

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

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

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

Incident ID	nAPP2222849508
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party Harvest Four Corners, LLC	OGRID 373888
Contact Name Monica Smith	Contact Telephone 505-632-4625
Contact email msmith@harvestmidstream.com	Incident # (assigned by OCD)
Contact mailing address 1755 Arroyo Drive, Bloomfield, NM 87413	

### Location of Release Source

Latitude 36.53826 Longitude -107.0988  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Jicarilla 119-5, Lateral D-2	Site Type Pipeline
Date Release Discovered 8/16/2022	API# (if applicable)

Unit Letter	Section	Township	Range	County
O	25	27N	03W	Rio Arriba

Surface Owner:  State  Federal  Tribal  Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input checked="" type="checkbox"/> Condensate	Volume Released (bbls) 5 gallons	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Natural Gas	Volume Released (Mcf) unknown	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

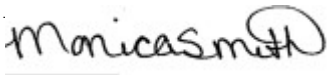
Cause of Release  
Operations personnel received a phone call from Logos producer at 9:30 of a line leak on the Lateral D-2 line. Operations personnel arrived onsite and found/ heard gas blowing. Leak appears to have released less than 5 gallons of condensate, that was dried and stained on the ground. The line itself is not located in a wash but runs adjacent to the wash, the liquids appear to have traveled to the bank of a near by wash. The line was LOTO.

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Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Release product made it to the bank of the wash.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? email notification to OCD.enviro@state.nm.us email address as well as Nelson Velez email. 8/16/2022, 1:22 pm C-129 release notification nAPP2222849508	

### Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> 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: <u>Monica Smith</u>	Title: <u>Environmental Specialist</u>
Signature: <u></u>	Date: <u>8/16/2022</u>
email: <u>msmith@harvestmidstream.com</u>	Telephone: <u>505-632-4625</u>
<b><u>OCD Only</u></b> Received by: _____ Date: _____	

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## 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?	____(ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.

State of New Mexico  
Oil Conservation Division

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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: Monica Smith Title: Environmental Specialist

Signature:  Date: 11/14/2022

email: msmith@harvestmidstream.com Telephone: 505-632-4625

**OCD Only**

Received by: Jocelyn Harimon Date: 11/14/2022

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## Remediation Plan

**Remediation Plan Checklist:** *Each of the following items must be included in the plan.*

- Detailed description of proposed remediation technique
- Scaled sitemap with GPS coordinates showing delineation points
- Estimated volume of material to be remediated
- Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

**Deferral Requests Only:** *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- Extents of contamination must be fully delineated.
- Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

- Approved
  Approved with Attached Conditions of Approval
  Denied
  Deferral Approved

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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## Closure

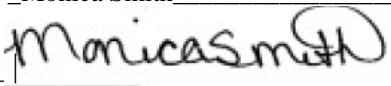
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled 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: Monica Smith Title: Environmental Specialist

Signature:  Date: 11/14/2022

email: msmith@harvestmidstrem.com Telephone: 505-632-4625

**OCD Only**

Received by: Jocelyn Harimon Date: 11/14/2022

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: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_



November 11, 2022

**Jicarilla Apache Nation, Environmental Protection Office**

Mr. Keith Manwell  
25 Hawks Drive  
Dulce, New Mexico 87528

**Re: Remediation Report and Closure Request**

Jicarilla 119-5, Lateral D-2  
Incident # nAPP2222849508  
Harvest Four Corners, LLC  
Rio Arriba County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Harvest Four Corners, LLC (Harvest), presents this *Remediation Report and Closure Request* for the Jicarilla 119-5, Lateral D2 (Site). The Site is located in Unit O of Section 25, Township 27 North, Range 03 West, within the Jicarilla Apache Reservation in Rio Arriba County, New Mexico (Figure 1).

## SITE BACKGROUND

On August 16, 2022, Harvest discovered a release near the Jicarilla 119-5 well production pad from the Lateral D-2 pipeline. The release was estimated to be less than five gallons of natural gas condensate and was only observable as dried, staining on the surface soil upon discovery. The pipeline runs adjacent to a wash, and liquids appear to have migrated to the bank of the wash. The line was locked out and tagged out. Harvest submitted notification of the release to the Jicarilla Apache Nation Environmental Protection Office (JANEPO) as well as to the New Mexico Oil Conservation Division (NMOCD). The NMOCD assigned the release incident number nAPP2222849508.

