: Well Plugging Plan of Operations for **CP-1886-POD1**

Greetings:

Enclosed is your copy of the Well Plugging Plan of Operations for the above referenced project. The proposed method of operation is found to be acceptable and in accordance with the Rules and Regulations Governing Well Driller Licensing; Construction, Repair and Plugging of Wells 19.27.4 NMAC adopted June 30, 2017 by the State Engineer.

Plugging operations shall also be conducted in accordance with NMED, NMOCD, or other State or Federal agencies having oversight for the above described project.

Maximum 5.2 gallons water per 94 lb. sack Portland Cement PLUS 0.6 gallon per 1% increase in bentonite up to maximum 6% bentonite by dry weight ratio. Bentonite must be hydrated separately and then mixed.

Within 30 days after the well is plugged, the well driller is required to file a complete plugging record with the OSE and the permit holder.

Sincerely,

K. Parekh

Kashyap Parekh
Water Resources Professional III

WELL PLUGGING PLAN OF OPERATIONS

NOTE: A Well Plugging Plan of Operations shall be filed with and accepted by the Office of the State Engineer prior to plugging. This form may be used to plug a single well, or if you are plugging multiple monitoring wells on the same site using the same plugging methodology.

Alert! Your well may be eligible to participate in the Aquifer Mapping Program (AMP)-NM Bureau of Geology geoinfo.nmt.edu/resources/water/cgmn/ If within an area of interest and meets the minimum construction requirements, such as there is still water in your well, and the well construction reflected in a well record and log is not compromised, contact AMP at 575-835-5038 or -6951, or by email nmbg-waterlevels@nmt.edu, prior to completing this prior form. Showing proof to the OSE that your well was accepted in this program, may delay the plugging of your well until a later date.

I. FILING FEE: There is no filing fee for this form.

II. GENERAL / WELL OWNERSHIP: ☑ Check here if proposing one plan for multiple monitoring wells on the same site and attaching WD-08m

Existing Office of the State Engineer POD Number (Well Number) for well to be plugged: CP- 1886 (POD-1)

Name of well owner: Kaiser-Francis Oil Company

Mailing address: 6733 S. Yale Ave County:

City: Tulsa State: OK Zip code: 74136

Phone number: 918-491-4350 E-mail: DavidZ@KFOC.net

III. WELL DRILLER INFORMATION:

Well Driller contracted to provide plugging services: Jackie D. Atkins (Atkins Engineering Associates)

New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/2023

IV. WELL INFORMATION: ☑ **Check here if this plan describes method for plugging multiple monitoring wells on the same site and attach supplemental form WD-08m and skip to #2 in this section.**

Note: A copy of the existing Well Record for the well(s) to be plugged should be attached to this plan.

1) GPS Well Location: Latitude: see WD-08m deg, _____ min, _____ sec
Longitude: _____ deg, _____ min, _____ sec, NAD 83

2) Reason(s) for plugging well(s):

Soil boring to determine groundwater level

OSE DII JUL 26 2021 PM3:10

3) Was well used for any type of monitoring program? NO If yes, please use section VII of this form to detail what hydrogeologic parameters were monitored. If the well was used to monitor contaminated or poor quality water, authorization from the New Mexico Environment Department may be required prior to plugging.

4) Does the well tap brackish, saline, or otherwise poor quality water? N/A If yes, provide additional detail, including analytical results and/or laboratory report(s):

5) Static water level: Unknown feet below land surface / feet above land surface (circle one)

6) Depth of the well: ~110 feet

7) Inside diameter of innermost casing: 2" inches.

8) Casing material: Temporary PVC SCH 40

9) The well was constructed with:

☐ an open-hole production interval, state the open interval: _____

☐ a well screen or perforated pipe, state the screened interval(s): _____

10) What annular interval surrounding the artesian casing of this well is cement-grouted? N/A

11) Was the well built with surface casing? NO If yes, is the annulus surrounding the surface casing grouted or otherwise sealed? _____ If yes, please describe:

12) Has all pumping equipment and associated piping been removed from the well? N/A If not, describe remaining equipment and intentions to remove prior to plugging in Section VII of this form.

V. DESCRIPTION OF PLANNED WELL PLUGGING:

☐ **If plugging method differs between multiple wells on same site, a separate form must be completed for each method.**

Note: If this plan proposes to plug an artesian well in a way other than with cement grout, placed bottom to top with a tremie pipe, a detailed diagram of the well showing proposed final plugged configuration shall be attached, as well as any additional technical information, such as geophysical logs, that are necessary to adequately describe the proposal. Attach a copy of any signed OSE variance to this plugging plan.

Also, if this planned plugging plan requires a variance to 19.27.4 NMAC, attach a detailed variance request signed by the applicant.

1) Describe the method by which cement grout shall be placed in the well, or describe requested plugging methodology proposed for the well:

The temporary 2" well material will be removed. Tremied from bottom to land Neat Cement in lifts

2) Will well head be cut-off below land surface after plugging? N/A

VI. PLUGGING AND SEALING MATERIALS:

Note: The plugging of a well that taps poor quality water may require the use of a specialty cement or specialty sealant. Attach a copy of the batch mix recipe from the cement company and/or product description for specialty cement mixes or any sealant that deviates from the list of OSE approved sealants.

1) For plugging intervals that employ cement grout, complete and attach Table A.

2) For plugging intervals that will employ approved non-cement based sealant(s), complete and attach Table B.

3) Theoretical volume of grout required to plug the well to land surface: 189

4) Type of Cement proposed: Type I/II Neat Cement

5) Proposed cement grout mix: <6.0 gallons of water per 94 pound sack of Portland cement.

6) Will the grout be: _____ batch-mixed and delivered to the site

X mixed on site

OSE DIT JUL 28 2021 PM3:10

7) Grout additives requested, and percent by dry weight relative to cement:

N/A

8) Additional notes and calculations:

N/A

VII. ADDITIONAL INFORMATION: List additional information below, or on separate sheet(s):

Cotton Draw 14 Fed Com 1H. The temporary well material will be removed. If no water is encountered then drill cuttings will be used to (10) ten feet of land surface and plugged using hydrated bentonite. If ground water is encountered the boring will be plugged tremie from bottom to a slurry of Portland TYPE I/II Neat cement in lifts. A 6.5" borehole will be plugged.

VIII. SIGNATURE:

I, David Zerger, say that I have carefully read the foregoing Well Plugging Plan of Operations and any attachments, which are a part hereof; that I am familiar with the rules and regulations of the State Engineer pertaining to the plugging of wells and will comply with them, and that each and all of the statements in the Well Plugging Plan of Operations and attachments are true to the best of my knowledge and belief.

Signature of Applicant — Date: 7-8-21

IX. ACTION OF THE STATE ENGINEER:

OSE DII JUL 26 2021 PM3:10

This Well Plugging Plan of Operations is:

X Approved subject to the attached conditions.

_____ Not approved for the reasons provided on the attached letter.

Witness my hand and official seal this 29th day of JULY, 2021

John R. D'Antonio Jr, P.E., New Mexico State Engineer

By: K. Parekh

KASHYAP PAREKH

W.R.P. III

TABLE A - For plugging intervals that employ cement grout. Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of grout placement (ft bgl)	N/A	N/A	N/A
Bottom of proposed interval of grout placement (ft bgl)	N/A	N/A	110
Theoretical volume of grout required per interval (gallons)	N/A	N/A	189
Proposed cement grout mix gallons of water per 94-lb. sack of Portland cement	N/A	N/A	<6.0
Mixed on-site or batch-mixed and delivered?	N/A	N/A	On-Site
Grout additive 1 requested	N/A	N/A	N/A
Additive 1 percent by dry weight relative to cement	N/A	N/A	N/A
Grout additive 2 requested	N/A	N/A	N/A
Additive 2 percent by dry weight relative to cement	N/A	N/A	N/A

OSE DII JUL 26 2021 PM3:10

TABLE B - For plugging intervals that will employ approved non-cement based sealant(s). Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of sealant placement (ft bgl)	N/A	N/A	0
Bottom of proposed sealant of grout placement (ft bgl)	N/A	N/A	10
Theoretical volume of sealant required per interval (gallons)	N/A	N/A	17
Proposed abandonment sealant (manufacturer and trade name)	N/A	N/A	Bariod Hole Plug

OSE DII JUL 26 2021 PM3:11

NEW MEXICO OFFICE OF THE STATE ENGINEER

ATTACHMENT to WD-08 Plan of Plugging
MULTIPLE MONITORING WELL DESCRIPTIONS

This Attachment is to be completed if more than one (1) monitoring well is to be plugged using the same method.

Location (Required):

☐ NM State Plane (NAD83) (Feet)
☐ NM West Zone
☐ NM Central Zone
☐ NM East Zone

☐ UTM (NAD83) (Meters)
☐ Zone 13N
☐ Zone 12N

■ Lat/Long (WGS84) (1/10th of second)

OTHER (allowable only for move-from descriptions - see application form for format)
☐ PLSS (quarters, section, township, range)
☐ Hydrographic Survey, Map & Tract
☐ Lot, Block & Subdivision
☐ Grant

OSE POD Number:	Other Well ID:	X or Longitude (ddmmss):	Y or Latitude (ddmmss):	Other Location Info (PLSS):	Casing ID- (inches):	Depth to Water- (ft bgs):	Total well Depth- (ft bgs):	Grout Volume:	Surface Casing (Y or N):
C- POD1	Exploratory Well #1	103°30'21.22"W	32°19'0.91"N	SE NW SE Sec 7-23S-34E	Boring	Unknown	110	189 gallons	N

FOR OSE INTERNAL USE Multiple Montioring POD Descriptions, Form wr-08m (Rev 7/31/19)

File Number:	Trn Number:
Trans Description (optional):	

OSE DII JUL 26 2021 PM3:11

Attachment D

Well Record and Log (CP-1886-POD1)

Atkins ENGINEERING ASSOCIATES INC.
2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

09/23/2021

DII-NMOSE
1900 W 2nd Street
Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record CP-1886 Pod1

To whom it may concern:

Attached please find a well log & record and a plugging record, in duplicate, for a one (1) soil borings, CP-1886 Pod1.

If you have any questions, please contact me at 575.499.9244 or lucas@atkinseng.com.

Sincerely,

Lucas Middleton

Enclosures: as noted above

OSE DII SEP 24 2021 AM 10:57

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (EW-01)	n/a	CP-1886

WELL OWNER NAME(S)	PHONE (OPTIONAL)
Kaiser-Francis Oil Company	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
6733 S. Yale Ave	Tulsa	OK	74136

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	19	0.91	N
	LONGITUDE	103	30	21.22	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

SE NW SE Sec. 7 T23S R34E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
09/09/2021	09/09/2021	temporary well material	110	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	105	±6.5	Boring- HSA	--	--	--	--

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	4	4	Sand, Medium/Fine grained, poorly graded, caliche gravel Brown	Y ✓ N	
4	9	5	Caliche, with fine-grained sand, Off White/ Tan	Y ✓ N	
9	105	96	Sand, Fine grained, poorly graded,with caliche gravel, Brown	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Shane Eldridge, Carmelo Trevino, Cameron Pruitt

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — OSE DII SEP 23 2021 AM 10:57 — 09/23/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 2 OF 2

2021-09-23__CP-1886_OSE_Well Record and Log_-forsign

Final Audit Report 2021-09-24

Created:	2021-09-23
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAA_hzmo4Ek-YF7hzeTkFsQk6J8KNirP4FZ

"2021-09-23__CP-1886_OSE_Well Record and Log_-forsign" History

Document created by Lucas Middleton (lucas@atkinseng.com)
2021-09-23 - 6:40:51 PM GMT- IP address: 69.21.248.123

Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2021-09-23 - 6:44:04 PM GMT

Email viewed by Jack Atkins (jack@atkinseng.com)
2021-09-24 - 0:38:55 AM GMT- IP address: 64.90.153.232

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2021-09-24 - 0:39:33 AM GMT - Time Source: server- IP address: 64.90.153.232

Agreement completed.
2021-09-24 - 0:39:33 AM GMT

OSE DIT SEP 24 2021 AM10:57

Adobe Sign

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: CP-1886 POD1 (EW-01)

Well owner: Kaiser-Francis Oil Company Phone No.: _____

Mailing address: 6733 S. Yale Ave

City: Tulsa State: OK Zip code: 74136

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Jackie D. Atkins (Atkins Engineering Associates Inc.)

2) New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/23

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Shane Eldridge, Cameron Pruitt, Carmelo Trevino

4) Date well plugging began: 09/15/2021 Date well plugging concluded: 09/15/2021

5) GPS Well Location: Latitude: 32 deg, 19 min, 0.91 sec
Longitude: 103 deg, 30 min, 21.22 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 105 ft below ground level (bgl), by the following manner: weighted tape

7) Static water level measured at initiation of plugging: n/a ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 07/29/2021

9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

OSE OIL SEP 24 2021 AM10:57

Version: September 8, 2009
Page 1 of 2

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	0-10' Hydrated Bentonite	20 gallons	15 gallons	Augers	
	10'-105' Drill Cuttings	Approx. 151 gallons	151 gallons	Boring	

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Jackie D. Atkins, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Jack Atkins

Signature of Well Driller

09/23/2021

Date

Version: September 8, 2009
Page 2 of 2

2021-09-23__CP-1886_WD-11 Plugging Record-forsign

Final Audit Report 2021-09-24

Created:	2021-09-23
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAYEBXAhBCiKa_i2kqkDWhoL47lyX5CdSf

"2021-09-23__CP-1886_WD-11 Plugging Record-forsign" History

Document created by Lucas Middleton (lucas@atkinseng.com)
2021-09-23 - 6:41:24 PM GMT- IP address: 69.21.248.123

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2021-09-23 - 6:43:53 PM GMT

Email viewed by Jack Atkins (jack@atkinseng.com)
2021-09-24 - 0:37:49 AM GMT- IP address: 64.90.153.232

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2021-09-24 - 0:38:31 AM GMT - Time Source: server- IP address: 64.90.153.232

