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	NAPP2231542675
District RP	
Facility ID	
Application ID	

# **Release Notification**

## **Responsible Party**

Responsible Party: Harvest Four Corners, LLC	OGRID: 373888	
Contact Name: Jennifer Deal	Contact Telephone: 505-324-5128	
Contact email: jdeal@harvestmidstream.com	Incident # (assigned by OCD)	
Contact mailing address: 1755 Arroyo Dr. Bloomfield, NM 87413		

### **Location of Release Source**

Latitude 36.72861

Longitude -107.95583 (NAD 83 in decimal degrees to 5 decimal places)

Site Name: Val Verde Plant	Site Type: Processing Plant
Date Release Discovered: 10/30/2022	API# (if applicable)

Unit Letter	Section	Township	Range	County
Н	18	30 N	10 W	San Juan

Surface Owner: State Federal Tribal Private (Name: Harvest Four Corners, LLC\_ )

## **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)	Volume Recovered (bbls)
	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) 20 bbls	Volume/Weight Recovered (provide units)
Amine		

Cause of Release

The release was caused by a seal failure on a amine pump. The pump was stopped and blocked in to stop the release. Approximately 20 bbls of amine were released onto the ground near the pump.

Page 1 of 68

Page 2

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?
🗌 Yes 🖾 No	
If YES, was immediate no	otice 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

 $\square$  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:Jennifer Deal	Title:Environmental Specialist
Signature: Gennifer Deal	Date:11/10/2022
email:jdeal@harvestmidstream.com	Telephone:505-324-5128
OCD Only	
Received by: Jocelyn Harimon	Date:11/14/2022

## 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?	<u>30</u> (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 <b>not</b> 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 <sup>1</sup>/<sub>2</sub>-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.

Page 3

Received by OCD: 1/2	23/2023 12:18:51 PM State of Ne	w Mavico	-		Page 4 of 6
				Incident ID	nAPP2231542675
Page 4	Oil Conservat	tion Division		District RP	
				Facility ID	
				Application ID	
public health or the en failed to adequately in addition, OCD accepta and/or regulations. Printed Name:J Signature:	vestmidstream.com	141 report by the OCD does r ion that pose a threat to groun eve the operator of responsibil Title:Env Date:	not relieve the dwater, surfac lity for compli ironmental S 1/20/2023	operator of liability sho ee water, human health ance with any other fee Specialist	ould their operations have or the environment. In deral, state, or local laws
OCD Only Received by:	Jocelyn Harimon	I	Date: 01/2	24/2023	

Received by OCD: 1/23/2023 12:18:51 PM Form C-141 State of New Mexico Oil Conservation Division

Application ID

## **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)  $\square$ 

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: Jennifer Deal Title:Environmental Specialist
Signature: Deal Date:1/20/2023
email:jdeal@harvestmidstream.com Telephone:505-324-5128
OCD Only
Received by: Jocelyn Harimon Date: 01/24/2023
Approved in Approved with Attached Conditions of Approval Denied Deferral Approved
Signature: Nelson Velez Date: 05/03/2023

Page 6

Oil Conservation Division

Nelson Velez

#### Page 6 of 68 nAPP2231542675 Incident ID 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.

<b>Closure Report Attachment Checklist:</b> 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 NM	-
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 Dis	trict 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 and regulations all operators are required to report and/or file certain rele may endanger public health or the environment. The acceptance of a C- should their operations have failed to adequately investigate and remedia human health or the environment. In addition, OCD acceptance of a C-1 compliance with any other federal, state, or local laws and/or regulations restore, reclaim, and re-vegetate the impacted surface area to the condition accordance with 19.15.29.13 NMAC including notification to the OCD w	ase notifications and perform corrective actions for releases which 141 report by the OCD does not relieve the operator of liability te contamination that pose a threat to groundwater, surface water, 41 report does not relieve the operator of responsibility for . The responsible party acknowledges they must substantially ons that existed prior to the release or their final land use in
Printed Name: Jennifer Deal Title:	
Signature: Deal Da	tte:1/20/2023
email:jdeal@harvestmidstream.com Telephone:	
OCD Only	
Received by: Jocelyn Harimon	Date: 01/24/2023
Closure approval by the OCD does not relieve the responsible party of lia remediate contamination that poses a threat to groundwater, surface water party of compliance with any other federal, state, or local laws and/or reg	, human health, or the environment nor does not relieve the responsible
Closure Approved by:	Date:
Printed Name:	Title:

Released to Imaging: 5/3/2023 9:51:25 AM



January 19, 2023

**New Mexico Oil Conservation Division** New Mexico Energy, Minerals, and Natural Resources Department 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: Release Delineation and Deferral Request Val Verde Plant San Juan County, New Mexico Harvest Four Corners, LLC NMOCD Incident No: nAPP2231542675

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Harvest Four Corners, LLC (Harvest), presents the following *Release Delineation and Deferral Request* (Request) detailing soil sampling and site delineation activities for a release at the Val Verde Plant (Site). The Site is located on private land in Bloomfield, New Mexico (Figure 1). The Site is located in Unit H, Section 18, Township 30 North, Range 10 West, in San Juan County, New Mexico. The purpose of the soil sampling and delineation activities was to confirm the presence or absence of impacts to soil following a release of liquid amine at the Site. Based on field observations, field screening, and laboratory analytical results from soil sampling activities, Harvest is submitting this Deferral Request for the release at the Site.

### **RELEASE BACKGROUND**

On October 10, 2022, a seal failed on an amine pump, causing a release of liquid amine into the concrete secondary containment. Approximately 20 barrels (bbls) of amine liquid breached the containment onto the surrounding ground surface in the facility, which is comprised of structural fill and crushed aggregate. Upon discovery of the release, the pump was immediately shut-in to stop any further liquid release. Emergency response activities began immediately, including hydro-vacuum recovery of liquids in containment and excavation of surface soils outside of containment. Approximately 80 cubic yards of soil were excavated and disposed of at a licensed disposal facility.

An initial Release Notification and Corrective Action Form C-141 (Form C-141) was submitted to the NMOCD on November 11, 2022, and has been updated and included with this report. The release was assigned Incident Number nAPP2231542675.

### SITE DESCRIPTION AND CLOSURE CRITERIA

Ensolum characterized the Site to determine applicability of Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be less than 50 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of State

Harvest Four Corners, LLC Release Delineation and Deferral Request Val Verde Plant

Engineer (NMOSE) well SJ 04127-POD10 (Appendix A), a monitoring well, is located approximately 1,050 feet west-northwest of the Site. This groundwater monitoring well has a depth to groundwater of approximately 30 feet bgs. Ground surface elevation at the groundwater well location is approximately 5,587 feet above mean sea level (amsl), which is approximately 8 feet lower in elevation than the Site.

The closest significant watercourse to the Site is an agricultural irrigation canal, located approximately 1,030 feet to the southwest. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low potential karst area. Figures 1 and 2 show the Site in relation to the above potential receptors.

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH) as gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO): 100 mg/kg
- Chloride: 600 mg/kg

### DELINEATION SOIL SAMPLING AND ANALYTICAL RESULTS

Harvest personnel removed the top two to six inches of impacted material immediately after the release occurred. Due to heavy density of existing above- and below-ground active infrastructure, as well as the composition of the subsurface material, soil removal was limited to manual removal with shovels and a Skid-Steer. Figure 3 shows the general area impacted by the release. On November 18, 2022, Ensolum collected soil samples from the area of the release to assess the presence or absence of impacted soil following the initial hand-excavation activities. Boring locations were selected to evaluate the vertical extent of impacted soil closest to the source area, as well as delineate the horizontal extent by placing borings outside of the obvious release footprint. A total of seven borehole locations were advanced using a hand auger to depths ranging from three to five feet bgs. Figure 3 depicts the area of the release and the seven soil sample locations. A photographic log is included as Appendix B.