## SITE CLOSURE CRITERIA

JANEPO states that the following standards apply to soil remediation activities at sites on the Jicarilla Apache Reservation:

- Chloride: 600 milligrams per kilogram (mg/kg)
- Total Petroleum Hydrocarbons (TPH) as a combination of gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO): 100 mg/kg
- A combination of benzene, toluene, ethylbenzene, and xylenes (BTEX): 50 mg/kg
- Benzene: 10 mg/kg

## SOIL SAMPLING AND EXCAVATION ACTIVITIES

Harvest excavated approximately 46 cubic yards of impacted soil that was hauled to the Envirotech Landfarm for disposal. The excavation was approximately ten feet wide, by 35 feet long, by five feet deep. On August 29, 2022, Harvest notified JANEPO by phone and NMOCD via email (Appendix A) of closure sampling. On August 30, 2022, Harvest retained Ensolum to perform field screening and soil sampling activities. Ensolum collected a total of five 5-point composite soil samples from the excavation: samples S-1 through S-5. Sample S-1 was collected from the floor of the excavation and samples S-2 through S-5 from the excavation sidewalls (Figure 2). The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below four degrees Celsius (°C) under strict chain-of-custody procedures to Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico, for analysis of BTEX following EPA Method 8021B; TPH-GRO, TPH-DRO, and TPH-MRO following EPA Method 8015M/D; and chloride following EPA Method 300.0.

## SOIL SAMPLING RESULTS

All soil samples collected from the excavation contained concentrations of benzene, total BTEX, total TPH, and chloride that were compliant with JANEPO closure criteria, except soil sample S-3, which contained a concentration of 140 mg/kg of TPH. Soil sample S-3 was collected on the northern wall of the excavation where excavating was halted due to the presence of sandstone. A summary of analytical results is presented on Table 1. Complete laboratory reports are attached as Appendix B.

## POTASSIUM PERMANGANATE AMENDMENT

JANEPO approved closure of the release with the slightly elevated TPH concentration in soil sample S-3 with the condition that Harvest apply potassium permanganate ( $\text{KMnO}_4$ ) to the open excavation in the presence of JANEPO. The closure approval letter is included as Appendix C. The JANEPO was notified of the application event on September 22, 2022 (Appendix C).

On September 26, 2022, Harvest retained Ensolum to apply  $\text{KMnO}_4$  to the open excavation. Ensolum used approximately 55 pounds of a 98 percent (%) remediation grade  $\text{KMnO}_4$ , dissolved in solute (potable water) to create an approximately 3% to 5% weight by volume solution. The solution was applied using a fluid transfer pump from a tank mounted on a trailer under low pressure to allow the solution to absorb into sidewalls and floors of excavation. Photographs are included in Appendix D. After the application, the excavation was backfilled with JANEPO-approved soil.

Ensolum appreciates the opportunity to submit this report to JANEPO and the NMOCD on behalf of Harvest. If there are any questions or comments regarding this report, please contact Danny Burns at 303-601-1420 or [dburns@ensolum.com](mailto:dburns@ensolum.com).



Harvest Four Corners, LLC  
Jicarilla 119-5, Lateral D-2



Sincerely,  
**Ensolum, LLC**

A handwritten signature in blue ink that reads "Brooke Herb".

Brooke Herb  
Senior Geologist  
(970) 403-6824  
bherb@ensolum.com

A handwritten signature in blue ink that reads "D. Burns".