Agreement completed.
2021-09-24 - 0:38:31 AM GMT

OSE DM SEP 24 2021 AM10:57

Adobe Sign

Attachment E

Closure Criteria Research

NBL 4-15 SWD Produced Water Line

Distance to nearest Depth to Water Point = 0.32 miles

U.S. Fish and Wildlife Service

National Wetlands Inventory

NBL 4-15 SWD Line - Riverine 3,389.7 ft

March 31, 2021

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

U.S. Fish and Wildlife Service
National Wetlands Inventory

NBL 4-15 SWD Line - Wetland 8,730.6 ft

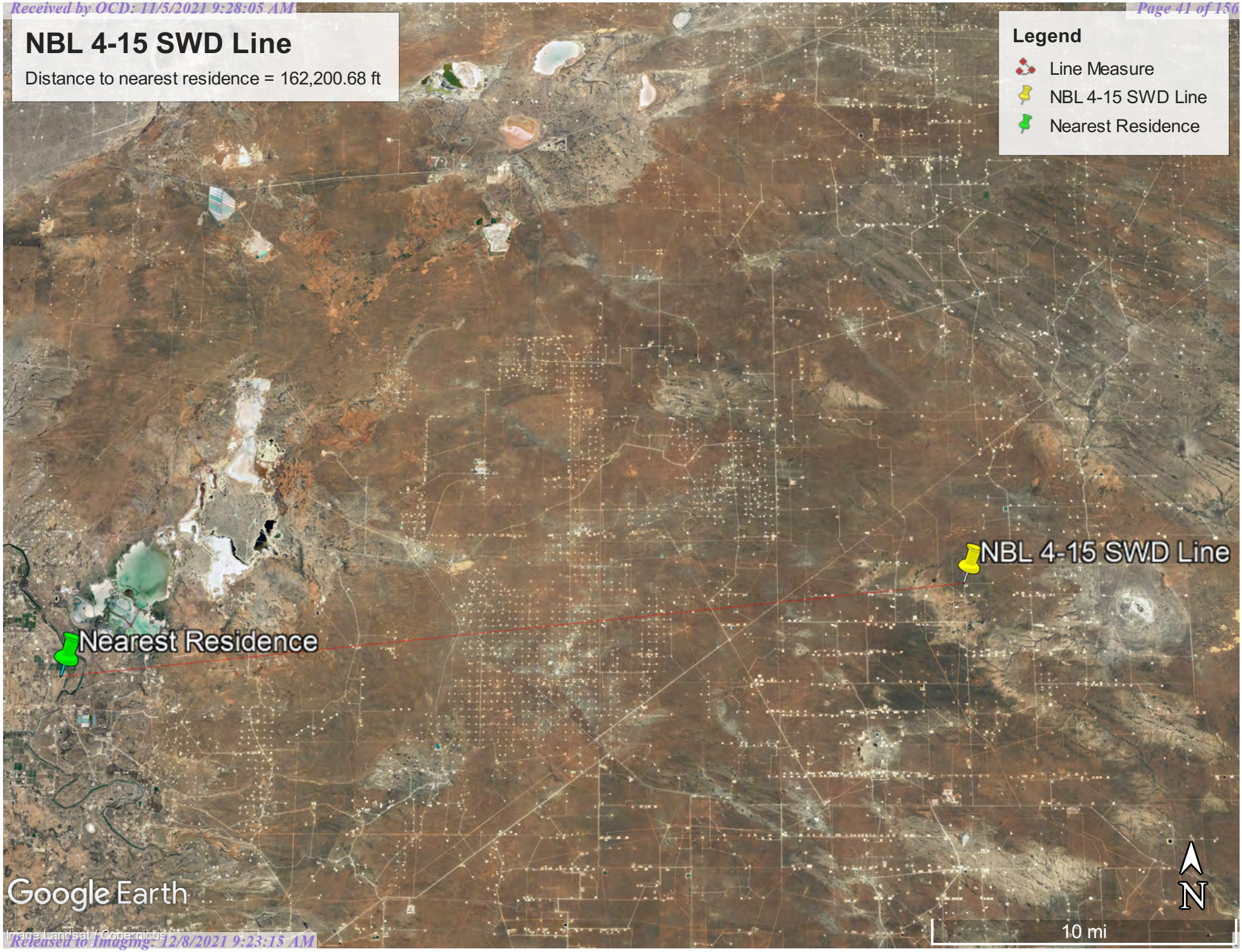
March 31, 2021

Wetlands

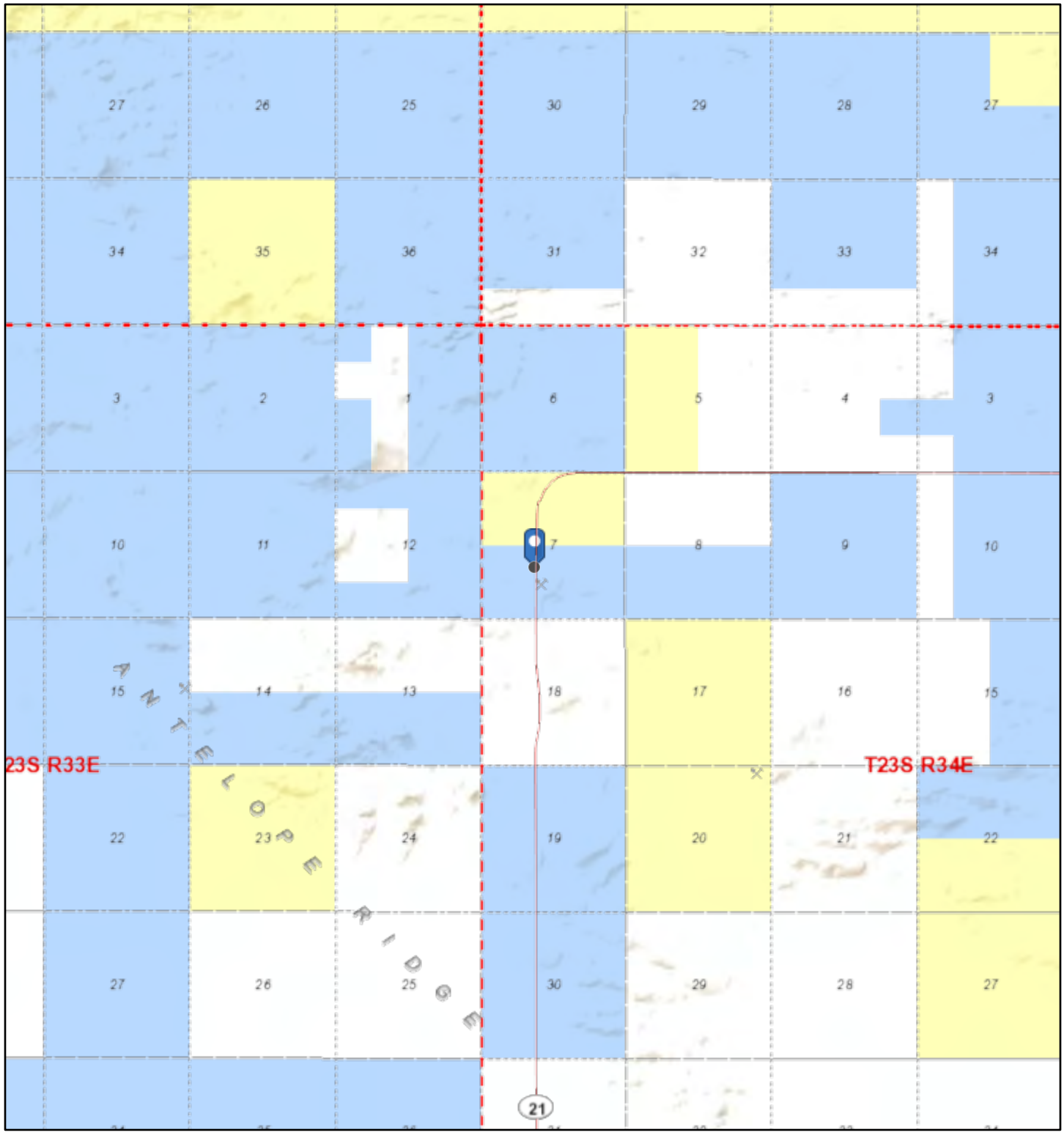
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper


NBL 4-15 SWD Line
Distance to nearest residence = 162,200.68 ft
Legend
Line Measure
NBL 4-15 SWD Line
Nearest Residence
NBL 4-15 SWD Line
Nearest Residence
Google Earth
Image Landsat / Copernicus
N
10 mi

Active Mines near NBL 4-15 SWD Line



3/31/2021, 10:50:42 AM

1:72,224

0 0.5 1 2 mi

0 0.75 1.5 3 km

Township / Range

Sections

Land Ownership

Bureau of Land Management

Bureau of Reclamation

Department of Agriculture

Department of Defense

Department of Energy

National Park Service

Private Land

State Game and Fish

State Land

State Parks

Tribal

U.S. Bureau of Land Management - New Mexico State Office, Sources: Esri, USGS, NOAA, Sources: Esri, Garmin, USGS, NPS

EMNRD MMD GIS Coordinator

New Energy, Minerals and Natural Resources Department (http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=1b5e577974664d689b47790897ca2795)

National Flood Hazard Layer FIRMette

FEMA

103°31'W 32°19'17"N

103°30'22"W 32°18'46"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/31/2021 at 11:50 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Attachment F

Karst Map

NBL 4-15 SWD Line

Karst Potential= Low

Attachment G

Envirotech, Inc. Laboratory Anaylsis Results

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 25, 2021

Ashley Giovengo

Kaiser Francis Oil Company
1224 Standpipe
Carlsbad, NM 88220
TEL: (575) 840-3940
FAX

RE: 4-15 SWD 03092021 Spill OrderNo.: 2103A04

Dear Ashley Giovengo:

Hall Environmental Analysis Laboratory received 3 sample(s) on 3/20/2021 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2103A04**
Date Reported: **3/25/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Client Sample ID: SS47-4'
Project: 4-15 SWD 03092021 Spill
Collection Date: 3/18/2021 4:37:00 PM
Lab ID: 2103A04-001 **Matrix:** SOIL **Received Date:** 3/20/2021 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	3/20/2021 9:55:39 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/20/2021 9:55:39 PM
Surr: DNOP	102	70-130		%Rec	1	3/20/2021 9:55:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/22/2021 10:56:49 AM
Surr: BFB	97.2	75.3-105		%Rec	1	3/22/2021 10:56:49 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	3/22/2021 10:56:49 AM
Toluene	ND	0.050		mg/Kg	1	3/22/2021 10:56:49 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/22/2021 10:56:49 AM
Xylenes, Total	ND	0.099		mg/Kg	1	3/22/2021 10:56:49 AM
Surr: 4-Bromofluorobenzene	99.8	80-120		%Rec	1	3/22/2021 10:56:49 AM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	2400	60		mg/Kg	20	3/20/2021 10:08:31 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103A04**
Date Reported: **3/25/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Project: 4-15 SWD 03092021 Spill
Lab ID: 2103A04-002 **Matrix:** SOIL

Client Sample ID: SS48-9'
Collection Date: 3/18/2021 3:06:00 PM
Received Date: 3/20/2021 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/20/2021 10:08:45 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/20/2021 10:08:45 PM
Surr: DNOP	103	70-130		%Rec	1	3/20/2021 10:08:45 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/22/2021 11:20:28 AM
Surr: BFB	96.7	75.3-105		%Rec	1	3/22/2021 11:20:28 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	3/22/2021 11:20:28 AM
Toluene	ND	0.049		mg/Kg	1	3/22/2021 11:20:28 AM
Ethylbenzene	ND	0.049		mg/Kg	1	3/22/2021 11:20:28 AM
Xylenes, Total	ND	0.098		mg/Kg	1	3/22/2021 11:20:28 AM
Surr: 4-Bromofluorobenzene	98.9	80-120		%Rec	1	3/22/2021 11:20:28 AM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	3100	150		mg/Kg	50	3/20/2021 10:45:46 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103A04**
Date Reported: **3/25/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Client Sample ID: SS03-6.5'
Project: 4-15 SWD 03092021 Spill
Collection Date: 3/18/2021 1:19:00 PM
Lab ID: 2103A04-003 **Matrix:** SOIL **Received Date:** 3/20/2021 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/20/2021 10:21:54 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/20/2021 10:21:54 PM
Surr: DNOP	103	70-130		%Rec	1	3/20/2021 10:21:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/22/2021 11:43:57 AM
Surr: BFB	98.8	75.3-105		%Rec	1	3/22/2021 11:43:57 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	3/22/2021 11:43:57 AM
Toluene	ND	0.049		mg/Kg	1	3/22/2021 11:43:57 AM
Ethylbenzene	ND	0.049		mg/Kg	1	3/22/2021 11:43:57 AM
Xylenes, Total	ND	0.098		mg/Kg	1	3/22/2021 11:43:57 AM
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	3/22/2021 11:43:57 AM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	4400	150		mg/Kg	50	3/20/2021 10:58:10 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103A04**
25-Mar-21

Client: Kaiser Francis Oil Company
Project: 4-15 SWD 03092021 Spill

Sample ID: **MB-58864**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **58864**	RunNo: **76086**							
Prep Date: **3/20/2021**	Analysis Date: **3/20/2021**	SeqNo: **2693684**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-58864**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **58864**	RunNo: **76086**							
Prep Date: **3/20/2021**	Analysis Date: **3/20/2021**	SeqNo: **2693685**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	90	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
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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103A04**
25-Mar-21

Client: Kaiser Francis Oil Company
Project: 4-15 SWD 03092021 Spill

Sample ID: **MB-58867**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **58867**	RunNo: **76096**
Prep Date: **3/20/2021**	Analysis Date: **3/20/2021**	SeqNo: **2694152** 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-58867**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **58867**	RunNo: **76096**
Prep Date: **3/20/2021**	Analysis Date: **3/20/2021**	SeqNo: **2694155** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.4	68.9	141			
Surr: DNOP	4.9		5.000		98.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103A04**
25-Mar-21

Client: Kaiser Francis Oil Company
Project: 4-15 SWD 03092021 Spill

Sample ID: **mb-58863**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **58863**	RunNo: **76109**							
Prep Date: **3/20/2021**	Analysis Date: **3/22/2021**	SeqNo: **2695161**	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	950		1000		94.6	75.3	105			

Sample ID: **lcs-58863**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **58863**	RunNo: **76109**							
Prep Date: **3/20/2021**	Analysis Date: **3/22/2021**	SeqNo: **2695162**	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	98.6	80	120			
Surr: BFB	1000		1000		104	75.3	105			

Sample ID: **2103a04-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **SS47-4'**	Batch ID: **58863**	RunNo: **76109**							
Prep Date: **3/20/2021**	Analysis Date: **3/22/2021**	SeqNo: **2695164**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.32	0	98.0	61.3	114			
Surr: BFB	1100		972.8		109	75.3	105			S

Sample ID: **2103a04-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **SS47-4'**	Batch ID: **58863**	RunNo: **76109**							
Prep Date: **3/20/2021**	Analysis Date: **3/22/2021**	SeqNo: **2695165**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.9	24.41	0	101	61.3	114	2.93	20	
Surr: BFB	1000		976.6		107	75.3	105	0	0	S

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 Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103A04**
25-Mar-21

Client: Kaiser Francis Oil Company
Project: 4-15 SWD 03092021 Spill

Sample ID: **mb-58863** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **58863** RunNo: **76109**
Prep Date: **3/20/2021** Analysis Date: **3/22/2021** SeqNo: **2695199** 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		97.3	80	120			

Sample ID: **LCS-58863** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **58863** RunNo: **76109**
Prep Date: **3/20/2021** Analysis Date: **3/22/2021** SeqNo: **2695200** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.3	80	120			
Toluene	0.96	0.050	1.000	0	96.4	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.4	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.9	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		99.1	80	120			

Sample ID: **2103a04-002ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SS48-9'** Batch ID: **58863** RunNo: **76109**
Prep Date: **3/20/2021** Analysis Date: **3/22/2021** SeqNo: **2695203** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	0.9901	0	93.8	76.3	120			
Toluene	0.96	0.050	0.9901	0	96.9	78.5	120			
Ethylbenzene	0.95	0.050	0.9901	0	95.8	78.1	124			
Xylenes, Total	2.8	0.099	2.970	0	95.5	79.3	125			
Surr: 4-Bromofluorobenzene	0.99		0.9901		100	80	120			