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 shipped chilled under strict chain-of-custody (COC) procedures to Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico for the following analysis:

- BTEX by United States Environmental Protection Agency (EPA) Method 8021B
- TPH-GRO, TPH-DRO, and TPH-MRO by EPA Method 8015M/D
- Chloride anion by EPA Method 300.0
- pH by Method SM4500H+B / EPA9040C

Analytical results indicated that elevated TPH-DRO and TPH concentrations were present in borehole BH1 at a depth of 0-0.5 feet bgs (sample BH1-0-0.5) exceeding the Closure Criteria. The pH results ranged from 6.80 to 9.13 standard units. TPH-GRO, TPH-DRO, TPH-MRO, BTEX compounds and chloride concentrations were not detected in any of the other soil samples above laboratory reporting limits. Analytical results are summarized in Table 1 and laboratory analytical reports and COC documentation for the initial soil samples are included as Appendix C.



Harvest Four Corners, LLC Release Delineation and Deferral Request Val Verde Plant **Page 9 of 68** January 19, 2023

### **DEFERRAL REQUEST**

Following the release, Harvest initiated manual excavation efforts around active infrastructure and equipment. As much soil as possible was removed from the Site without major deconstruction. Subsequent delineation soil-sampling activities conducted by Ensolum indicated that impacted soil remains in a limited area at the Site at depths less than 0.5 feet bgs. Laboratory analytical results at soil sample locations BH4, BH5, BH6, and BH7 indicate that the lateral extent of the release has successfully been delineated. Samples collected within the release extent defined vertical delineation. Based on the vertical and aerial extent of the impact and delineation soil sampling results, approximately 10 cubic yards of impacted soil remain in place at the Site near active production equipment.

Based on the results presented in this report, Ensolum and Harvest do not believe deferment of the remaining impacted soil will result in imminent risk to human health, the environment, or groundwater. Specifically, heavily impacted soil has been removed and disposed off-Site and impacted soil remaining at the Site is restricted to depths less than 0.5 feet. Additionally, based on the nature of the soil within this area of the Site (structural fill for equipment and machinery related to the gas plant operations) and the access restrictions presented by the gas plant equipment/machinery, further soil removal is not feasible at this time. In accordance with 19.15.29.12 C NMAC. (2), Harvest is proposing to leave in place approximately 10 cubic yards of impacted soil at the Site until facility closure or major deconstruction, whichever occurs first. Accordingly, Harvest requests deferral of final remediation at the Site until equipment in this area is removed or the facility is closed.

We appreciate the opportunity to provide this report to the NMOCD. If you should have any questions or comments regarding this document, please contact the undersigned.

Sincerely,

Ensolum, LLC

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

cc: Jennifer Deal, Harvest Four Corners, LLC

### Attachments:

Figure 1:	Site Location Map
Figure 2:	Site Receptor Map
Figure 3:	Soil Sampling Locations
Table 1:	Delineation Soil Sample Analytical Results
Appendix A:	NMOSE Well Summary
Appendix B:	Photographic Log
Appendix C:	Laboratory Analytical Report

Ushley L. ager

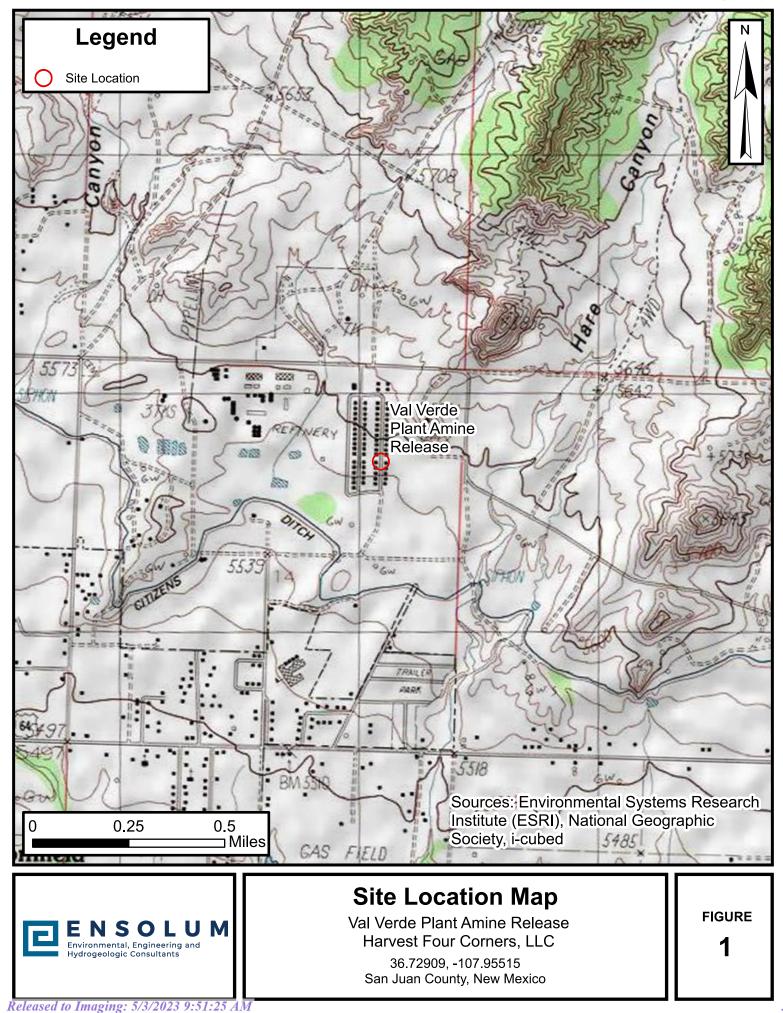
Ashley Ager, MS, PG Principal, Geologist (970) 946-1093 aager@ensolum.com