Danny Burns  
Senior Geologist  
303-601-1420  
dburns@ensolum.com

**Attachments:**

Figure 1: Site Location Map

Figure 2: Site Map

Table 1: Soil Sample Analytical Results

Appendix A: NMOCD Notification

Appendix B: Laboratory Analytical Report

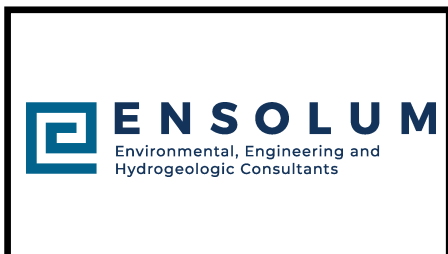
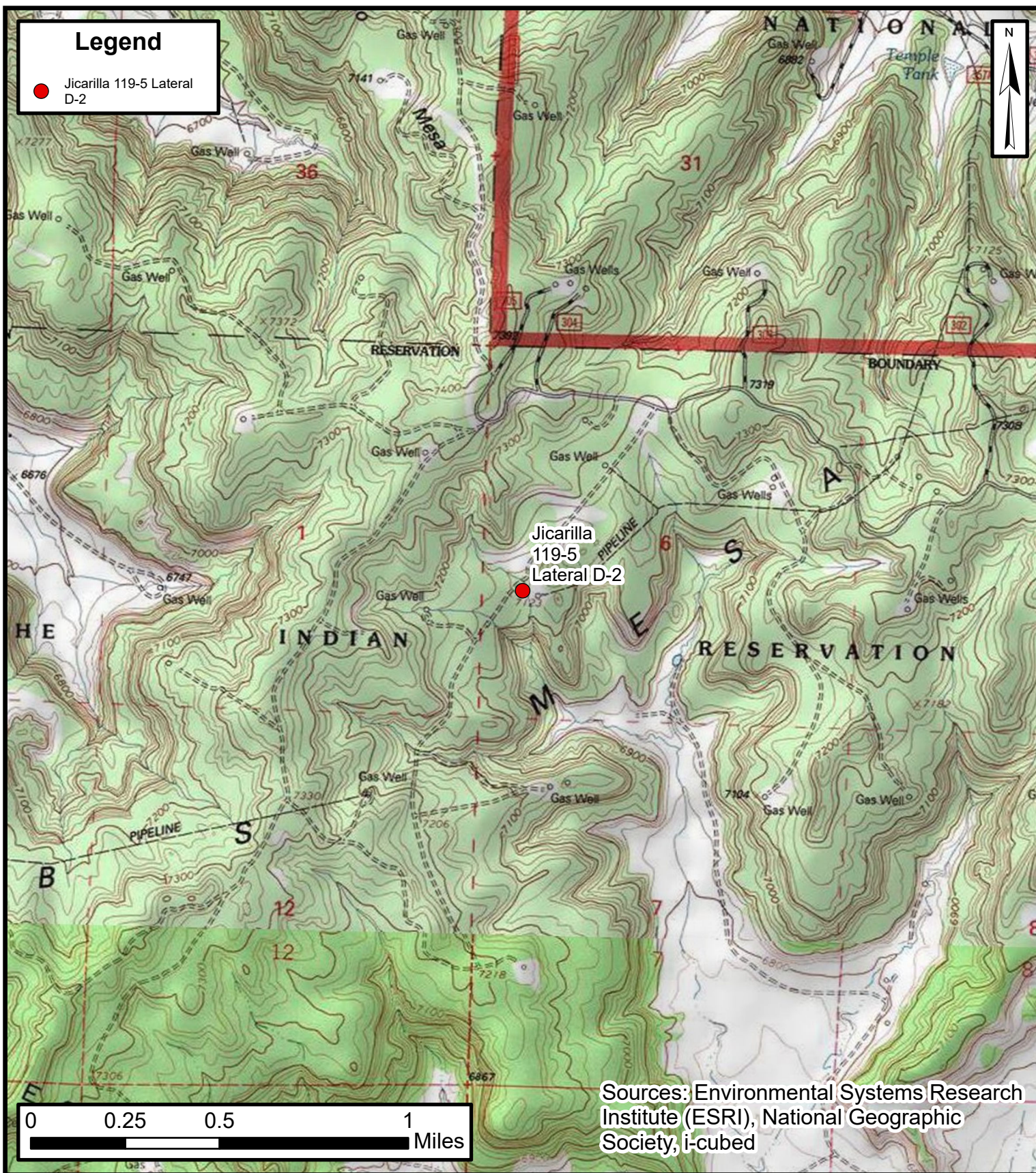
Appendix C: JANEPO Approval of Closure and Notification of  $\text{KMnO}_4$  Application