Sample ID: **2103a04-002amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SS48-9'** Batch ID: **58863** RunNo: **76109**
Prep Date: **3/20/2021** Analysis Date: **3/22/2021** SeqNo: **2695204** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.024	0.9737	0	86.8	76.3	120	9.38	20	
Toluene	0.87	0.049	0.9737	0	89.6	78.5	120	9.46	20	
Ethylbenzene	0.87	0.049	0.9737	0	89.6	78.1	124	8.29	20	
Xylenes, Total	2.6	0.097	2.921	0	89.8	79.3	125	7.88	20	
Surr: 4-Bromofluorobenzene	0.97		0.9737		99.7	80	120	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Kaiser Francis Oil Company** Work Order Number: **2103A04** RcptNo: 1

Received By: **Sean Livingston** 3/20/2021 8:50:00 AM S Livingston

Completed By: **Sean Livingston** 3/20/2021 9:01:37 AM S Livingston

Reviewed By: 3/20/21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
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: SGL 3/20/21

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	3.1	Good				

Chain-of-Custody Record

Client: Kaiser Francis Oil Company

Mailing Address: 1224 Standpipe Rd Carlsbad, N.M. 88220

Phone #: 505-382-1211

email or Fax#: ashley.giovengo@wescominc.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: C - Same Day BTEX, TPH ASAP
☐ Standard ☐ Rush

Project Name: 4-15 SWD 03.09.2021 Spill

Project #:

Project Manager: Ashley Giovengo

Sampler: Ashley Giovengo

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 3.3 - 0.2 = 3.1 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2103A04	BTEX / MTBE / TMB's (8021)	TPH: 8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
3/18/21	4:37 pm	S	SS47-4'	jar 1	ice	001	X	X					X			
3/18/21	3:06 pm	S	SS48-9'	jar 1	ice	002	X	X					X			
3/18/21	1:19 pm	S	SS03-6.5'	jar 1	ice	003	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/19/21	830		Cummings		3/19/21	830
3/19/21	1900	Cummings	SGL	Courier	3/20/21	8:50

Remarks: please cc shar.harvester@wescominc.com

ANGC Ashley Giovengo

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: clients.hallenvironmental.com

March 25, 2021

Ashley Giovengo

Kaiser Francis Oil Company
1224 Standpipe
Carlsbad, NM 88220
TEL: (575) 840-3940
FAX

RE: 4 15 SWD 03 09 2021 Spill OrderNo.: 2103A49

Dear Ashley Giovengo:

Hall Environmental Analysis Laboratory received 7 sample(s) on 3/23/2021 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2103A49**
Date Reported: **3/25/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103A49-001 **Matrix:** SOIL

Client Sample ID: SS49-0.5'
Collection Date: 3/19/2021 2:12:00 PM
Received Date: 3/23/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**
Diesel Range Organics (DRO)	10	9.8		mg/Kg	1	3/23/2021 10:13:57 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/23/2021 10:13:57 AM
Surr: DNOP	92.3	70-130		%Rec	1	3/23/2021 10:13:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/24/2021 9:09:03 AM
Surr: BFB	91.3	75.3-105		%Rec	1	3/24/2021 9:09:03 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	3/24/2021 9:09:03 AM
Toluene	ND	0.048		mg/Kg	1	3/24/2021 9:09:03 AM
Ethylbenzene	ND	0.048		mg/Kg	1	3/24/2021 9:09:03 AM
Xylenes, Total	ND	0.096		mg/Kg	1	3/24/2021 9:09:03 AM
Surr: 4-Bromofluorobenzene	98.5	80-120		%Rec	1	3/24/2021 9:09:03 AM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	630	59		mg/Kg	20	3/23/2021 10:53:21 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103A49**
Date Reported: **3/25/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103A49-002 **Matrix:** SOIL

Client Sample ID: SS50-6'
Collection Date: 3/19/2021 4:39:00 PM
Received Date: 3/23/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**
Diesel Range Organics (DRO)	120	9.8		mg/Kg	1	3/23/2021 10:23:19 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/23/2021 10:23:19 AM
Surr: DNOP	112	70-130		%Rec	1	3/23/2021 10:23:19 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/24/2021 9:32:38 AM
Surr: BFB	87.2	75.3-105		%Rec	1	3/24/2021 9:32:38 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	3/24/2021 9:32:38 AM
Toluene	ND	0.048		mg/Kg	1	3/24/2021 9:32:38 AM
Ethylbenzene	ND	0.048		mg/Kg	1	3/24/2021 9:32:38 AM
Xylenes, Total	ND	0.097		mg/Kg	1	3/24/2021 9:32:38 AM
Surr: 4-Bromofluorobenzene	95.2	80-120		%Rec	1	3/24/2021 9:32:38 AM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	1100	60		mg/Kg	20	3/23/2021 11:05:46 AM

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 Limit

Analytical Report
Lab Order **2103A49**
Date Reported: **3/25/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103A49-003 **Matrix:** SOIL

Client Sample ID: SS48-17'
Collection Date: 3/19/2021 2:55:00 PM
Received Date: 3/23/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	3/23/2021 10:32:45 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/23/2021 10:32:45 AM
Surr: DNOP	83.6	70-130		%Rec	1	3/23/2021 10:32:45 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/24/2021 9:56:09 AM
Surr: BFB	89.0	75.3-105		%Rec	1	3/24/2021 9:56:09 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	3/24/2021 9:56:09 AM
Toluene	ND	0.050		mg/Kg	1	3/24/2021 9:56:09 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/24/2021 9:56:09 AM
Xylenes, Total	ND	0.099		mg/Kg	1	3/24/2021 9:56:09 AM
Surr: 4-Bromofluorobenzene	98.2	80-120		%Rec	1	3/24/2021 9:56:09 AM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	760	60		mg/Kg	20	3/23/2021 11:18:11 AM

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 Limit

Analytical Report
Lab Order **2103A49**
Date Reported: **3/25/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103A49-004 **Matrix:** SOIL

Client Sample ID: SS48-13'
Collection Date: 3/19/2021 2:23:00 PM
Received Date: 3/23/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	1800	60		mg/Kg	20	3/23/2021 11:30:35 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103A49**
Date Reported: **3/25/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103A49-005 **Matrix:** SOIL

Client Sample ID: SS48-12'
Collection Date: 3/19/2021 2:01:00 PM
Received Date: 3/23/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	3600	150		mg/Kg	50	3/23/2021 11:30:43 PM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103A49**
Date Reported: **3/25/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103A49-006 **Matrix:** SOIL

Client Sample ID: SS48-14'
Collection Date: 3/19/2021 2:32:00 PM
Received Date: 3/23/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	2200	60		mg/Kg	20	3/23/2021 11:55:24 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103A49**
Date Reported: **3/25/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103A49-007 **Matrix:** SOIL

Client Sample ID: SS48-16'
Collection Date: 3/19/2021 2:44:00 PM
Received Date: 3/23/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	2300	60		mg/Kg	20	3/23/2021 12:07:49 PM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103A49**
25-Mar-21

Client: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill

Sample ID: **MB-58901** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **58901** RunNo: **76140**
Prep Date: **3/23/2021** Analysis Date: **3/23/2021** SeqNo: **2696564** Units: **mg/Kg**

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

Sample ID: **LCS-58901** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **58901** RunNo: **76140**
Prep Date: **3/23/2021** Analysis Date: **3/23/2021** SeqNo: **2696565** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.9	90	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
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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103A49**
25-Mar-21

Client: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill

Sample ID: **MB-58898**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **58898**	RunNo: **76138**							
Prep Date: **3/23/2021**	Analysis Date: **3/23/2021**	SeqNo: **2695795**	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	8.1		10.00		80.7	70	130			

Sample ID: **LCS-58898**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **58898**	RunNo: **76138**							
Prep Date: **3/23/2021**	Analysis Date: **3/23/2021**	SeqNo: **2695796**	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	97.4	68.9	141			
Surr: DNOP	4.5		5.000		89.6	70	130			

Sample ID: **2103A49-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **SS49-0.5'**	Batch ID: **58898**	RunNo: **76138**							
Prep Date: **3/23/2021**	Analysis Date: **3/23/2021**	SeqNo: **2695797**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	9.3	46.64	10.32	89.1	15	184			
Surr: DNOP	3.9		4.664		84.2	70	130			

Sample ID: **2103A49-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **SS49-0.5'**	Batch ID: **58898**	RunNo: **76138**							
Prep Date: **3/23/2021**	Analysis Date: **3/23/2021**	SeqNo: **2695798**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.5	47.26	10.32	83.7	15	184	3.89	23.9	
Surr: DNOP	4.1		4.726		87.6	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103A49**
25-Mar-21

Client: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill

Sample ID: **mb-58900** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **58900** RunNo: **76182**
Prep Date: **3/23/2021** Analysis Date: **3/24/2021** SeqNo: **2697501** 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	940		1000		93.8	75.3	105			

Sample ID: **lcs-58900** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **58900** RunNo: **76182**
Prep Date: **3/23/2021** Analysis Date: **3/24/2021** SeqNo: **2697502** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.0	80	120			
Surr: BFB	1000		1000		99.6	75.3	105			

Sample ID: **2103a49-001ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SS49-0.5'** Batch ID: **58900** RunNo: **76182**
Prep Date: **3/23/2021** Analysis Date: **3/24/2021** SeqNo: **2697523** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.7	23.61	0	98.6	61.3	114			
Surr: BFB	950		944.3		100	75.3	105			

Sample ID: **2103a49-001amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SS49-0.5'** Batch ID: **58900** RunNo: **76182**
Prep Date: **3/23/2021** Analysis Date: **3/24/2021** SeqNo: **2697524** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.7	23.43	0	96.6	61.3	114	2.88	20	
Surr: BFB	930		937.2		99.6	75.3	105	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103A49**
25-Mar-21

Client: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill

Sample ID: **mb-58900** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **58900** RunNo: **76182**
Prep Date: **3/23/2021** Analysis Date: **3/24/2021** SeqNo: **2697544** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID: **LCS-58900** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **58900** RunNo: **76182**
Prep Date: **3/23/2021** Analysis Date: **3/24/2021** SeqNo: **2697545** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.2	80	120			
Toluene	0.96	0.050	1.000	0	96.1	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.2	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.6	80	120			

Sample ID: **2103a49-002ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SS50-6'** Batch ID: **58900** RunNo: **76182**
Prep Date: **3/23/2021** Analysis Date: **3/24/2021** SeqNo: **2697572** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.024	0.9579	0	101	76.3	120			
Toluene	0.99	0.048	0.9579	0	103	78.5	120			
Ethylbenzene	0.98	0.048	0.9579	0	103	78.1	124			
Xylenes, Total	2.9	0.096	2.874	0	101	79.3	125			
Surr: 4-Bromofluorobenzene	0.95		0.9579		99.1	80	120			

Sample ID: **2103a49-002amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SS50-6'** Batch ID: **58900** RunNo: **76182**
Prep Date: **3/23/2021** Analysis Date: **3/24/2021** SeqNo: **2697575** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	0.9940	0	102	76.3	120	4.48	20	
Toluene	1.0	0.050	0.9940	0	104	78.5	120	4.88	20	
Ethylbenzene	1.0	0.050	0.9940	0	105	78.1	124	5.72	20	
Xylenes, Total	3.1	0.099	2.982	0	104	79.3	125	6.14	20	
Surr: 4-Bromofluorobenzene	0.98		0.9940		98.4	80	120	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Kaiser Francis Oil Company

Work Order Number: 2103A49

RcptNo: 1

Received By: Cheyenne Cason 3/23/2021 8:00:00 AM

Completed By: Sean Livingston 3/23/2021 8:07:55 AM S Livingston

Reviewed By: JR 3/23/21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
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:

NO 3/23/21

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	2.4	Good				

Chain-of-Custody Record

Client: Kaiser Francis Oil Company

Mailing Address: 1224 Standpipe Rd Carlsbad, N.m 88220

Phone #: 505-382-1211

email or Fax#: ashley.giovengo@wescominc.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush Samedays

Project Name: 4-15 SWD 03.09.2021 Spill

Project #:

Project Manager: Ashley Giovengo

Sampler: Ashley Giovengo

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 2.5 (-0.1) = 2.4 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2103A49	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
3/19/21	2:12pm	S	SS49 - 0.5'	jar 1	ice	001	X	X					X			
3/19/21	4:39pm	S	SS50 - 6'	jar 1	ice	002	X	X					X			
3/19/21	2:55pm	S	SS48 - 17'	jar 1	ice	003	X	X					X			
3/19/21	2:23pm	S	SS48 - 13' *	jar 1	ice	004	X	X					X			
3/19/21	2:01pm	S	SS48 - 12' *	jar 1	ice	005	X	X					X			
3/19/21	2:32pm	S	SS48 - 14' *	jar 1	ice	006	X	X					X			
3/19/21	2:44pm	S	SS48 - 16' *	jar 1	ice	007	X	X					X			

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
3/22/21	12:33pm				3/22/21	1233
3/22/21	1900			courier	3/23/21	0800

Remarks: Please cc shar.harvester@wescominc.com, ANG/AG = Ashley Giovengo
* If sample SS48-17' is clean please run SS48-16'; if SS48-16' is clean please run SS48-14' etc.

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: clients.hallenvironmental.com

March 30, 2021

Ashley Giovengo

Kaiser Francis Oil Company
1224 Standpipe
Carlsbad, NM 88220
TEL: (575) 840-3940
FAX:

RE: 4 15 SWD 03 09 2021 Spill OrderNo.: 2103C32

Dear Ashley Giovengo:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/26/2021 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2103C32**
Date Reported: **3/30/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company **Client Sample ID:** BG01-01'
Project: 4 15 SWD 03 09 2021 Spill **Collection Date:** 3/24/2021 12:35:00 PM
Lab ID: 2103C32-001 **Matrix:** MEOH (SOIL) **Received Date:** 3/26/2021 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	3/26/2021 11:04:07 AM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	3/26/2021 11:04:07 AM
Surr: DNOP	106	70-130		%Rec	1	3/26/2021 11:04:07 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	3/26/2021 12:21:00 PM
Surr: BFB	96.0	75.3-105		%Rec	1	3/26/2021 12:21:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	3/26/2021 12:21:00 PM
Toluene	ND	0.043		mg/Kg	1	3/26/2021 12:21:00 PM
Ethylbenzene	ND	0.043		mg/Kg	1	3/26/2021 12:21:00 PM
Xylenes, Total	ND	0.086		mg/Kg	1	3/26/2021 12:21:00 PM
Surr: 4-Bromofluorobenzene	85.5	80-120		%Rec	1	3/26/2021 12:21:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	ND	60		mg/Kg	20	3/26/2021 9:41:49 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103C32**
Date Reported: **3/30/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company **Client Sample ID:** BG01-02'
Project: 4 15 SWD 03 09 2021 Spill **Collection Date:** 3/24/2021 12:38:00 PM
Lab ID: 2103C32-002 **Matrix:** MEOH (SOIL) **Received Date:** 3/26/2021 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	3/26/2021 11:40:23 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/26/2021 11:40:23 AM
Surr: DNOP	97.0	70-130		%Rec	1	3/26/2021 11:40:23 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	3/26/2021 12:41:00 PM
Surr: BFB	94.3	75.3-105		%Rec	1	3/26/2021 12:41:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.016		mg/Kg	1	3/26/2021 12:41:00 PM
Toluene	ND	0.032		mg/Kg	1	3/26/2021 12:41:00 PM
Ethylbenzene	ND	0.032		mg/Kg	1	3/26/2021 12:41:00 PM
Xylenes, Total	ND	0.065		mg/Kg	1	3/26/2021 12:41:00 PM
Surr: 4-Bromofluorobenzene	84.5	80-120		%Rec	1	3/26/2021 12:41:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	ND	60		mg/Kg	20	3/26/2021 9:54:14 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2103C32**
Date Reported: **3/30/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company **Client Sample ID:** BG02-01'
Project: 4 15 SWD 03 09 2021 Spill **Collection Date:** 3/24/2021 12:49:00 PM
Lab ID: 2103C32-003 **Matrix:** MEOH (SOIL) **Received Date:** 3/26/2021 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/26/2021 11:26:11 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/26/2021 11:26:11 AM
Surr: DNOP	93.6	70-130		%Rec	1	3/26/2021 11:26:11 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	3/26/2021 1:01:00 PM
Surr: BFB	96.9	75.3-105		%Rec	1	3/26/2021 1:01:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.018		mg/Kg	1	3/26/2021 1:01:00 PM
Toluene	ND	0.037		mg/Kg	1	3/26/2021 1:01:00 PM
Ethylbenzene	ND	0.037		mg/Kg	1	3/26/2021 1:01:00 PM
Xylenes, Total	ND	0.074		mg/Kg	1	3/26/2021 1:01:00 PM
Surr: 4-Bromofluorobenzene	85.9	80-120		%Rec	1	3/26/2021 1:01:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	ND	60		mg/Kg	20	3/26/2021 10:06:39 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2103C32**
Date Reported: **3/30/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Client Sample ID: BG02-02'
Project: 4 15 SWD 03 09 2021 Spill
Collection Date: 3/24/2021 12:58:00 PM
Lab ID: 2103C32-004
Matrix: MEOH (SOIL)
Received Date: 3/26/2021 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	3/26/2021 1:05:30 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/26/2021 1:05:30 PM
Surr: DNOP	84.4	70-130		%Rec	1	3/26/2021 1:05:30 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	3/26/2021 1:21:00 PM
Surr: BFB	96.1	75.3-105		%Rec	1	3/26/2021 1:21:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.019		mg/Kg	1	3/26/2021 1:21:00 PM
Toluene	ND	0.037		mg/Kg	1	3/26/2021 1:21:00 PM
Ethylbenzene	ND	0.037		mg/Kg	1	3/26/2021 1:21:00 PM
Xylenes, Total	ND	0.075		mg/Kg	1	3/26/2021 1:21:00 PM
Surr: 4-Bromofluorobenzene	84.8	80-120		%Rec	1	3/26/2021 1:21:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	64	60		mg/Kg	20	3/26/2021 10:19:05 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103C32**
30-Mar-21

Client: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill

Sample ID: **MB-58988** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **58988** RunNo: **76237**
Prep Date: **3/26/2021** Analysis Date: **3/26/2021** SeqNo: **2699809** Units: **mg/Kg**

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

Sample ID: **LCS-58988** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **58988** RunNo: **76237**
Prep Date: **3/26/2021** Analysis Date: **3/26/2021** SeqNo: **2699810** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	90	110			

Sample ID: **MB-58988** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **58988** RunNo: **76245**
Prep Date: **3/26/2021** Analysis Date: **3/26/2021** SeqNo: **2699967** Units: **mg/Kg**

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

Sample ID: **LCS-58988** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **58988** RunNo: **76245**
Prep Date: **3/26/2021** Analysis Date: **3/26/2021** SeqNo: **2699968** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.8	90	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
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2103C32**

30-Mar-21

Client: Kaiser Francis Oil Company

Project: 4 15 SWD 03 09 2021 Spill

Sample ID: **MB-58987** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **58987** RunNo: **76239**

Prep Date: **3/26/2021** Analysis Date: **3/26/2021** SeqNo: **2699357** 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		104	70	130			

Sample ID: **LCS-58987** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **58987** RunNo: **76239**

Prep Date: **3/26/2021** Analysis Date: **3/26/2021** SeqNo: **2699358** 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	96.7	68.9	141			
Surr: DNOP	5.2		5.000		104	70	130			

Sample ID: **2103C32-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **BG01-01'** Batch ID: **58987** RunNo: **76239**

Prep Date: **3/26/2021** Analysis Date: **3/26/2021** SeqNo: **2699525** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	8.3	41.74	0	90.7	15	184			
Surr: DNOP	4.3		4.174		103	70	130			

Sample ID: **2103C32-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **BG01-01'** Batch ID: **58987** RunNo: **76239**

Prep Date: **3/26/2021** Analysis Date: **3/26/2021** SeqNo: **2699528** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	9.9	49.26	0	77.6	15	184	0.973	23.9	
Surr: DNOP	4.8		4.926		97.9	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103C32**
30-Mar-21

Client: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R76246**	RunNo: **76246**
Prep Date:	Analysis Date: **3/26/2021**	SeqNo: **2699472** 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	1000		1000		99.7	75.3	105			

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 Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103C32**
30-Mar-21

Client: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **BS76246**	RunNo: **76246**
Prep Date:	Analysis Date: **3/26/2021**	SeqNo: **2699475** 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	0.88		1.000		88.1	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Kaiser Francis Oil Company** Work Order Number: **2103C32** RcptNo: **1**

Received By: **Juan Rojas** **3/26/2021 7:35:00 AM**

Completed By: **Cheyenne Cason** **3/26/2021 8:03:18 AM**

Reviewed By: SGL 3/26/21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
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: CM 3/25/21

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	1.6	Good				

Chain-of-Custody Record

Client: Kaiser Francis Oil Company

Mailing Address: 1224 Standpipe Rd Carlsbad, N.M. 88220

Phone #: 505-382-1211

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: Same Day

☐ Standard ☑ Rush

Project Name: 4-15 SWD 03.09.2021 Spill

Project #:

Project Manager: Ashley Giovengo

Sampler: Ashley Giovengo

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 1.6-0=1.6 (°C)

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 Name	Container Type and #	Preservative Type	HEAL No. 2103632	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
3/24/21	12:35pm	S	BG01-1'	jar 1	ice	001	X	X					X			
3/24/21	12:38pm	S	BG01-2'	jar 1	ice	002	X	X					X			
3/24/21	12:49pm	S	BG02-1'	jar 1	ice	003	X	X					X			
3/24/21	12:58pm	S	BG02-2'	jar 1	ice	004	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
3/25/21	9:27am				3/25/21	927
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
3/25/21	1900			courier	3/26/21	7:35

Remarks: Please cc shar.harvester@wescominc.com
ANG = Ashley Giovengo

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: clients.hallenvironmental.com

March 15, 2021

Ashley Giovengo

Kaiser Francis Oil Company
1224 Standpipe
Carlsbad, NM 88220
TEL: (575) 840-3940
FAX:

RE: 4 15 SWD 03 09 2021 Spill OrderNo.: 2103687

Dear Ashley Giovengo:

Hall Environmental Analysis Laboratory received 10 sample(s) on 3/12/2021 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2103687**
Date Reported: **3/15/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103687-001 **Matrix:** SOIL

Client Sample ID: SS01- 3.5'
Collection Date: 3/9/2021 4:17:00 PM
Received Date: 3/12/2021 4:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	9500	600		mg/Kg	200	3/13/2021 9:50:15 AM	58702
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/12/2021 6:18:25 PM	58701
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/12/2021 6:18:25 PM	58701
Surr: DNOP	94.4	70-130		%Rec	1	3/12/2021 6:18:25 PM	58701
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	3/13/2021 5:17:00 PM	R75920
Surr: BFB	87.6	75.3-105		%Rec	1	3/13/2021 5:17:00 PM	R75920
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.018		mg/Kg	1	3/13/2021 5:17:00 PM	R75920
Toluene	ND	0.036		mg/Kg	1	3/13/2021 5:17:00 PM	R75920
Ethylbenzene	ND	0.036		mg/Kg	1	3/13/2021 5:17:00 PM	R75920
Xylenes, Total	ND	0.071		mg/Kg	1	3/13/2021 5:17:00 PM	R75920
Surr: 4-Bromofluorobenzene	81.5	80-120		%Rec	1	3/13/2021 5:17:00 PM	R75920

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 Limit

Analytical Report
Lab Order **2103687**
Date Reported: **3/15/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103687-002 **Matrix:** SOIL

Client Sample ID: SS03- 3.5'
Collection Date: 3/9/2021 4:25:00 PM
Received Date: 3/12/2021 4:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**VP**
Chloride	4900	150		mg/Kg	50	3/13/2021 10:02:40 AM	58702
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**mb**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	3/12/2021 7:21:26 PM	58701
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/12/2021 7:21:26 PM	58701
Surr: DNOP	88.4	70-130		%Rec	1	3/12/2021 7:21:26 PM	58701
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**CCM**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	3/13/2021 11:58:00 AM	R75920
Surr: BFB	87.7	75.3-105		%Rec	1	3/13/2021 11:58:00 AM	R75920
EPA METHOD 8021B: VOLATILES						Analyst:	**CCM**
Benzene	ND	0.019		mg/Kg	1	3/13/2021 11:58:00 AM	R75920
Toluene	ND	0.039		mg/Kg	1	3/13/2021 11:58:00 AM	R75920
Ethylbenzene	ND	0.039		mg/Kg	1	3/13/2021 11:58:00 AM	R75920
Xylenes, Total	ND	0.077		mg/Kg	1	3/13/2021 11:58:00 AM	R75920
Surr: 4-Bromofluorobenzene	84.0	80-120		%Rec	1	3/13/2021 11:58:00 AM	R75920

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 Limit

Analytical Report
Lab Order **2103687**
Date Reported: **3/15/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103687-003 **Matrix:** SOIL

Client Sample ID: SS05- 3.5'
Collection Date: 3/9/2021 4:35:00 PM
Received Date: 3/12/2021 4:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	7100	300		mg/Kg	100	3/13/2021 10:15:04 AM	58702
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	93	9.1		mg/Kg	1	3/12/2021 7:58:59 PM	58701
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/12/2021 7:58:59 PM	58701
Surr: DNOP	89.4	70-130		%Rec	1	3/12/2021 7:58:59 PM	58701
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	5.3	3.5		mg/Kg	1	3/13/2021 12:18:00 PM	R75920
Surr: BFB	125	75.3-105	S	%Rec	1	3/13/2021 12:18:00 PM	R75920
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.018		mg/Kg	1	3/13/2021 12:18:00 PM	R75920
Toluene	ND	0.035		mg/Kg	1	3/13/2021 12:18:00 PM	R75920
Ethylbenzene	ND	0.035		mg/Kg	1	3/13/2021 12:18:00 PM	R75920
Xylenes, Total	ND	0.070		mg/Kg	1	3/13/2021 12:18:00 PM	R75920
Surr: 4-Bromofluorobenzene	87.8	80-120		%Rec	1	3/13/2021 12:18:00 PM	R75920

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 Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2103687**
Date Reported: **3/15/2021**

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103687-004 **Matrix:** SOIL

Client Sample ID: BG01- 0'
Collection Date: 3/9/2021 4:43:00 PM
Received Date: 3/12/2021 4:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	3/12/2021 6:42:31 PM	58702
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/12/2021 8:36:21 PM	58701
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/12/2021 8:36:21 PM	58701
Surr: DNOP	83.8	70-130		%Rec	1	3/12/2021 8:36:21 PM	58701
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	3/13/2021 12:38:00 PM	R75920
Surr: BFB	91.9	75.3-105		%Rec	1	3/13/2021 12:38:00 PM	R75920
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.017		mg/Kg	1	3/13/2021 12:38:00 PM	R75920
Toluene	ND	0.033		mg/Kg	1	3/13/2021 12:38:00 PM	R75920
Ethylbenzene	ND	0.033		mg/Kg	1	3/13/2021 12:38:00 PM	R75920
Xylenes, Total	ND	0.067		mg/Kg	1	3/13/2021 12:38:00 PM	R75920
Surr: 4-Bromofluorobenzene	85.9	80-120		%Rec	1	3/13/2021 12:38:00 PM	R75920

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 Limit

Analytical Report
Lab Order **2103687**
Date Reported: **3/15/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103687-005 **Matrix:** SOIL

Client Sample ID: SS09- 0'
Collection Date: 3/9/2021 3:00:00 PM
Received Date: 3/12/2021 4:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	400	60		mg/Kg	20	3/12/2021 6:54:56 PM	58702
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	3/12/2021 9:13:37 PM	58701
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/12/2021 9:13:37 PM	58701
Surr: DNOP	91.8	70-130		%Rec	1	3/12/2021 9:13:37 PM	58701
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	3/13/2021 12:58:00 PM	R75920
Surr: BFB	89.2	75.3-105		%Rec	1	3/13/2021 12:58:00 PM	R75920
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.019		mg/Kg	1	3/13/2021 12:58:00 PM	R75920
Toluene	ND	0.038		mg/Kg	1	3/13/2021 12:58:00 PM	R75920
Ethylbenzene	ND	0.038		mg/Kg	1	3/13/2021 12:58:00 PM	R75920
Xylenes, Total	ND	0.076		mg/Kg	1	3/13/2021 12:58:00 PM	R75920
Surr: 4-Bromofluorobenzene	80.9	80-120		%Rec	1	3/13/2021 12:58:00 PM	R75920

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 Limit

Analytical Report
Lab Order **2103687**
Date Reported: **3/15/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103687-006 **Matrix:** SOIL

Client Sample ID: SS11- 0'
Collection Date: 3/9/2021 3:10:00 PM
Received Date: 3/12/2021 4:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**VP**
Chloride	990	60		mg/Kg	20	3/12/2021 7:07:20 PM	58702
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**mb**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/12/2021 9:50:39 PM	58701
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/12/2021 9:50:39 PM	58701
Surr: DNOP	88.9	70-130		%Rec	1	3/12/2021 9:50:39 PM	58701
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**CCM**
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	3/13/2021 1:18:00 PM	R75920
Surr: BFB	86.8	75.3-105		%Rec	1	3/13/2021 1:18:00 PM	R75920
EPA METHOD 8021B: VOLATILES						Analyst:	**CCM**
Benzene	ND	0.018		mg/Kg	1	3/13/2021 1:18:00 PM	R75920
Toluene	ND	0.036		mg/Kg	1	3/13/2021 1:18:00 PM	R75920
Ethylbenzene	ND	0.036		mg/Kg	1	3/13/2021 1:18:00 PM	R75920
Xylenes, Total	ND	0.073		mg/Kg	1	3/13/2021 1:18:00 PM	R75920
Surr: 4-Bromofluorobenzene	80.2	80-120		%Rec	1	3/13/2021 1:18:00 PM	R75920

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103687**
Date Reported: **3/15/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103687-007 **Matrix:** SOIL

Client Sample ID: SS12- 0'
Collection Date: 3/9/2021 3:15:00 PM
Received Date: 3/12/2021 4:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	180	59		mg/Kg	20	3/12/2021 7:19:45 PM	58702
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/12/2021 10:27:20 PM	58701
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/12/2021 10:27:20 PM	58701
Surr: DNOP	89.8	70-130		%Rec	1	3/12/2021 10:27:20 PM	58701
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	3/13/2021 1:37:00 PM	R75920
Surr: BFB	88.5	75.3-105		%Rec	1	3/13/2021 1:37:00 PM	R75920
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.016		mg/Kg	1	3/13/2021 1:37:00 PM	R75920
Toluene	ND	0.031		mg/Kg	1	3/13/2021 1:37:00 PM	R75920
Ethylbenzene	ND	0.031		mg/Kg	1	3/13/2021 1:37:00 PM	R75920
Xylenes, Total	ND	0.062		mg/Kg	1	3/13/2021 1:37:00 PM	R75920
Surr: 4-Bromofluorobenzene	84.0	80-120		%Rec	1	3/13/2021 1:37:00 PM	R75920