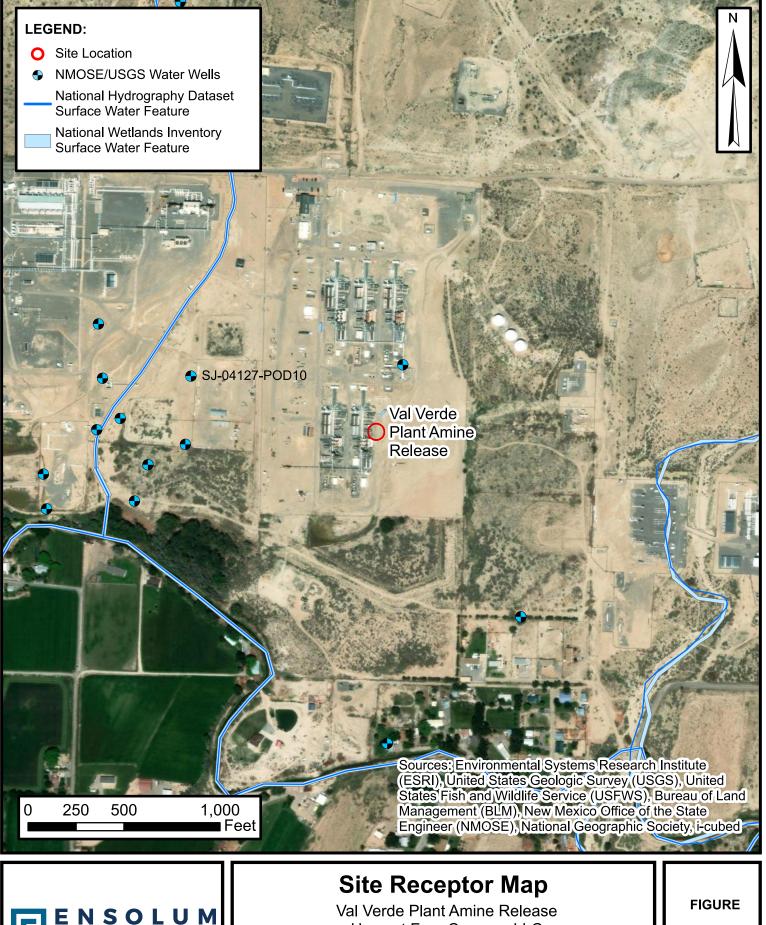




# Figures

Received by OCD: 1/23/2023 12:18:51 PM





# Environmental, Engineering and Hydrogeologic Consultants

Val Verde Plant Amine Release Harvest Four Corners, LLC 36.72909, -107.95515 San Juan County, New Mexico