Appendix D: Photographic Log



FIGURES

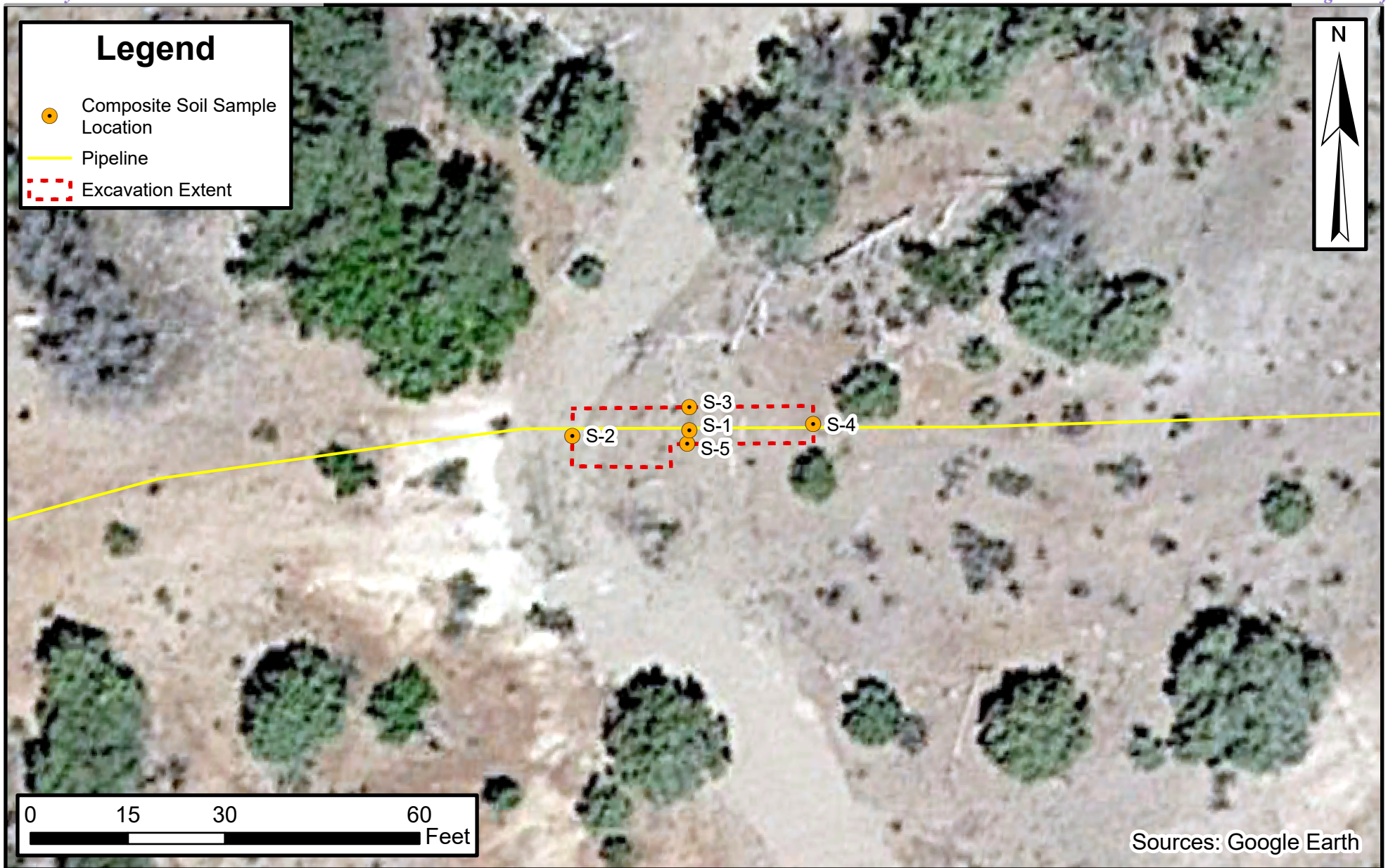




**Site Location Map**  
 Jicarilla 119-5 Lateral D-2  
 Harvest Four Corners, LLC  
 36.513106, -107.299327  
 Rio Arriba County, New Mexico

**FIGURE**  
**1**





**Site Map**  
Jicarilla 119-5 Lateral D-2  
Harvest Four Corners, LLC  
36.513106, -107.299327  
Rio Arriba County, New Mexico

**FIGURE  
2**



TABLE



**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Jicarilla 119-5, Lateral D2  
 Harvest Four Corners, LLC  
 Rio Arriba County, New Mexico

Sample Designation	Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (GRO+DRO+MRO) (mg/kg)	Chloride (mg/kg)
<b>JANEPO and NMOCD Closure Criteria for Soils Impacted by a Release (Groundwater &lt;50 feet)</b>			<b>10</b>	NE	NE	NE	<b>50</b>	NE	NE	NE	<b>100</b>	<b>600</b>
<b>Excavation Confirmation Soil Samples</b>												
S-1	8/30/2022	5	<0.088	<0.18	<0.18	<0.35	<0.35	<18	36	<50	<50	110
S-2	8/30/2022	0 - 5	<0.017	<0.033	<0.033	<0.066	<0.066	<3.3	<15	<50	<50	<60
S-3	8/30/2022	0 - 5	<0.10	<0.21	<0.21	1.1	1.1	<21	140	<47	<b>140</b>	340
S-4	8/30/2022	0 - 5	<0.017	<0.033	<0.033	<0.067	<0.067	<3.3	<15	<49	<49	<60
S-5	8/30/2022	0 - 5	<0.016	<0.032	<0.032	<0.063	<0.063	<3.2	<14	<48	<48	<60

**Notes:**

- bgs: below ground surface
- JANEPO: Jicarilla Apache Nation Environmental Protection Office
- mg/kg: milligrams per kilogram
- NE: Not Established
- NMOCD: New Mexico Oil Conservation Division
- BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
- GRO: Gasoline Range Organics
- DRO: Diesel Range Organics
- MRO: Motor Oil/Lube Oil Range Organics
- TPH: Total Petroleum Hydrocarbon
- <0.037: indicates result less than the stated laboratory reporting limit (RL)
- Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.



APPENDIX A

NMOCD NOTIFICATION

**From:** [Brooke Herb](#)  
**To:** [Enviro, OCD, EMNRD](#); [Velez, Nelson, EMNRD](#)  
**Cc:** [Monica Smith](#)  
**Subject:** nAPP2222849508 Jicarilla 119-5 Sampling Notification  
**Date:** Monday, August 29, 2022 4:33:00 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)

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On behalf of Harvest Four Corners, Ensolum is submitting this notification to perform closure soil sampling at the Jicarilla 119-5 (nAPP2222849508) beginning Tuesday August 30, 2022, at noon. The site is located at coordinates 36.53826, -107.0988. The Jicarilla EPO have also been notified and will be onsite. Please reach out with any questions.