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103687**
Date Reported: **3/15/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103687-008 **Matrix:** SOIL

Client Sample ID: SS14- 0'
Collection Date: 3/9/2021 3:25:00 PM
Received Date: 3/12/2021 4:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	2800	150		mg/Kg	50	3/13/2021 10:27:29 AM	58702
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/12/2021 11:03:45 PM	58701
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/12/2021 11:03:45 PM	58701
Surr: DNOP	97.5	70-130		%Rec	1	3/12/2021 11:03:45 PM	58701
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	3/13/2021 1:57:00 PM	R75920
Surr: BFB	86.0	75.3-105		%Rec	1	3/13/2021 1:57:00 PM	R75920
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.015		mg/Kg	1	3/13/2021 1:57:00 PM	R75920
Toluene	ND	0.031		mg/Kg	1	3/13/2021 1:57:00 PM	R75920
Ethylbenzene	ND	0.031		mg/Kg	1	3/13/2021 1:57:00 PM	R75920
Xylenes, Total	ND	0.062		mg/Kg	1	3/13/2021 1:57:00 PM	R75920
Surr: 4-Bromofluorobenzene	81.2	80-120		%Rec	1	3/13/2021 1:57:00 PM	R75920

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103687**
Date Reported: **3/15/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103687-009 **Matrix:** SOIL

Client Sample ID: SS16- 0'
Collection Date: 3/9/2021 3:38:00 PM
Received Date: 3/12/2021 4:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	3900	150		mg/Kg	50	3/13/2021 10:39:53 AM	58702
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	3/12/2021 11:40:01 PM	58701
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	3/12/2021 11:40:01 PM	58701
Surr: DNOP	87.7	70-130		%Rec	1	3/12/2021 11:40:01 PM	58701
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	ND	2.6		mg/Kg	1	3/13/2021 2:17:00 PM	R75920
Surr: BFB	88.1	75.3-105		%Rec	1	3/13/2021 2:17:00 PM	R75920
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.013		mg/Kg	1	3/13/2021 2:17:00 PM	R75920
Toluene	ND	0.026		mg/Kg	1	3/13/2021 2:17:00 PM	R75920
Ethylbenzene	ND	0.026		mg/Kg	1	3/13/2021 2:17:00 PM	R75920
Xylenes, Total	ND	0.052		mg/Kg	1	3/13/2021 2:17:00 PM	R75920
Surr: 4-Bromofluorobenzene	81.8	80-120		%Rec	1	3/13/2021 2:17:00 PM	R75920

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2103687**
Date Reported: **3/15/2021**

CLIENT: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill
Lab ID: 2103687-010 **Matrix:** SOIL

Client Sample ID: SS08- 0.5'
Collection Date: 3/9/2021 2:58:00 PM
Received Date: 3/12/2021 4:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	5000	150		mg/Kg	50	3/13/2021 10:52:18 AM	58702
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	23	9.4		mg/Kg	1	3/13/2021 12:16:07 AM	58701
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/13/2021 12:16:07 AM	58701
Surr: DNOP	90.3	70-130		%Rec	1	3/13/2021 12:16:07 AM	58701
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	23	3.1		mg/Kg	1	3/13/2021 2:37:00 PM	R75920
Surr: BFB	236	75.3-105	S	%Rec	1	3/13/2021 2:37:00 PM	R75920
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.015		mg/Kg	1	3/13/2021 2:37:00 PM	R75920
Toluene	ND	0.031		mg/Kg	1	3/13/2021 2:37:00 PM	R75920
Ethylbenzene	0.049	0.031		mg/Kg	1	3/13/2021 2:37:00 PM	R75920
Xylenes, Total	0.25	0.062		mg/Kg	1	3/13/2021 2:37:00 PM	R75920
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	3/13/2021 2:37:00 PM	R75920

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 Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103687**
15-Mar-21

Client: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill

Sample ID: **MB-58702**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **58702**	RunNo: **75898**							
Prep Date: **3/12/2021**	Analysis Date: **3/12/2021**	SeqNo: **2686278**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-58702**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **58702**	RunNo: **75898**							
Prep Date: **3/12/2021**	Analysis Date: **3/12/2021**	SeqNo: **2686280**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.6	90	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
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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103687**
15-Mar-21

Client: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill

Sample ID: **MB-58686** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **58686** RunNo: **75910**
Prep Date: **3/12/2021** Analysis Date: **3/12/2021** SeqNo: **2685926** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.1		10.00		90.7	70	130			

Sample ID: **LCS-58686** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **58686** RunNo: **75910**
Prep Date: **3/12/2021** Analysis Date: **3/12/2021** SeqNo: **2685927** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		5.000		89.1	70	130			

Sample ID: **2103626-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BatchQC** Batch ID: **58686** RunNo: **75910**
Prep Date: **3/12/2021** Analysis Date: **3/12/2021** SeqNo: **2685928** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.1		4.371		93.5	70	130			

Sample ID: **2103626-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BatchQC** Batch ID: **58686** RunNo: **75910**
Prep Date: **3/12/2021** Analysis Date: **3/12/2021** SeqNo: **2685929** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		4.859		88.2	70	130	0	0	

Sample ID: **MB-58701** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **58701** RunNo: **75910**
Prep Date: **3/12/2021** Analysis Date: **3/12/2021** SeqNo: **2686263** 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	8.3		10.00		82.6	70	130			

Sample ID: **LCS-58701** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **58701** RunNo: **75910**
Prep Date: **3/12/2021** Analysis Date: **3/12/2021** SeqNo: **2686279** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	82.1	68.9	141			
Surr: DNOP	4.1		5.000		81.6	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103687**
15-Mar-21

Client: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill

Sample ID: **2103687-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SS01- 3.5'** Batch ID: **58701** RunNo: **75910**
Prep Date: **3/12/2021** Analysis Date: **3/12/2021** SeqNo: **2686310** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	9.7	48.54	0	83.9	15	184			
Surr: DNOP	4.2		4.854		85.6	70	130			

Sample ID: **2103687-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SS01- 3.5'** Batch ID: **58701** RunNo: **75910**
Prep Date: **3/12/2021** Analysis Date: **3/12/2021** SeqNo: **2686313** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	9.8	49.16	0	85.7	15	184	3.41	23.9	
Surr: DNOP	4.1		4.916		84.2	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 Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103687**
15-Mar-21

Client: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill

Sample ID: **2103687-001ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SS01- 3.5'** Batch ID: **R75920** RunNo: **75920**
Prep Date: Analysis Date: **3/13/2021** SeqNo: **2686659** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.6	17.76	0	103	61.3	114			
Surr: BFB	720		710.2		101	75.3	105			

Sample ID: **2103687-001amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SS01- 3.5'** Batch ID: **R75920** RunNo: **75920**
Prep Date: Analysis Date: **3/13/2021** SeqNo: **2686660** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.6	17.76	0	100	61.3	114	2.75	20	
Surr: BFB	710		710.2		100	75.3	105	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103687**
15-Mar-21

Client: Kaiser Francis Oil Company
Project: 4 15 SWD 03 09 2021 Spill

Sample ID: **2103687-002ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SS03- 3.5'** Batch ID: **R75920** RunNo: **75920**
Prep Date: Analysis Date: **3/13/2021** SeqNo: **2686677** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.77	0.077	0.7722	0	99.5	78.1	153			
Benzene	0.75	0.019	0.7722	0	96.5	76.3	120			
Toluene	0.72	0.039	0.7722	0	93.5	78.5	120			
Ethylbenzene	0.72	0.039	0.7722	0	92.6	78.1	124			
Xylenes, Total	2.1	0.077	2.317	0	91.9	79.3	125			
Surr: 4-Bromofluorobenzene	0.62		0.7722		80.0	80	120			

Sample ID: **2103687-002amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SS03- 3.5'** Batch ID: **R75920** RunNo: **75920**
Prep Date: Analysis Date: **3/13/2021** SeqNo: **2686678** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.72	0.019	0.7722	0	92.8	76.3	120	3.88	20	
Toluene	0.70	0.039	0.7722	0	90.3	78.5	120	3.45	20	
Ethylbenzene	0.69	0.039	0.7722	0	89.7	78.1	124	3.22	20	
Xylenes, Total	2.1	0.077	2.317	0	89.1	79.3	125	3.08	20	
Surr: 4-Bromofluorobenzene	0.61		0.7722		79.5	80	120	0	0	S

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 Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Kaiser Francis Oil Company

Work Order Number: 2103687

RcptNo: 1

Received By: Sean Livingston 3/12/2021 4:40:00 PM

Completed By: Desiree Dominguez 3/12/2021 4:47:15 PM

Reviewed By: ENM 3/12/21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
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: SCL 3/12/21

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	5.6	Good				

Chain-of-Custody Record

Client: Kaiser Francis Oil Company

Mailing Address: 1224 Standpipe Rd Carlsbad, NM 88220

Phone #: 505-382-1211

email or Fax#: ashley.giovengo@wescominc.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☑ Rush 2 Same-day

Project Name: 4-15 SWD - 03.09.2021 Spill

Project #:

Project Manager: Ashley Giovengo

Sampler: Ashley Giovengo
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 5.6+0=5.6 (°C)

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 Name	Container Type and #	Preservative Type	HEAL No. 2103687	BTEX / MTBE / TMB's (8021)	TPH 8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
3/10/21	4:17pm	S	SS01-3.5'	jar 1	ice	-001	X	X					X			
3/10/21	4:25pm	S	SS03-3.5'	jar 1	ice	-002	X	X					X			
3/10/21	4:35pm	S	SS05-3.5'	jar 1	ice	-003	X	X					X			
3/10/21	4:43pm	S	BG01-0'	jar 1	ice	-004	X	X					X			
3/10/21	3:00pm	S	SS09-0'	jar 1	ice	-005	X	X					X			
3/10/21	3:10pm	S	SS11-0'	jar 1	ice	-006	X	X					X			
3/10/21	3:15pm	S	SS12-0'	jar 1	ice	-007	X	X					X			
3/10/21	3:25pm	S	SS14-0'	jar 1	ice	-008	X	X					X			
3/10/21	3:38pm	S	SS16-0'	jar 1	ice	-009	X	X					X			
3/10/21	2:58pm	S	SS08-0.5'	jar 1	ice	-010	X	X					X			
ANG																
ENM 3/12/21																

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/11/21	12:04pm				3/11/21	1204
3/11/21	1900		SGC	courier	3/12/21	16:40

Remarks: Please cc shar.harvester@wescominc.com
ANG= Ashley Giovengo

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: clients.hallenvironmental.com

March 25, 2021

Ashley Giovengo

Kaiser Francis Oil Company
1224 Standpipe
Carlsbad, NM 88220
TEL: (575) 840-3940
FAX

RE: 4-15 SWD 03.09.2021 Spill OrderNo.: 2103949

Dear Ashley Giovengo:

Hall Environmental Analysis Laboratory received 6 sample(s) on 3/19/2021 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2103949**
Date Reported: **3/25/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Client Sample ID: SS17-1'
Project: 4-15 SWD 03.09.2021 Spill
Collection Date: 3/17/2021 2:00:00 PM
Lab ID: 2103949-001
Matrix: MEOH (SOIL)
Received Date: 3/19/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	13	9.7		mg/Kg	1	3/19/2021 9:37:59 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/19/2021 9:37:59 AM
Surr: DNOP	97.6	70-130		%Rec	1	3/19/2021 9:37:59 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/19/2021 8:34:23 AM
Surr: BFB	101	75.3-105		%Rec	1	3/19/2021 8:34:23 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	3/19/2021 8:34:23 AM
Toluene	ND	0.050		mg/Kg	1	3/19/2021 8:34:23 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/19/2021 8:34:23 AM
Xylenes, Total	ND	0.10		mg/Kg	1	3/19/2021 8:34:23 AM
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	3/19/2021 8:34:23 AM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	1000	60		mg/Kg	20	3/19/2021 9:55:26 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2103949**
Date Reported: **3/25/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company
Client Sample ID: SS21-0'
Project: 4-15 SWD 03.09.2021 Spill
Collection Date: 3/17/2021 10:00:00 AM
Lab ID: 2103949-002
Matrix: MEOH (SOIL)
Received Date: 3/19/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	18	9.8		mg/Kg	1	3/19/2021 1:39:28 PM
Motor Oil Range Organics (MRO)	71	49		mg/Kg	1	3/19/2021 1:39:28 PM
Surr: DNOP	84.2	70-130		%Rec	1	3/19/2021 1:39:28 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/19/2021 8:57:58 AM
Surr: BFB	97.5	75.3-105		%Rec	1	3/19/2021 8:57:58 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	3/19/2021 8:57:58 AM
Toluene	ND	0.050		mg/Kg	1	3/19/2021 8:57:58 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/19/2021 8:57:58 AM
Xylenes, Total	ND	0.10		mg/Kg	1	3/19/2021 8:57:58 AM
Surr: 4-Bromofluorobenzene	98.6	80-120		%Rec	1	3/19/2021 8:57:58 AM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	ND	61		mg/Kg	20	3/19/2021 10:07:51 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103949**
Date Reported: **3/25/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company **Client Sample ID:** SS24-0'
Project: 4-15 SWD 03.09.2021 Spill **Collection Date:** 3/17/2021 10:06:00 AM
Lab ID: 2103949-003 **Matrix:** MEOH (SOIL) **Received Date:** 3/19/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	3/19/2021 10:01:21 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	3/19/2021 10:01:21 AM
Surr: DNOP	97.3	70-130		%Rec	1	3/19/2021 10:01:21 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/19/2021 9:21:38 AM
Surr: BFB	96.6	75.3-105		%Rec	1	3/19/2021 9:21:38 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	3/19/2021 9:21:38 AM
Toluene	ND	0.050		mg/Kg	1	3/19/2021 9:21:38 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/19/2021 9:21:38 AM
Xylenes, Total	ND	0.10		mg/Kg	1	3/19/2021 9:21:38 AM
Surr: 4-Bromofluorobenzene	96.5	80-120		%Rec	1	3/19/2021 9:21:38 AM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	ND	60		mg/Kg	20	3/19/2021 10:20:15 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2103949**
Date Reported: **3/25/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company **Client Sample ID:** SS31-1'
Project: 4-15 SWD 03.09.2021 Spill **Collection Date:** 3/17/2021 2:38:00 PM
Lab ID: 2103949-004 **Matrix:** MEOH (SOIL) **Received Date:** 3/19/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	3/19/2021 10:13:08 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/19/2021 10:13:08 AM
Surr: DNOP	99.2	70-130		%Rec	1	3/19/2021 10:13:08 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/19/2021 9:45:14 AM
Surr: BFB	95.7	75.3-105		%Rec	1	3/19/2021 9:45:14 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	3/19/2021 9:45:14 AM
Toluene	ND	0.050		mg/Kg	1	3/19/2021 9:45:14 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/19/2021 9:45:14 AM
Xylenes, Total	ND	0.10		mg/Kg	1	3/19/2021 9:45:14 AM
Surr: 4-Bromofluorobenzene	95.8	80-120		%Rec	1	3/19/2021 9:45:14 AM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	180	60		mg/Kg	20	3/19/2021 10:32:40 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103949**
Date Reported: **3/25/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company **Client Sample ID:** SS33-0'
Project: 4-15 SWD 03.09.2021 Spill **Collection Date:** 3/17/2021 3:22:00 PM
Lab ID: 2103949-005 **Matrix:** MEOH (SOIL) **Received Date:** 3/19/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	3/19/2021 10:25:00 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/19/2021 10:25:00 AM
Surr: DNOP	92.2	70-130		%Rec	1	3/19/2021 10:25:00 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/19/2021 10:08:34 AM
Surr: BFB	102	75.3-105		%Rec	1	3/19/2021 10:08:34 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	3/19/2021 10:08:34 AM
Toluene	ND	0.050		mg/Kg	1	3/19/2021 10:08:34 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/19/2021 10:08:34 AM
Xylenes, Total	ND	0.10		mg/Kg	1	3/19/2021 10:08:34 AM
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	3/19/2021 10:08:34 AM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	ND	60		mg/Kg	20	3/19/2021 10:45:04 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103949**
Date Reported: **3/25/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Kaiser Francis Oil Company **Client Sample ID:** SS38-4'
Project: 4-15 SWD 03.09.2021 Spill **Collection Date:** 3/17/2021 4:36:00 PM
Lab ID: 2103949-006 **Matrix:** MEOH (SOIL) **Received Date:** 3/19/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	3/19/2021 10:36:50 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/19/2021 10:36:50 AM
Surr: DNOP	107	70-130		%Rec	1	3/19/2021 10:36:50 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/19/2021 10:32:06 AM
Surr: BFB	104	75.3-105		%Rec	1	3/19/2021 10:32:06 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	3/19/2021 10:32:06 AM
Toluene	ND	0.050		mg/Kg	1	3/19/2021 10:32:06 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/19/2021 10:32:06 AM
Xylenes, Total	ND	0.10		mg/Kg	1	3/19/2021 10:32:06 AM
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	3/19/2021 10:32:06 AM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	5600	300		mg/Kg	100	3/19/2021 11:22:17 AM