2



Released to Imaging: 5/3/2023 9:51:25 AM



# Table

# E N S O L U M

						TABLE DN SOIL SAMPLE Val Verde Harvest Four Co San Juan County,	ANALYTICAL Plant mers, LLC	RESULTS					
Sample Identification	Date	Depth (feet bgs)	рН	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Closure Release	Criteria for Soils Groundwater <50		NE	10	NE	NE	NE	50	NE	NE	NE	100	600
BH1-0-0.5	11/18/2022	0 - 0.5	9.13	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	330	<48	330	<60
BH1-2.5-3	11/18/2022	2.5 - 3	7.55	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<15	<50	<69.9	<60
BH1-4.5-5	11/18/2022	4.5 - 5	6.80	<0.025	<0.049	<0.049	<0.098	<0.221	<4.9	<14	<48	<66.9	<60
BH2-0-0.5	11/18/2022	0 - 0.5	7.67	<0.025	<0.050	<0.050	<0.10	<0.225	<5.0	<14	<48	<67	<60
BH2-3-4	11/18/2022	3-4	8.13	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<14	<48	<66.9	<60
BH3-0-0.5	11/18/2022	0 - 0.5	7.97	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<14	<47	<65.8	<60
BH3-3-4	11/18/2022	3-4	8.33	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<14	<48	<67	<60
BH4-0-0.5	11/18/2022	0 - 0.5	7.78	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<15	<50	<69.8	<60
BH4-2-3	11/18/2022	2-3	7.88	<0.025	<0.049	<0.049	<0.099	<0.222	<4.9	<14	<47	<65.9	<60
BH5-0-0.5	11/18/2022	0 - 0.5	8.05	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<15	<50	<69.8	<60
BH5-2-3	11/18/2022	2-3	8.41	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<15	<49	<68.8	<60
BH6-0-0.5	11/18/2022	0 - 0.5	8.49	<0.025	<0.049	<0.049	<0.099	<0.222	<4.9	<14	<47	<65.9	<60
BH6-2-3	11/18/2022	2-3	8.70	<0.025	<0.050	<0.050	<0.10	<0.225	<5.0	<13	<44	<62	<61
BH7-0-0.5	11/18/2022	0 - 0.5	7.65	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<15	<49	<68.8	<60
BH7-2-3	11/18/2022	2-3	7.89	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<15	<48	<67.8	<60

#### Notes:

bgs: below ground surface

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

mg/kg: milligrams per kilogram

NA: Not Analyzed

NE: Not Established

NMOCD: New Mexico Oil Conservation Division

': feet

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

MRO: Motor Oil/Lube Oil Range Organics

TPH: Total Petroleum Hydrocarbon

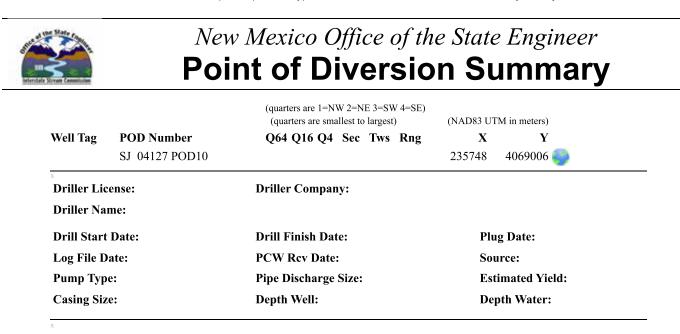
<0.037: indicates result less than the stated laboratory reporting limit (RL)

Concentrations in **bold** and shaded exceed the New Mexico Oil Conservation Division Table 1 Closure Criteria for Soils Impacted by a Release