Thanks,  
Brooke



**Brooke Herb**  
Senior Geologist  
970-403-6824  
**Ensolum, LLC**  
in f 





APPENDIX B

LABORATORY ANALYTICAL REPORT



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

September 06, 2022

Stanley Dean

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX

RE: Jic 119 5 Lateral D2

OrderNo.: 2208H93

Dear Stanley Dean:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/31/2022 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](http://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,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

**Analytical Report**

Lab Order **2208H93**

Date Reported: **9/6/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** S-1

**Project:** Jic 119 5 Lateral D2

**Collection Date:** 8/30/2022 12:00:00 PM

**Lab ID:** 2208H93-001

**Matrix:** MEOH (SOIL)

**Received Date:** 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	110	59		mg/Kg	20	8/31/2022 11:13:31 AM	69881
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	36	15		mg/Kg	1	8/31/2022 12:50:43 PM	69874
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/31/2022 12:50:43 PM	69874
Surr: DNOP	87.8	21-129		%Rec	1	8/31/2022 12:50:43 PM	69874
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	18		mg/Kg	5	8/31/2022 8:59:36 AM	A90700
Surr: BFB	98.3	37.7-212		%Rec	5	8/31/2022 8:59:36 AM	A90700
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.088		mg/Kg	5	8/31/2022 8:59:36 AM	C90700
Toluene	ND	0.18		mg/Kg	5	8/31/2022 8:59:36 AM	C90700
Ethylbenzene	ND	0.18		mg/Kg	5	8/31/2022 8:59:36 AM	C90700
Xylenes, Total	ND	0.35		mg/Kg	5	8/31/2022 8:59:36 AM	C90700
Surr: 4-Bromofluorobenzene	91.1	70-130		%Rec	5	8/31/2022 8:59:36 AM	C90700

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

**Analytical Report**

Lab Order **2208H93**

Date Reported: **9/6/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** S-2

**Project:** Jic 119 5 Lateral D2

**Collection Date:** 8/30/2022 12:05:00 PM

**Lab ID:** 2208H93-002

**Matrix:** MEOH (SOIL)

**Received Date:** 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	8/31/2022 11:25:55 AM	69881
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/31/2022 1:12:09 PM	69874
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/31/2022 1:12:09 PM	69874
Surr: DNOP	87.6	21-129		%Rec	1	8/31/2022 1:12:09 PM	69874
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	8/31/2022 9:23:07 AM	A90700
Surr: BFB	97.4	37.7-212		%Rec	1	8/31/2022 9:23:07 AM	A90700
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.017		mg/Kg	1	8/31/2022 9:23:07 AM	C90700
Toluene	ND	0.033		mg/Kg	1	8/31/2022 9:23:07 AM	C90700
Ethylbenzene	ND	0.033		mg/Kg	1	8/31/2022 9:23:07 AM	C90700
Xylenes, Total	ND	0.066		mg/Kg	1	8/31/2022 9:23:07 AM	C90700
Surr: 4-Bromofluorobenzene	91.3	70-130		%Rec	1	8/31/2022 9:23:07 AM	C90700

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

**Analytical Report**

Lab Order **2208H93**

Date Reported: **9/6/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** S-3

**Project:** Jic 119 5 Lateral D2

**Collection Date:** 8/30/2022 12:10:00 PM

**Lab ID:** 2208H93-003

**Matrix:** MEOH (SOIL)

**Received Date:** 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	340	60		mg/Kg	20	8/31/2022 11:38:19 AM	69881
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	140	14		mg/Kg	1	8/31/2022 1:23:00 PM	69874
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/31/2022 1:23:00 PM	69874
Surr: DNOP	85.5	21-129		%Rec	1	8/31/2022 1:23:00 PM	69874
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	21		mg/Kg	5	8/31/2022 9:46:42 AM	A90700
Surr: BFB	104	37.7-212		%Rec	5	8/31/2022 9:46:42 AM	A90700
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.10		mg/Kg	5	8/31/2022 9:46:42 AM	C90700
Toluene	ND	0.21		mg/Kg	5	8/31/2022 9:46:42 AM	C90700
Ethylbenzene	ND	0.21		mg/Kg	5	8/31/2022 9:46:42 AM	C90700
Xylenes, Total	1.1	0.41		mg/Kg	5	8/31/2022 9:46:42 AM	C90700
Surr: 4-Bromofluorobenzene	88.9	70-130		%Rec	5	8/31/2022 9:46:42 AM	C90700