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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103949**
25-Mar-21

Client: Kaiser Francis Oil Company
Project: 4-15 SWD 03.09.2021 Spill

Sample ID: **MB-58846**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **58846**	RunNo: **76062**							
Prep Date: **3/19/2021**	Analysis Date: **3/19/2021**	SeqNo: **2693169**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-58846**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **58846**	RunNo: **76062**							
Prep Date: **3/19/2021**	Analysis Date: **3/19/2021**	SeqNo: **2693170**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.9	90	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
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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103949**
25-Mar-21

Client: Kaiser Francis Oil Company
Project: 4-15 SWD 03.09.2021 Spill

Sample ID: **MB-58835** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **58835** RunNo: **76061**
Prep Date: **3/19/2021** Analysis Date: **3/19/2021** SeqNo: **2692540** 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	7.6		10.00		76.2	70	130			

Sample ID: **LCS-58835** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **58835** RunNo: **76061**
Prep Date: **3/19/2021** Analysis Date: **3/19/2021** SeqNo: **2692543** 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	95.6	68.9	141			
Surr: DNOP	3.9		5.000		77.3	70	130			

Sample ID: **2103949-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SS17-1'** Batch ID: **58835** RunNo: **76064**
Prep Date: **3/19/2021** Analysis Date: **3/19/2021** SeqNo: **2693641** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.0	44.92	12.58	81.6	15	184			
Surr: DNOP	4.2		4.492		93.2	70	130			

Sample ID: **2103949-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SS17-1'** Batch ID: **58835** RunNo: **76064**
Prep Date: **3/19/2021** Analysis Date: **3/19/2021** SeqNo: **2693642** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	8.5	42.74	12.58	82.8	15	184	2.59	23.9	
Surr: DNOP	4.0		4.274		93.3	70	130	0	0	

Sample ID: **MB-58798** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **58798** RunNo: **76064**
Prep Date: **3/18/2021** Analysis Date: **3/19/2021** SeqNo: **2693658** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.7		10.00		97.0	70	130			

Sample ID: **LCS-58798** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **58798** RunNo: **76064**
Prep Date: **3/18/2021** Analysis Date: **3/19/2021** SeqNo: **2693659** Units: **%Rec**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103949**
25-Mar-21

Client: Kaiser Francis Oil Company
Project: 4-15 SWD 03.09.2021 Spill

Sample ID: **LCS-58798** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **58798** RunNo: **76064**
Prep Date: **3/18/2021** Analysis Date: **3/19/2021** SeqNo: **2693659** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		5.000		90.8	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2103949**

25-Mar-21

Client: Kaiser Francis Oil Company

Project: 4-15 SWD 03.09.2021 Spill

Sample ID: **mb1**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G76071**	RunNo: **76071**
Prep Date:	Analysis Date: **3/19/2021**	SeqNo: **2693889** 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	1000		1000		99.7	75.3	105			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G76071**	RunNo: **76071**
Prep Date:	Analysis Date: **3/19/2021**	SeqNo: **2693890** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	82.7	80	120			
Surr: BFB	1100		1000		113	75.3	105			S

Sample ID: **2103949-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SS17-1'**	Batch ID: **G76071**	RunNo: **76071**
Prep Date:	Analysis Date: **3/19/2021**	SeqNo: **2693909** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.4	61.3	114			
Surr: BFB	1200		1000		115	75.3	105			S

Sample ID: **2103949-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SS17-1'**	Batch ID: **G76071**	RunNo: **76071**
Prep Date:	Analysis Date: **3/19/2021**	SeqNo: **2693910** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.8	61.3	114	6.14	20	
Surr: BFB	1200		1000		117	75.3	105	0	0	S

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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103949**
25-Mar-21

Client: Kaiser Francis Oil Company
Project: 4-15 SWD 03.09.2021 Spill

Sample ID: **mb1**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B76071**	RunNo: **76071**
Prep Date:	Analysis Date: **3/19/2021**	SeqNo: **2693940** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.9	80	120			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B76071**	RunNo: **76071**
Prep Date:	Analysis Date: **3/19/2021**	SeqNo: **2693941** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.5	80	120			
Toluene	0.91	0.050	1.000	0	91.0	80	120			
Ethylbenzene	0.91	0.050	1.000	0	90.6	80	120			
Xylenes, Total	2.7	0.10	3.000	0	90.0	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID: **2103949-002ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SS21-0'**	Batch ID: **B76071**	RunNo: **76071**
Prep Date:	Analysis Date: **3/19/2021**	SeqNo: **2693960** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	87.4	76.3	120			
Toluene	0.89	0.050	1.000	0	88.9	78.5	120			
Ethylbenzene	0.88	0.050	1.000	0	88.4	78.1	124			
Xylenes, Total	2.6	0.10	3.000	0	88.0	79.3	125			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID: **2103949-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SS21-0'**	Batch ID: **B76071**	RunNo: **76071**
Prep Date:	Analysis Date: **3/19/2021**	SeqNo: **2693961** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	86.9	76.3	120	0.505	20	
Toluene	0.88	0.050	1.000	0	88.5	78.5	120	0.462	20	
Ethylbenzene	0.88	0.050	1.000	0	87.5	78.1	124	1.07	20	
Xylenes, Total	2.6	0.10	3.000	0	86.9	79.3	125	1.25	20	
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Kaiser Francis Oil Company | Work Order Number: 2103949 | RcptNo: 1

Received By: Cheyenne Cason 3/19/2021 7:50:00 AM

Completed By: Cheyenne Cason 3/19/2021 8:01:09 AM

Reviewed By: DAD 3/19/21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
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: SGL 3/19/21

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	0.8	Good				
2	2.3	Good				

Chain-of-Custody Record

Client: Kaiser Francis Oil Company

Mailing Address: 1224 Standpipe Rd Carlsbad, N.M. 88220

Phone #: 505-382-1211

email or Fax#: ashley.giovengo@wescominc.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush Sameday

Project Name: 4-15 SWD 03.09.2021 spill

Project #:

Project Manager: Ashley Giovengo

Sampler: Ashley Giovengo
On Ice: ☑ Yes ☐ No
# of Coolers: 1 0.6+0.2=0.8
Cooler Temp(including CF): 2.1+0.2=2.3 (°C)

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 Name	Container Type and #	Preservative Type	HEAL No. 2103449	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
3/17/21	2:00pm	S	SS17-1'	jar 1	ice	001	X	X					X			
3/17/21	10:00am	S	SS21-0'	jar 1	ice	002	X	X					X			
3/17/21	10:06am	S	SS24-0'	jar 1	ice	003	X	X					X			
3/17/21	2:38pm	S	SS31-1'	jar 1	ice	004	X	X					X			
3/17/21	3:22pm	S	SS33-0'	jar 1	ice	005	X	X					X			
3/17/21	4:36pm	S	SS38-4'	jar 1	ice	006	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
			[signature]	-	3/18/21	830
Date: 3/18/21	Time: 1900	Relinquished by: [signature]	Received by: [signature]	Via: cow	Date: 3/19/21	Time: 0750

Remarks: Please cc shar.harvester@wescominc.com on results.
ANG= Ashley Giovengo

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: clients.hallenvironmental.com

October 13, 2021

Ashley Giovengo

Wescom Inc
1907 San Jose Blvd. Apt. 425
Carlsbad, NM 88220
TEL:
FAX

RE: NBL Unit 4 15 SWD 03 09 21 Spill Unit KFOC OrderNo.: 2110012

Dear Ashley Giovengo:

Hall Environmental Analysis Laboratory received 18 sample(s) on 10/1/2021 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF01-15'
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 9:12:00 AM
Lab ID: 2110012-001 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/8/2021 6:52:48 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/8/2021 6:52:48 PM
Surr: DNOP	109	70-130		%Rec	1	10/8/2021 6:52:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/7/2021 8:13:00 AM
Surr: BFB	101	70-130		%Rec	1	10/7/2021 8:13:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **mb**
Benzene	ND	0.024		mg/Kg	1	10/7/2021 8:13:00 AM
Toluene	ND	0.047		mg/Kg	1	10/7/2021 8:13:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	10/7/2021 8:13:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	10/7/2021 8:13:00 AM
Surr: 4-Bromofluorobenzene	91.2	70-130		%Rec	1	10/7/2021 8:13:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	2800	150		mg/Kg	50	10/8/2021 9:10:03 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF02-8'
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 9:25:00 AM
Lab ID: 2110012-002 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/8/2021 7:05:28 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/8/2021 7:05:28 PM
Surr: DNOP	79.9	70-130		%Rec	1	10/8/2021 7:05:28 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/7/2021 1:37:00 PM
Surr: BFB	95.9	70-130		%Rec	1	10/7/2021 1:37:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **mb**
Benzene	ND	0.024		mg/Kg	1	10/7/2021 1:37:00 PM
Toluene	ND	0.047		mg/Kg	1	10/7/2021 1:37:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/7/2021 1:37:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/7/2021 1:37:00 PM
Surr: 4-Bromofluorobenzene	87.1	70-130		%Rec	1	10/7/2021 1:37:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	1300	60		mg/Kg	20	10/6/2021 12:33:52 PM

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 Limit

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF03-5'
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 9:31:00 AM
Lab ID: 2110012-003 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	10/8/2021 7:18:10 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/8/2021 7:18:10 PM
Surr: DNOP	85.7	70-130		%Rec	1	10/8/2021 7:18:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/7/2021 1:57:00 PM
Surr: BFB	96.6	70-130		%Rec	1	10/7/2021 1:57:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **mb**
Benzene	ND	0.025		mg/Kg	1	10/7/2021 1:57:00 PM
Toluene	ND	0.050		mg/Kg	1	10/7/2021 1:57:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/7/2021 1:57:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/7/2021 1:57:00 PM
Surr: 4-Bromofluorobenzene	88.7	70-130		%Rec	1	10/7/2021 1:57:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	210	60		mg/Kg	20	10/6/2021 12:46:16 PM

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 Limit

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF04-4'
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 9:43:00 AM
Lab ID: 2110012-004 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/8/2021 7:30:53 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/8/2021 7:30:53 PM
Surr: DNOP	97.4	70-130		%Rec	1	10/8/2021 7:30:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/7/2021 2:16:00 PM
Surr: BFB	98.2	70-130		%Rec	1	10/7/2021 2:16:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **mb**
Benzene	ND	0.024		mg/Kg	1	10/7/2021 2:16:00 PM
Toluene	ND	0.048		mg/Kg	1	10/7/2021 2:16:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/7/2021 2:16:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/7/2021 2:16:00 PM
Surr: 4-Bromofluorobenzene	89.4	70-130		%Rec	1	10/7/2021 2:16:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	1500	59		mg/Kg	20	10/6/2021 12:58:41 PM

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 Limit

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF05-9'
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 9:58:00 AM
Lab ID: 2110012-005 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/8/2021 7:43:26 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/8/2021 7:43:26 PM
Surr: DNOP	107	70-130		%Rec	1	10/8/2021 7:43:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/7/2021 5:32:00 PM
Surr: BFB	102	70-130		%Rec	1	10/7/2021 5:32:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **mb**
Benzene	ND	0.024		mg/Kg	1	10/7/2021 5:32:00 PM
Toluene	ND	0.048		mg/Kg	1	10/7/2021 5:32:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/7/2021 5:32:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/7/2021 5:32:00 PM
Surr: 4-Bromofluorobenzene	87.6	70-130		%Rec	1	10/7/2021 5:32:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	1900	60		mg/Kg	20	10/6/2021 1:11:06 PM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF06-5'
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 10:14:00 AM
Lab ID: 2110012-006 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/8/2021 7:56:11 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/8/2021 7:56:11 PM
Surr: DNOP	102	70-130		%Rec	1	10/8/2021 7:56:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/7/2021 5:52:00 PM
Surr: BFB	100	70-130		%Rec	1	10/7/2021 5:52:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **mb**
Benzene	ND	0.024		mg/Kg	1	10/7/2021 5:52:00 PM
Toluene	ND	0.049		mg/Kg	1	10/7/2021 5:52:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/7/2021 5:52:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/7/2021 5:52:00 PM
Surr: 4-Bromofluorobenzene	87.8	70-130		%Rec	1	10/7/2021 5:52:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	1000	60		mg/Kg	20	10/6/2021 1:23:31 PM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF07-5'
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 10:30:00 AM
Lab ID: 2110012-007 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/8/2021 8:09:02 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/8/2021 8:09:02 PM
Surr: DNOP	91.9	70-130		%Rec	1	10/8/2021 8:09:02 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/7/2021 6:11:00 PM
Surr: BFB	102	70-130		%Rec	1	10/7/2021 6:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **mb**
Benzene	ND	0.024		mg/Kg	1	10/7/2021 6:11:00 PM
Toluene	ND	0.048		mg/Kg	1	10/7/2021 6:11:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/7/2021 6:11:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/7/2021 6:11:00 PM
Surr: 4-Bromofluorobenzene	82.7	70-130		%Rec	1	10/7/2021 6:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	1100	60		mg/Kg	20	10/6/2021 2:00:46 PM