# APPENDIX A

NMOSE Well Summary



The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

1/19/23 2:25 PM

POINT OF DIVERSION SUMMARY

Received by OCD: 1/23/2023 12:18:51 PM

\*

WITH NO CONSUMPTI	VE USE OF WATER		
For fees, see State Engineer websi	te: http://www.ose.state.nm.us/		20
Pollution Control And / Or Recovery	Geo-Thermal		AZTEC
Construction Site De-Watering	Other (Describe):		V I G
Mineral De-Watering			AMI
l be required to apply water to beneficial use.			1: 30 HOL
est - Requested Start Date: 12/1/14	Requested En	nd Date: 2/2	
arations Submitted?  Yes No			per email date 11-24-14
	WITH NO CONSUMPTI (check applic For fees, see State Engineer websi Pollution Control And / Or Recovery Construction Site De-Watering Mineral De-Watering	Construction Site De-Watering Other (Describe): Mineral De-Watering be required to apply water to beneficial use.	WITH NO CONSUMPTIVE USE OF WATER (check applicable box): For fees, see State Engineer website: http://www.ose.state.nm.us/ Pollution Control And / Or Recovery Geo-Thermal Construction Site De-Watering Other (Describe): Mineral De-Watering

### 1. APPLICANT(S)

Name: Joseph Wiley	Name: Jeffrey Minchak
Contact or Agent: check here if Agent El Paso Natural Gas Co, LLC	Contact or Agent: check here if Agent CH2M HILL
Mailing Address: 1001 Louisiana Street, Room 956L	Mailing Address: 3721 Rutledge Road NE, Suite B-1
City: Houston	City: Albuquerque
State: TX Zip Code: 77002	State: NM Zip Code: 87109
Phone: (832) 279-1610	Phone: (505) 379-3222         □ Home ⊠ Cell           Phone (Work): (505) 855-5237
E-mail (optional): Joe_Wiley@kindermorgan.com	E-mail (optional): Jeffrey.Minchak@ch2m.com

FOR OSE INTERNAL USE	Application for Permit, Form wr-07, Rev 4/12/12
File Number: SJ-4127 POD1-POD4	Trn Number: 643 776
Trans Description (optional): POD L	thru PODII
Sub-Basin: SJ	
PCW/LOG Due Date: November 25,	2015
	Page 1 of 4

٠

7

2. WELL(S) Describe the well(s) applicable to this application.

(Lat/Long - WGS84).			tate Plane (NAD 83), UTM (NAD 83), <u>or</u> Latitude/Longitude a PLSS location in addition to above.
<ul> <li>NM State Plane (NAD83)</li> <li>NM West Zone</li> <li>NM East Zone</li> <li>NM Central Zone</li> </ul>	(Feet)	ITM (NAD83) (Mete ]Zone 12N ]Zone 13N	Trs)  Lat/Long (WGS84) (to the nearest 1/10 <sup>th</sup> of second)
Well Number (if known):	<b>X XX EXENTING ON</b> <b>XXXX EXENTING ON</b> XXXX EXENTING ON X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	Provide if known: -Public Land Survey System (PLSS) ( <i>Quarters or Halves , Section, Township, Range</i> ) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
			XXSectionXX4X Townshipx 29 NXRaddex XXXXXXX
Per en	mail dated 11-	24-14 this we	ll will not be installed.
MW-71 (SJ-4127 POD1)	2085809.45	2685097.54	Section: 14, Township: 29N, Range: 11W
<b>MW-72</b> (SJ-4127 POD2)	2084534.0818	2685482.3535	Section: 14, Township: 29N, Range: 11W
<b>MW-73</b> (SJ-4127 POD3)	2084835.7311	2685874.0635	Section: 14, Township: 29N, Range: 11W
<b>MW-74</b> (SJ-4127 POD4)	2084408.2137	2685959.784	Section: 14, Township: 29N, Range: 11W
NOTE: If more well locations Additional well descriptions	s need to be descril are attached:	oed, complete forn Yes ⊠ No	n WR-08 (Attachment 1 – POD Descriptions) If yes, how many
	to common landmar	ks, streets, or other	Well locations are located on the south side of County Road Bloomfield, NM 87413.
Well is on land owned by: E1	Paso Natural	Gas Co. (Per	email dated 11-24-14)
Well Information: NOTE: If m If yes, how many	nore than one (1) w	ell needs to be des	cribed, provide attachment. Attached? 🗌 Yes 🗌 No
	et): 50.00	(	Dutside diameter of well casing (inches): 4.50
Approximate depth of well (fee			Driller License Number: WD-1210

Application for Permit, Form wr-	FOR OSE INTERNAL USE
n Number:	File Number: SJ-4127 POD1-POD4
Page 2 d	