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

**Analytical Report**

Lab Order **2208H93**

Date Reported: **9/6/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** S-4

**Project:** Jic 119 5 Lateral D2

**Collection Date:** 8/30/2022 12:15:00 PM

**Lab ID:** 2208H93-004

**Matrix:** MEOH (SOIL)

**Received Date:** 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	8/31/2022 11:50:43 AM	69881
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/31/2022 1:44:27 PM	69874
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/31/2022 1:44:27 PM	69874
Surr: DNOP	87.4	21-129		%Rec	1	8/31/2022 1:44:27 PM	69874
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	8/31/2022 10:10:10 AM	A90700
Surr: BFB	100	37.7-212		%Rec	1	8/31/2022 10:10:10 AM	A90700
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.017		mg/Kg	1	8/31/2022 10:10:10 AM	C90700
Toluene	ND	0.033		mg/Kg	1	8/31/2022 10:10:10 AM	C90700
Ethylbenzene	ND	0.033		mg/Kg	1	8/31/2022 10:10:10 AM	C90700
Xylenes, Total	ND	0.067		mg/Kg	1	8/31/2022 10:10:10 AM	C90700
Surr: 4-Bromofluorobenzene	92.4	70-130		%Rec	1	8/31/2022 10:10:10 AM	C90700

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

**Analytical Report**

Lab Order **2208H93**

Date Reported: **9/6/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** S-5

**Project:** Jic 119 5 Lateral D2

**Collection Date:** 8/30/2022 12:20:00 PM

**Lab ID:** 2208H93-005

**Matrix:** MEOH (SOIL)

**Received Date:** 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	8/31/2022 12:03:08 PM	69881
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/31/2022 1:55:15 PM	69874
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/31/2022 1:55:15 PM	69874
Surr: DNOP	85.8	21-129		%Rec	1	8/31/2022 1:55:15 PM	69874
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	8/31/2022 10:33:36 AM	A90700
Surr: BFB	96.9	37.7-212		%Rec	1	8/31/2022 10:33:36 AM	A90700
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.016		mg/Kg	1	8/31/2022 10:33:36 AM	C90700
Toluene	ND	0.032		mg/Kg	1	8/31/2022 10:33:36 AM	C90700
Ethylbenzene	ND	0.032		mg/Kg	1	8/31/2022 10:33:36 AM	C90700
Xylenes, Total	ND	0.063		mg/Kg	1	8/31/2022 10:33:36 AM	C90700
Surr: 4-Bromofluorobenzene	90.4	70-130		%Rec	1	8/31/2022 10:33:36 AM	C90700

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2208H93

06-Sep-22

**Client:** Harvest  
**Project:** Jic 119 5 Lateral D2

Sample ID: <b>MB-69881</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>69881</b>	RunNo: <b>90702</b>								
Prep Date: <b>8/31/2022</b>	Analysis Date: <b>8/31/2022</b>	SeqNo: <b>3243311</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-69881</b>	SampType: <b>ics</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>69881</b>	RunNo: <b>90702</b>								
Prep Date: <b>8/31/2022</b>	Analysis Date: <b>8/31/2022</b>	SeqNo: <b>3243312</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.7	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 Quantitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2208H93

06-Sep-22

**Client:** Harvest  
**Project:** Jic 119 5 Lateral D2

Sample ID: <b>LCS-69874</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>69874</b>	RunNo: <b>90697</b>								
Prep Date: <b>8/31/2022</b>	Analysis Date: <b>8/31/2022</b>	SeqNo: <b>3241478</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	15	50.00	0	74.3	64.4	127			
Surr: DNOP	3.7		5.000		73.5	21	129			

Sample ID: <b>MB-69874</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>69874</b>	RunNo: <b>90697</b>								
Prep Date: <b>8/31/2022</b>	Analysis Date: <b>8/31/2022</b>	SeqNo: <b>3241482</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.5		10.00		84.7	21	129			

Sample ID: <b>2208H93-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>S-1</b>	Batch ID: <b>69874</b>	RunNo: <b>90697</b>								
Prep Date: <b>8/31/2022</b>	Analysis Date: <b>8/31/2022</b>	SeqNo: <b>3241741</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	84	15	49.02	36.41	96.7	36.1	154			
Surr: DNOP	3.4		4.902		70.2	21	129			

Sample ID: <b>2208H93-001AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>S-1</b>	Batch ID: <b>69874</b>	RunNo: <b>90697</b>								
Prep Date: <b>8/31/2022</b>	Analysis Date: <b>8/31/2022</b>	SeqNo: <b>3241742</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	84	14	48.08	36.41	98.1	36.1	154	0.289	33.9	
Surr: DNOP	3.5		4.808		72.6	21	129	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 Quantitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2208H93

06-Sep-22

**Client:** Harvest  
**Project:** Jic 119 5 Lateral D2

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>A90700</b>		RunNo: <b>90700</b>							
Prep Date:	Analysis Date: <b>8/31/2022</b>		SeqNo: <b>3241883</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	960		1000		96.0	37.7	212			

Sample ID: <b>2.5ug gro lcs</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>A90700</b>		RunNo: <b>90700</b>							
Prep Date:	Analysis Date: <b>8/31/2022</b>		SeqNo: <b>3241884</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.9	72.3	137			
Surr: BFB	1900		1000		187	37.7	212			