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 Limit

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF08-4.5'
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 10:38:00 AM
Lab ID: 2110012-008 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/8/2021 8:21:40 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/8/2021 8:21:40 PM
Surr: DNOP	113	70-130		%Rec	1	10/8/2021 8:21:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/7/2021 6:31:00 PM
Surr: BFB	92.4	70-130		%Rec	1	10/7/2021 6:31:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **mb**
Benzene	ND	0.024		mg/Kg	1	10/7/2021 6:31:00 PM
Toluene	ND	0.049		mg/Kg	1	10/7/2021 6:31:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/7/2021 6:31:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/7/2021 6:31:00 PM
Surr: 4-Bromofluorobenzene	85.8	70-130		%Rec	1	10/7/2021 6:31:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	2200	150		mg/Kg	50	10/7/2021 7:42:40 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF09-4.5'
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 10:42:00 AM
Lab ID: 2110012-009 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/8/2021 8:34:50 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/8/2021 8:34:50 PM
Surr: DNOP	86.1	70-130		%Rec	1	10/8/2021 8:34:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/7/2021 6:50:00 PM
Surr: BFB	99.0	70-130		%Rec	1	10/7/2021 6:50:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **mb**
Benzene	ND	0.024		mg/Kg	1	10/7/2021 6:50:00 PM
Toluene	ND	0.047		mg/Kg	1	10/7/2021 6:50:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/7/2021 6:50:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/7/2021 6:50:00 PM
Surr: 4-Bromofluorobenzene	88.5	70-130		%Rec	1	10/7/2021 6:50:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	680	60		mg/Kg	20	10/6/2021 2:25:36 PM

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 Limit

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF10-4'
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 10:45:00 AM
Lab ID: 2110012-010 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/8/2021 8:47:23 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/8/2021 8:47:23 PM
Surr: DNOP	80.7	70-130		%Rec	1	10/8/2021 8:47:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/7/2021 7:10:00 PM
Surr: BFB	99.2	70-130		%Rec	1	10/7/2021 7:10:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **mb**
Benzene	ND	0.024		mg/Kg	1	10/7/2021 7:10:00 PM
Toluene	ND	0.048		mg/Kg	1	10/7/2021 7:10:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/7/2021 7:10:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/7/2021 7:10:00 PM
Surr: 4-Bromofluorobenzene	88.4	70-130		%Rec	1	10/7/2021 7:10:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	2100	60		mg/Kg	20	10/6/2021 2:38:00 PM

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 Limit

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF11-5'
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 10:52:00 AM
Lab ID: 2110012-011 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/8/2021 9:10:10 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/8/2021 9:10:10 AM
Surr: DNOP	106	70-130		%Rec	1	10/8/2021 9:10:10 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/7/2021 11:59:19 AM
Surr: BFB	93.4	70-130		%Rec	1	10/7/2021 11:59:19 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	10/7/2021 11:59:19 AM
Toluene	ND	0.049		mg/Kg	1	10/7/2021 11:59:19 AM
Ethylbenzene	ND	0.049		mg/Kg	1	10/7/2021 11:59:19 AM
Xylenes, Total	ND	0.097		mg/Kg	1	10/7/2021 11:59:19 AM
Surr: 4-Bromofluorobenzene	83.7	70-130		%Rec	1	10/7/2021 11:59:19 AM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	730	59		mg/Kg	20	10/6/2021 2:50:25 PM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF12-5'
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 10:58:00 AM
Lab ID: 2110012-012 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	10/8/2021 9:41:51 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/8/2021 9:41:51 AM
Surr: DNOP	101	70-130		%Rec	1	10/8/2021 9:41:51 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/7/2021 1:10:25 PM
Surr: BFB	91.8	70-130		%Rec	1	10/7/2021 1:10:25 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	10/7/2021 1:10:25 PM
Toluene	ND	0.048		mg/Kg	1	10/7/2021 1:10:25 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/7/2021 1:10:25 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/7/2021 1:10:25 PM
Surr: 4-Bromofluorobenzene	82.5	70-130		%Rec	1	10/7/2021 1:10:25 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	1900	60		mg/Kg	20	10/6/2021 3:02:49 PM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF13-4'
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 11:08:00 AM
Lab ID: 2110012-013 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/8/2021 9:52:27 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/8/2021 9:52:27 AM
Surr: DNOP	106	70-130		%Rec	1	10/8/2021 9:52:27 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/7/2021 2:20:55 PM
Surr: BFB	90.9	70-130		%Rec	1	10/7/2021 2:20:55 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	10/7/2021 2:20:55 PM
Toluene	ND	0.048		mg/Kg	1	10/7/2021 2:20:55 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/7/2021 2:20:55 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/7/2021 2:20:55 PM
Surr: 4-Bromofluorobenzene	82.0	70-130		%Rec	1	10/7/2021 2:20:55 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	150	60		mg/Kg	20	10/6/2021 3:40:05 PM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF14-4'
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 11:12:00 AM
Lab ID: 2110012-014 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	10/8/2021 10:03:04 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/8/2021 10:03:04 AM
Surr: DNOP	105	70-130		%Rec	1	10/8/2021 10:03:04 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/7/2021 2:44:22 PM
Surr: BFB	92.6	70-130		%Rec	1	10/7/2021 2:44:22 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.023		mg/Kg	1	10/7/2021 2:44:22 PM
Toluene	ND	0.047		mg/Kg	1	10/7/2021 2:44:22 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/7/2021 2:44:22 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/7/2021 2:44:22 PM
Surr: 4-Bromofluorobenzene	83.0	70-130		%Rec	1	10/7/2021 2:44:22 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	240	61		mg/Kg	20	10/6/2021 3:52:30 PM

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 Limit

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF15-Wall
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 11:29:00 AM
Lab ID: 2110012-015 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/8/2021 10:13:40 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/8/2021 10:13:40 AM
Surr: DNOP	118	70-130		%Rec	1	10/8/2021 10:13:40 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/7/2021 3:08:04 PM
Surr: BFB	92.1	70-130		%Rec	1	10/7/2021 3:08:04 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	10/7/2021 3:08:04 PM
Toluene	ND	0.048		mg/Kg	1	10/7/2021 3:08:04 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/7/2021 3:08:04 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/7/2021 3:08:04 PM
Surr: 4-Bromofluorobenzene	82.0	70-130		%Rec	1	10/7/2021 3:08:04 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	22000	1500		mg/Kg	500	10/7/2021 7:55:05 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF16-Wall
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 11:39:00 AM
Lab ID: 2110012-016 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/8/2021 10:24:18 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/8/2021 10:24:18 AM
Surr: DNOP	108	70-130		%Rec	1	10/8/2021 10:24:18 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/7/2021 3:31:30 PM
Surr: BFB	92.0	70-130		%Rec	1	10/7/2021 3:31:30 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	10/7/2021 3:31:30 PM
Toluene	ND	0.049		mg/Kg	1	10/7/2021 3:31:30 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/7/2021 3:31:30 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/7/2021 3:31:30 PM
Surr: 4-Bromofluorobenzene	82.0	70-130		%Rec	1	10/7/2021 3:31:30 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	390	60		mg/Kg	20	10/6/2021 4:42:08 PM

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 Limit

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF17-Wall
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 11:49:00 AM
Lab ID: 2110012-017 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/8/2021 10:34:55 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/8/2021 10:34:55 AM
Surr: DNOP	124	70-130		%Rec	1	10/8/2021 10:34:55 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/7/2021 3:54:55 PM
Surr: BFB	91.3	70-130		%Rec	1	10/7/2021 3:54:55 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	10/7/2021 3:54:55 PM
Toluene	ND	0.050		mg/Kg	1	10/7/2021 3:54:55 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/7/2021 3:54:55 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/7/2021 3:54:55 PM
Surr: 4-Bromofluorobenzene	81.1	70-130		%Rec	1	10/7/2021 3:54:55 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	28000	1500		mg/Kg	500	10/7/2021 8:07:30 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2110012**
Date Reported: **10/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc
Client Sample ID: CONF18-Wall
Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit
Collection Date: 9/29/2021 12:04:00 PM
Lab ID: 2110012-018 **Matrix:** SOIL
Received Date: 10/1/2021 7:38:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/8/2021 10:45:33 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/8/2021 10:45:33 AM
Surr: DNOP	98.4	70-130		%Rec	1	10/8/2021 10:45:33 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/7/2021 4:18:22 PM
Surr: BFB	93.6	70-130		%Rec	1	10/7/2021 4:18:22 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	10/7/2021 4:18:22 PM
Toluene	ND	0.050		mg/Kg	1	10/7/2021 4:18:22 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/7/2021 4:18:22 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/7/2021 4:18:22 PM
Surr: 4-Bromofluorobenzene	83.9	70-130		%Rec	1	10/7/2021 4:18:22 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	35000	1500		mg/Kg	500	10/7/2021 8:19:55 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110012**

13-Oct-21

Client: Wescom Inc

Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit KFOC

Sample ID: **MB-63068** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **63068** RunNo: **81844**
Prep Date: **10/6/2021** Analysis Date: **10/6/2021** SeqNo: **2895385** Units: **mg/Kg**

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

Sample ID: **LCS-63068** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **63068** RunNo: **81844**
Prep Date: **10/6/2021** Analysis Date: **10/6/2021** SeqNo: **2895386** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.4	90	110			

Sample ID: **MB-63075** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **63075** RunNo: **81844**
Prep Date: **10/6/2021** Analysis Date: **10/6/2021** SeqNo: **2895415** Units: **mg/Kg**

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

Sample ID: **LCS-63075** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **63075** RunNo: **81844**
Prep Date: **10/6/2021** Analysis Date: **10/6/2021** SeqNo: **2895416** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.2	90	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
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110012**

13-Oct-21

Client: Wescom Inc

Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit KFOC

Sample ID: **2110012-011AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**								
Client ID: **CONF11-5'**	Batch ID: **63052**	RunNo: **81901**								
Prep Date: **10/5/2021**	Analysis Date: **10/8/2021**	SeqNo: **2898192**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	9.5	47.48	0	89.7	39.3	155			
Surr: DNOP	4.9		4.748		104	70	130			

Sample ID: **2110012-011AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**								
Client ID: **CONF11-5'**	Batch ID: **63052**	RunNo: **81901**								
Prep Date: **10/5/2021**	Analysis Date: **10/8/2021**	SeqNo: **2898193**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	9.6	47.80	0	120	39.3	155	29.4	23.4	R
Surr: DNOP	6.7		4.780		140	70	130	0	0	S

Sample ID: **LCS-63052**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**								
Client ID: **LCSS**	Batch ID: **63052**	RunNo: **81901**								
Prep Date: **10/5/2021**	Analysis Date: **10/8/2021**	SeqNo: **2898210**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	107	68.9	135			
Surr: DNOP	6.4		5.000		127	70	130			

Sample ID: **MB-63052**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**								
Client ID: **PBS**	Batch ID: **63052**	RunNo: **81901**								
Prep Date: **10/5/2021**	Analysis Date: **10/8/2021**	SeqNo: **2898211**	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	13		10.00		129	70	130			

Sample ID: **MB-63051**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**								
Client ID: **PBS**	Batch ID: **63051**	RunNo: **81900**								
Prep Date: **10/5/2021**	Analysis Date: **10/8/2021**	SeqNo: **2898289**	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		104	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 Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110012**

13-Oct-21

Client: Wescom Inc

Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit KFOC

Sample ID: **LCS-63051**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **63051**	RunNo: **81900**
Prep Date: **10/5/2021**	Analysis Date: **10/8/2021**	SeqNo: **2898290** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	10	50.00	0	116	68.9	135			
Surr: DNOP	5.9		5.000		118	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110012**

13-Oct-21

Client: Wescom Inc

Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit KFOC

Sample ID: **mb-63023**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **63023**	RunNo: **81827**
Prep Date: **10/4/2021**	Analysis Date: **10/7/2021**	SeqNo: **2895596** 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	1000		1000		101	70	130			

Sample ID: **lcs-63023**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **63023**	RunNo: **81827**
Prep Date: **10/4/2021**	Analysis Date: **10/7/2021**	SeqNo: **2895598** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	104	78.6	131			
Surr: BFB	1100		1000		107	70	130			

Sample ID: **2110012-011ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **CONF11-5'**	Batch ID: **63028**	RunNo: **81897**
Prep Date: **10/4/2021**	Analysis Date: **10/7/2021**	SeqNo: **2898004** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.8	24.20	0	99.4	61.3	114			
Surr: BFB	980		968.1		101	70	130			

Sample ID: **2110012-011amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **CONF11-5'**	Batch ID: **63028**	RunNo: **81897**
Prep Date: **10/4/2021**	Analysis Date: **10/7/2021**	SeqNo: **2898005** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.8	24.18	0	99.5	61.3	114	0.0163	20	
Surr: BFB	970		967.1		101	70	130	0	0	

Sample ID: **lcs-63028**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **63028**	RunNo: **81897**
Prep Date: **10/4/2021**	Analysis Date: **10/7/2021**	SeqNo: **2898046** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	106	78.6	131			
Surr: BFB	1000		1000		103	70	130			

Sample ID: **mb-63028**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **63028**	RunNo: **81897**
Prep Date: **10/4/2021**	Analysis Date: **10/7/2021**	SeqNo: **2898048** Units: **mg/Kg**

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

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 Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110012**

13-Oct-21

Client: Wescom Inc

Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit KFOC

Sample ID: **mb-63028**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **63028**	RunNo: **81897**
Prep Date: **10/4/2021**	Analysis Date: **10/7/2021**	SeqNo: **2898048** 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	930		1000		92.9	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 Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110012**

13-Oct-21

Client: Wescom Inc

Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit KFOC

Sample ID: **mb-63023** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **63023** RunNo: **81827**
Prep Date: **10/4/2021** Analysis Date: **10/7/2021** SeqNo: **2895635** 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	0.93		1.000		92.9	70	130			

Sample ID: **lcs-63023** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **63023** RunNo: **81827**
Prep Date: **10/4/2021** Analysis Date: **10/7/2021** SeqNo: **2895637** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.8	80	120			
Toluene	0.94	0.050	1.000	0	93.8	80	120			
Ethylbenzene	0.93	0.050	1.000	0	92.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.8	80	120			
Surr: 4-Bromofluorobenzene	0.91		1.000		90.8	70	130			

Sample ID: **2110012-012ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **CONF12-5'** Batch ID: **63028** RunNo: **81897**
Prep Date: **10/4/2021** Analysis Date: **10/7/2021** SeqNo: **2898078** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.024	0.9681	0	86.5	80	120			
Toluene	0.86	0.048	0.9681	0	89.1	80	120			
Ethylbenzene	0.87	0.048	0.9681	0	90.1	80	120			
Xylenes, Total	2.6	0.097	2.904	0	87.9	80	120			
Surr: 4-Bromofluorobenzene	0.84		0.9681		86.7	70	130			

Sample ID: **2110012-012amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **CONF12-5'** Batch ID: **63028** RunNo: **81897**
Prep Date: **10/4/2021** Analysis Date: **10/7/2021** SeqNo: **2898079** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.024	0.9699	0	82.5	80	120	4.47	20	
Toluene	0.82	0.048	0.9699	0	84.2	80	120	5.52	20	
Ethylbenzene	0.82	0.048	0.9699	0	84.4	80	120	6.32	20	
Xylenes, Total	2.4	0.097	2.910	0	83.6	80	120	4.81	20	
Surr: 4-Bromofluorobenzene	0.85		0.9699		87.8	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 Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110012**