Sample ID: <b>2208h93-001ams</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>S-1</b>	Batch ID: <b>A90700</b>		RunNo: <b>90700</b>							
Prep Date:	Analysis Date: <b>8/31/2022</b>		SeqNo: <b>3241885</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	88	18	87.90	0	99.6	70	130			
Surr: BFB	7000		3516		200	37.7	212			

Sample ID: <b>2208h93-001amsd</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>S-1</b>	Batch ID: <b>A90700</b>		RunNo: <b>90700</b>							
Prep Date:	Analysis Date: <b>8/31/2022</b>		SeqNo: <b>3241886</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	88	18	87.90	0	100	70	130	0.521	20	
Surr: BFB	7100		3516		202	37.7	212	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 Quantitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2208H93

06-Sep-22

**Client:** Harvest  
**Project:** Jic 119 5 Lateral D2

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>C90700</b>	RunNo: <b>90700</b>								
Prep Date:	Analysis Date: <b>8/31/2022</b>	SeqNo: <b>3241908</b>	Units: <b>mg/Kg</b>							
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		89.8	70	130			

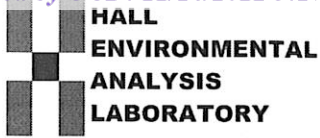
Sample ID: <b>100ng btex lcs</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>C90700</b>	RunNo: <b>90700</b>								
Prep Date:	Analysis Date: <b>8/31/2022</b>	SeqNo: <b>3241909</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	88.9	80	120			
Toluene	0.92	0.050	1.000	0	91.6	80	120			
Ethylbenzene	0.91	0.050	1.000	0	90.6	80	120			
Xylenes, Total	2.7	0.10	3.000	0	90.4	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.5	70	130			

Sample ID: <b>2208h93-002ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>S-2</b>	Batch ID: <b>C90700</b>	RunNo: <b>90700</b>								
Prep Date:	Analysis Date: <b>8/31/2022</b>	SeqNo: <b>3241910</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.59	0.017	0.6636	0	88.8	68.8	120			
Toluene	0.61	0.033	0.6636	0.008958	90.8	73.6	124			
Ethylbenzene	0.61	0.033	0.6636	0	91.9	72.7	129			
Xylenes, Total	1.8	0.066	1.991	0.03942	90.6	75.7	126			
Surr: 4-Bromofluorobenzene	0.63		0.6636		94.4	70	130			

Sample ID: <b>2208h93-002amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>S-2</b>	Batch ID: <b>C90700</b>	RunNo: <b>90700</b>								
Prep Date:	Analysis Date: <b>8/31/2022</b>	SeqNo: <b>3241911</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.57	0.017	0.6636	0	85.5	68.8	120	3.72	20	
Toluene	0.59	0.033	0.6636	0.008958	87.3	73.6	124	3.86	20	
Ethylbenzene	0.59	0.033	0.6636	0	89.5	72.7	129	2.72	20	
Xylenes, Total	1.8	0.066	1.991	0.03942	88.5	75.7	126	2.25	20	
Surr: 4-Bromofluorobenzene	0.63		0.6636		94.2	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 Quantitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Harvest Work Order Number: 2208H93 RcptNo: 1

Received By: Joseph Alderette 8/31/2022 7:40:00 AM

Completed By: Sean Livingston 8/31/2022 7:53:37 AM

Reviewed By: KPG 8.31.22

Handwritten initials and signature

Chain of Custody

- 1. Is Chain of Custody complete? Yes [checked] No [ ] Not Present [ ]
2. How was the sample delivered? Courier

Log In

- 3. Was an attempt made to cool the samples? Yes [checked] No [ ] NA [ ]
4. Were all samples received at a temperature of >0° C to 6.0°C Yes [checked] No [ ] NA [ ]
5. Sample(s) in proper container(s)? Yes [checked] No [ ]
6. Sufficient sample volume for indicated test(s)? Yes [checked] No [ ]
7. Are samples (except VOA and ONG) properly preserved? Yes [checked] No [ ]
8. Was preservative added to bottles? Yes [ ] No [checked] NA [ ]
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [ ] No [ ] NA [checked]
10. Were any sample containers received broken? Yes [ ] No [checked]
11. Does paperwork match bottle labels? Yes [checked] No [ ]
12. Are matrices correctly identified on Chain of Custody? Yes [checked] No [ ]
13. Is it clear what analyses were requested? Yes [checked] No [ ]
14. Were all holding times able to be met? Yes [checked] No [ ]

# of preserved bottles checked for pH:
Adjusted?
Checked by: JN 8/31/22

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [ ] No [ ] NA [checked]

Person Notified:
By Whom:
Regarding:
Client Instructions:
Date:
Via: [ ] eMail [ ] Phone [ ] Fax [ ] In Person