13-Oct-21

Client: Wescom Inc

Project: NBL Unit 4 15 SWD 03 09 21 Spill Unit KFOC

Sample ID: **LCS-63028**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **63028**	RunNo: **81897**
Prep Date: **10/4/2021**	Analysis Date: **10/7/2021**	SeqNo: **2898119** 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	91.9	80	120			
Toluene	0.95	0.050	1.000	0	94.6	80	120			
Ethylbenzene	0.93	0.050	1.000	0	93.4	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.2	80	120			
Surr: 4-Bromofluorobenzene	0.85		1.000		85.0	70	130			

Sample ID: **mb-63028**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **63028**	RunNo: **81897**
Prep Date: **10/4/2021**	Analysis Date: **10/7/2021**	SeqNo: **2898121** 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	0.83		1.000		82.9	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Wescom Inc | Work Order Number: 2110012 | RcptNo: 1

Received By: Tracy Casarrubias 10/1/2021 7:38:00 AM

Completed By: Sean Livingston 10/1/2021 9:54:47 AM

Reviewed By: JR 10/1/21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
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: TME 10/1/21

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	5.8	Good				

Chain-of-Custody Record

Client: Wescom Inc

Mailing Address: 1724 Standpipe Rd Carlsbad, NM 88220

Phone #: 505-382-1211

email or Fax#: ashley.giovengo@wescominc.com

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

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5 Day ☑ Standard ☐ Rush

Project Name: NBL 4-15 SWD 03.09.21 Unit K FOC Spill

Project #:

Project Manager: Ashley Giovengo ashley.giovengo@wescominc.com

Sampler: Cole Burton

On Ice: ☒ Yes ☐ No

# of Coolers: 5.9 - 0.1 = 5.8 SCA 10/1/21

Cooler Temp(including CF): 3.1 (°C)

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 Name	Container Type and #	Preservative Type	HEAL No. 2110012	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
9/29/21	9:12	S	CONF01 - 15'	1jar	ice	001	X	X					X			
9/29/21	9:25	S	CONF02 - 8'			002	X	X					X			
9/29/21	9:31	S	CONF03 - 5'			003	X	X					X			
9/29/21	9:43	S	CONF04 - 4'			004	X	X					X			
9/29/21	9:58	S	CONF05 - 9'			005	X	X					X			
9/29/21	10:14	S	CONF06 - 5'			006	X	X					X			
9/29/21	10:30	S	CONF07 - 5'			007	X	X					X			
9/29/21	10:38	S	CONF08 - 4.5'			008	X	X					X			
9/29/21	10:42	S	CONF09 - 4.5'			009	X	X					X			
9/29/21	10:45	S	CONF10 - 4'			010	X	X					X			
9/29/21	10:52	S	CONF11 - 5'			011	X	X					X			
9/29/21	10:58	S	CONF12 - 5'			012	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
9-30-21	7:53	Cole Burton			9/30/21	753
9-30-21	1900			courier	10/1/21	7:38

Remarks: Preserved on ice

please cc shar.harvester@wescominc.com and cole.burton@wescominc.com

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.

Chain-of-Custody Record

Client: Wescom Inc.

Mailing Address: 1224 Standpipe Rd
Carlsbad, NM 88220

Phone #: 505-382-1211

email or Fax#: ashley.giovengo@wescominc-com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5 Day
☐ Standard ☐ Rush

Project Name: KFOC
NDL Unit 41-15 SWD
03.09.21 Spill

Project #:

Project Manager: Ashley Giovengo
ashley.giovengo@wescominc-com

Sampler: Cole Burton

On Ice: ☒ Yes ☐ No

# of Coolers: 3 sac 10/1/21

Cooler Temp(including CF): 5.9-0.1=5.8 (°C)

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 Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
9/29/21	11:08	S	CONF 13-4'	1 jar	ice	013	X	X					X			
9/29/21	11:12	S	CONF 14-4'			014	X	X					X			
9/29/21	11:29	S	CONF 15-wall			015	X	X					X			
9/29/21	11:39	S	CONF 16-wall			016	X	X					X			
9/29/21	11:49	S	CONF 17-wall			017	X	X					X			
9/29/21	12:04	S	CONF 18-wall			018	X	X					X			

Remarks:

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
9-30-21	7:53	Cole Burton				
9/30/21	1900				9/30/21	753
				courier	10/1/21	7:30

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: clients.hallenvironmental.com

October 21, 2021

Ashley Giovengo

Wescom Inc
1907 San Jose Blvd. Apt. 425
Carlsbad, NM 88220
TEL: (575) 499-6831
FAX

RE: KFOC NBL Unit 4-15 SWD 03.09.21 Spill OrderNo.: 2110842

Dear Ashley Giovengo:

Hall Environmental Analysis Laboratory received 3 sample(s) on 10/19/2021 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2110842**
Date Reported: **10/21/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc **Client Sample ID:** CONF15A-Wall
Project: KFOC NBL Unit 4-15 SWD 03.09.21 Sp **Collection Date:** 10/15/2021 10:25:00 AM
Lab ID: 2110842-001 **Matrix:** MEOH (SOIL) **Received Date:** 10/19/2021 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	27	9.8		mg/Kg	1	10/19/2021 1:31:54 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/19/2021 1:31:54 PM
Surr: DNOP	94.2	70-130		%Rec	1	10/19/2021 1:31:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	10/19/2021 11:43:09 AM
Surr: BFB	107	70-130		%Rec	1	10/19/2021 11:43:09 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.020		mg/Kg	1	10/19/2021 11:43:09 AM
Toluene	ND	0.040		mg/Kg	1	10/19/2021 11:43:09 AM
Ethylbenzene	ND	0.040		mg/Kg	1	10/19/2021 11:43:09 AM
Xylenes, Total	ND	0.079		mg/Kg	1	10/19/2021 11:43:09 AM
Surr: 4-Bromofluorobenzene	89.1	70-130		%Rec	1	10/19/2021 11:43:09 AM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	2600	150		mg/Kg	50	10/20/2021 7:12:44 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2110842**
Date Reported: **10/21/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc **Client Sample ID:** CONF17A-Wall
Project: KFOC NBL Unit 4-15 SWD 03.09.21 Sp **Collection Date:** 10/15/2021 9:22:00 AM
Lab ID: 2110842-002 **Matrix:** MEOH (SOIL) **Received Date:** 10/19/2021 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	10/19/2021 1:45:24 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/19/2021 1:45:24 PM
Surr: DNOP	93.2	70-130		%Rec	1	10/19/2021 1:45:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	10/19/2021 12:06:38 PM
Surr: BFB	107	70-130		%Rec	1	10/19/2021 12:06:38 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.019		mg/Kg	1	10/19/2021 12:06:38 PM
Toluene	ND	0.037		mg/Kg	1	10/19/2021 12:06:38 PM
Ethylbenzene	ND	0.037		mg/Kg	1	10/19/2021 12:06:38 PM
Xylenes, Total	ND	0.075		mg/Kg	1	10/19/2021 12:06:38 PM
Surr: 4-Bromofluorobenzene	88.0	70-130		%Rec	1	10/19/2021 12:06:38 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	1100	60		mg/Kg	20	10/20/2021 2:32:00 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2110842**
Date Reported: **10/21/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Wescom Inc **Client Sample ID:** CONF18A-Wall
Project: KFOC NBL Unit 4-15 SWD 03.09.21 Sp **Collection Date:** 10/15/2021 11:20:00 AM
Lab ID: 2110842-003 **Matrix:** MEOH (SOIL) **Received Date:** 10/19/2021 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/19/2021 1:59:01 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/19/2021 1:59:01 PM
Surr: DNOP	95.1	70-130		%Rec	1	10/19/2021 1:59:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	10/19/2021 12:30:05 PM
Surr: BFB	112	70-130		%Rec	1	10/19/2021 12:30:05 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.017		mg/Kg	1	10/19/2021 12:30:05 PM
Toluene	ND	0.035		mg/Kg	1	10/19/2021 12:30:05 PM
Ethylbenzene	ND	0.035		mg/Kg	1	10/19/2021 12:30:05 PM
Xylenes, Total	ND	0.069		mg/Kg	1	10/19/2021 12:30:05 PM
Surr: 4-Bromofluorobenzene	93.1	70-130		%Rec	1	10/19/2021 12:30:05 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	5500	300		mg/Kg	100	10/20/2021 7:25:09 AM

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 Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2110842**
21-Oct-21

Client: Wescom Inc
Project: KFOC NBL Unit 4-15 SWD 03.09.21 Spill

Sample ID: **MB-63407**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **63407**	RunNo: **82176**							
Prep Date: **10/19/2021**	Analysis Date: **10/19/2021**	SeqNo: **2911642**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-63407**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **63407**	RunNo: **82176**							
Prep Date: **10/19/2021**	Analysis Date: **10/19/2021**	SeqNo: **2911643**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.5	90	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
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110842**

21-Oct-21

Client: Wescom Inc

Project: KFOC NBL Unit 4-15 SWD 03.09.21 Spill

Sample ID: **2110842-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **CONF15A-Wall** Batch ID: **63397** RunNo: **82154**
Prep Date: **10/19/2021** Analysis Date: **10/19/2021** SeqNo: **2911250** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	65	9.9	49.31	27.17	76.1	39.3	155	8.54	23.4	
Surr: DNOP	4.6		4.931		93.9	70	130	0	0	

Sample ID: **2110842-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **CONF15A-Wall** Batch ID: **63397** RunNo: **82154**
Prep Date: **10/19/2021** Analysis Date: **10/19/2021** SeqNo: **2911251** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	70	9.6	47.76	27.17	90.6	39.3	155			
Surr: DNOP	4.6		4.776		97.1	70	130			

Sample ID: **MB-63397** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **63397** RunNo: **82154**
Prep Date: **10/19/2021** Analysis Date: **10/19/2021** SeqNo: **2911255** 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		92.4	70	130			

Sample ID: **LCS-63397** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **63397** RunNo: **82154**
Prep Date: **10/19/2021** Analysis Date: **10/19/2021** SeqNo: **2911256** 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	97.3	68.9	135			
Surr: DNOP	4.8		5.000		95.1	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110842**

21-Oct-21

Client: Wescom Inc

Project: KFOC NBL Unit 4-15 SWD 03.09.21 Spill

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **B82157**	RunNo: **82157**
Prep Date:	Analysis Date: **10/19/2021**	SeqNo: **2911490** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		108	70	130			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **B82157**	RunNo: **82157**
Prep Date:	Analysis Date: **10/19/2021**	SeqNo: **2911491** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	5.0	25.00	0	119	78.6	131			
Surr: BFB	1300		1000		127	70	130			

Sample ID: **2110842-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **CONF15A-Wall**	Batch ID: **B82157**	RunNo: **82157**
Prep Date:	Analysis Date: **10/19/2021**	SeqNo: **2911495** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.0	19.87	0	114	61.3	114			S
Surr: BFB	970		794.9		122	70	130			

Sample ID: **2110842-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **CONF15A-Wall**	Batch ID: **B82157**	RunNo: **82157**
Prep Date:	Analysis Date: **10/19/2021**	SeqNo: **2911496** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.0	19.87	0	117	61.3	114	2.94	20	S
Surr: BFB	1000		794.9		126	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2110842**
21-Oct-21

Client: Wescom Inc
Project: KFOC NBL Unit 4-15 SWD 03.09.21 Spill

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **D82157** RunNo: **82157**
Prep Date: Analysis Date: **10/19/2021** SeqNo: **2911541** 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	0.90		1.000		89.7	70	130			

Sample ID: **100ng btex lcs** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **D82157** RunNo: **82157**
Prep Date: Analysis Date: **10/19/2021** SeqNo: **2911542** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	100	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	102	80	120			
Xylenes, Total	3.0	0.10	3.000	0	100	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.0	70	130			

Sample ID: **2110842-002ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **CONF17A-Wall** Batch ID: **D82157** RunNo: **82157**
Prep Date: Analysis Date: **10/19/2021** SeqNo: **2911546** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.72	0.019	0.7463	0	96.7	80	120			
Toluene	0.74	0.037	0.7463	0	99.6	80	120			
Ethylbenzene	0.74	0.037	0.7463	0	99.4	80	120			
Xylenes, Total	2.2	0.075	2.239	0	97.6	80	120			
Surr: 4-Bromofluorobenzene	0.69		0.7463		92.0	70	130			

Sample ID: **2110842-002amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **CONF17A-Wall** Batch ID: **D82157** RunNo: **82157**
Prep Date: Analysis Date: **10/19/2021** SeqNo: **2911547** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.76	0.019	0.7463	0	102	80	120	5.02	20	
Toluene	0.78	0.037	0.7463	0	105	80	120	5.00	20	
Ethylbenzene	0.78	0.037	0.7463	0	104	80	120	4.55	20	
Xylenes, Total	2.3	0.075	2.239	0	102	80	120	4.85	20	
Surr: 4-Bromofluorobenzene	0.73		0.7463		98.0	70	130	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Wescom Inc** Work Order Number: **2110842** RcptNo: **1**

Received By: **Cheyenne Cason** **10/19/2021 7:00:00 AM** CC

Completed By: **Cheyenne Cason** **10/19/2021 7:52:02 AM** CC

Reviewed By: DAD 10/19/21

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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
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: CC 10/19/21

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	5.8	Good				

Chain-of-Custody Record

Client: Wescom Inc

Mailing Address: 1224 Standpipe Rd
Carlsbad NM 88220

Phone #: 505-382-1211

email or Fax#: ashley.giovengo@wescominc.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: 24 HOUR
☐ Standard ☒ Rush

Project Name: KEOC NBL Unit 4-15 SWD 03.09.21 Spill

Project #:

Project Manager: Ashley Giovengo

Sampler: Cole Burton

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 5.8-0=5.8 (°C)

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 Name	Container Type and #	Preservative Type	HEAL No. 2110842	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
10-14	10:25	S	CONF15A-wall	1 Jar	ice	001	X	X					X			
10-15	9:22	S	CONF17A-wall	1 Jar	ice	002	X	X					X			
10-15	11:20	S	CONF18A-wall	1 Jar	ice	003	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					10/18/21	1115
Date: 10/18/21	Time: 1900	Relinquished by:	Received by:	Via:	Date	Time
			Eric Carr	Courier	10/19/21	0700

Remarks: Please cc shar.harvester@wescominc.com & cole.burton@wescominc.com

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.

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	NAPP210704353
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	> 110 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release 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?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP210704353
District RP	
Facility ID	
Application ID	

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

Printed Name: Charles Lock Title: EHS Manager

Signature: [signature] Date: 11-5-21

email: charles1@KFOC.net Telephone: 918-491-4337

OCD Only

Received by: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAPP210704353
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Charles W Lock Title: EHS Manager

Signature: Charles W Lock Date: 11-5-21

email: charles1@KFOC.net Telephone: 918-491-4337

OCD Only

Received by: Chad Hensley Date: 12/08/2021

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Chad Hensley Date: 12/08/2021

Printed Name: Chad Hensley Title: Environmental Specialist Advanced

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 60429

CONDITIONS

Operator: KAISER-FRANCIS OIL CO P.O. Box 21468 Tulsa, OK 74121	OGRID: 12361
	Action Number: 60429
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	12/8/2021