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 4.9, Good, [ ], [ ], [ ], [ ]



# Chain-of-Custody Record

Client: Harvest  
 Mailing Address: Mid Stream

Turn-Around Time: 1600h  
 Standard  Rush 8-31-22  
 Project Name: Sic 119-5 Laford D-2  
 Project #:

Phone #:

email or Fax#: adapanti@enselab.com

Project Manager: Stanley Dean

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

Accreditation:  Az Compliance

NELAC  Other

EDD (Type)

Sampler: ADAPANTI

On Ice:  Yes  No

# of Coolers: 1

Cooler Temp (including Cp): 4.9 0-4.9 (°C)

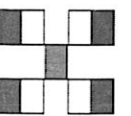
Container Type and #

Preservative Type

HEAL No. 22081493

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
8/30	1200	S	S-1	1 1/2 gal	cool	001
8/30	1205	S	S-2	1	cool	002
8/30	1210	S	S-3	1	cool	003
8/30	1215	S	S-4	1	cool	004
8/30	1220	S	S-5	1	cool	005

Received by:	Vial	Date	Time	Remarks:
<u>[Signature]</u>		8/30/22	1538	OC: Monica Smith
<u>[Signature]</u>		8/31/22	7:48	Sample



**HALL ENVIRONMENTAL**  
**ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Received by: OC: 21/14/2022 3:17:57 PM

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.



## APPENDIX C

# JANEPO APPROVAL OF CLOSURE AND NOTIFICATION OF KMNO<sub>4</sub> APPLICATION

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**From:** [Yahoo Warning](#)  
**To:** [Brooke Herb](#)  
**Subject:** Re: [EXTERNAL] Re: Harvest - Jic 119 5 Sample results and diagram.  
**Date:** Thursday, September 22, 2022 8:07:23 AM  
**Attachments:** [image004.png](#)  
[image005.png](#)  
[image001.png](#)  
[image002.png](#)  
[image003.png](#)

---

[\*\*EXTERNAL EMAIL\*\*]

Brooke Herb,

Thank you for the proposed date for application of potassium Permanganate, I will plan on being there on said location.

Thank You,  
K.C. Manwell

On Thursday, September 22, 2022, 06:34:59 AM MDT, Brooke Herb <bherb@ensolum.com> wrote:

K.C.,

Harvest would like to proceed with the Potassium Permanganate application at the Jicarilla 119 5 location on Monday September 26, 2022, at 11:00 AM. Please let us know if that will work.

Thank you,

Brooke



**Brooke Herb**

Senior Geologist

970-403-6824

**Ensolum, LLC**

[in](#) [f](#) [t](#)

---

**From:** Yahoo Warning <[kcmawell@yahoo.com](mailto:kcmawell@yahoo.com)>  
**Sent:** Thursday, September 1, 2022 8:22 AM  
**To:** Monica Smith <[msmith@harvestmidstream.com](mailto:msmith@harvestmidstream.com)>  
**Subject:** [EXTERNAL] Re: Harvest - Jic 119 5 Sample results and diagram.

**CAUTION:** External sender. DO NOT open links or attachments from UNKNOWN senders.

Monica,

On behalf of the Jicarilla 119 5 laboratory results and careful review, JANEPO has determined that due to bedrock on the S-3 sample being just above Jicarilla Apache Nation Environmental Closure Standards. Approval is here by granted to proceed with an application of potassium Permanganate as an alternative method to continue as a conditional closure, JANEPO would like to be on location for the proposed application. JANEPO Thanks Harvest-Midstream for their cooperation in resolving the Incident of Non- Compliance.

Thank You, K.C. Manwell

On Thursday, September 1, 2022, 07:38:07 AM MDT, Monica Smith <[msmith@harvestmidstream.com](mailto:msmith@harvestmidstream.com)> wrote:

Keith,

Please see the attached results for the Jic 119 5.

Thank you,

*Monica Smith*

Environmental Specialist

Harvest Four Corners, LLC

[msmith@harvestmidstream.com](mailto:msmith@harvestmidstream.com)

505-632-4625 (office)

505-947-1852 (cell)





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APPENDIX D  
PHOTOGRAPHIC LOG

**PHOTOGRAPHIC LOG**  
Jicarilla 119-5, Lateral D-2  
Rio Arriba County, New Mexico  
Harvest Four Corners, LLC

<p><b>Photograph 1</b></p> <p>View East of the excavation on August 30, 2022.</p>	
<p><b>Photograph 2</b></p> <p>View East of the excavation on September 26, 2022, during application of the potassium permanganate amendment.</p>	

**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 158669

**CONDITIONS**

Operator: Harvest Four Corners, LLC 1755 Arroyo Dr Bloomfield, NM 87413	OGRID: 373888
	Action Number: 158669
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
nvelez	Closure accepted for the record based on Jicarilla EPO approval.	3/7/2023