5

AH 11: 30



4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

Exploratory: Include a description of any proposed pump test, if applicable. Monitoring: Include the reason for the monitoring well, and, The duration of the planned monitoring.	Pollution Control and/or Recovery:         □ Include a plan for pollution         control/recovery, that includes the         following:         □ A description of the need for the         pollution control or recovery operation.         □ The estimated maximum period of         time for completion of the operation.         □ The annual diversion amount.         □ The annual consumptive use         amount.         □ The maximum amount of water to be         diverted and injected for the duration of         the operation.         □ The method and place of discharge.         □ The method of measurement of         water produced and discharged.         □ The method of measurement of         water injected.         □ The characteristics of the aquifer.         □ The method of determining the         resulting annual consumptive use of         water and depletion from any related         stream system.         □ Proof of any permit required from the         New Mexico Environment Department.         □ An access agreement if the         applicant is not the owner of the land on         which the pollution plume control or         recovery well is to be located.	Construction De-Watering: Include a description of the proposed dewatering operation, The estimated duration of the operation, The maximum amount of water to be diverted, A description of the need for the dewatering operation, and, A description of how the diverted water will be disposed of. Geo-Thermal: Include a description of the geothermal heat exchange project, The amount of water to be diverted and re-injected for the project, The time frame for constructing the geothermal heat exchange project, and, The duration of the project. Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	Mine De-Watering: Include a plan for pollution control/recovery, that includes the following: A description of the need for mine dewatering. The estimated maximum period of time for completion of the operation. The source(s) of the water to be diverted The geohydrologic characteristics of the aquifer(s). The maximum amount of water to be diverted per annum. The maximum amount of water to be diverted for the duration of the operation. The quality of the water. The method of measurement of water diverted. The recharge of water to the aquifer. Description of the estimated area of hydrologic effect of the project. An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. A description of the methods employed to estimate effects on surface water rights and underground water rights. Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
---	---	---	--

ACKNOWLEDGEMENT

I, We (name of applicant(s)), Joseph Wiley Print Name(s) affirm that the foregoing statements are true to the best of (my, our) knowledge and belief. 0 Applicant Signature Applicant Signature ACTION OF THE STATE ENGINEER This application is: A approved partially approved denied provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval. 25th day of November 20 <sup>14</sup> , for the State Engineer, Witness my hand and seal this Scott A. Verhines, PE , State Engineer By: Kimberly Kirby Print Signature Title: Water Resource Spec., Water Rights Division District V OSE Notation: Page 4 removed as it Application for Permit, Form wr-07 FOR OSE INTERNAL USE only had the Title underline File Number: SJ-4127 POD1-POD4 Trn Number: carried over. Page 3 of 4 Received by OCD: 1/23/2023 12:18:51 PM

Interstate Stream Commission

## NEW MEXICO OFFICE OF THE STATE ENGINEER

APPLICATION FOR PERMIT TO DRILL A WELL WITH NO CONSUMPTIVE USE OF WATER



(check applicable box):

	For fees, see State Engineer websi	ite: http://www.ose.state.nm.us/	N
Purpose:	Pollution Control And / Or Recovery	Geo-Thermal	STATE AZTE
Exploratory	Construction Site De-Watering	Other (Describe):	
Monitoring	Mineral De-Watering		9 AM
A separate permit wi	Il be required to apply water to beneficial use.		III: 3
I Temporary Requ	est - Requested Start Date: 12/1/14	Requested End Date: 2/2X/15	
	erations Submitted? 🗌 Yes 🛛 No		per email dated 11-24-14
	plan submitted for three existined with this location (MW-5, MW-6	0	

### 1. APPLICANT(S)

Name: Joseph Wiley	Name: Jeffrey Minchak
Contact or Agent: check here if Agent El Paso Natural Gas Co, LLC	Contact or Agent: check here if Agent CH2M HILL
Mailing Address: 1001 Louisiana Street, Room 956L	Mailing Address: 3721 Rutledge Road NE, Suite B-1
City: Houston	City: Albuquerque
State: TX Zip Code: 77002	State: NM Zip Code: 87109
Phone: (832) 279-1610	Phone: (505) 379-3222
E-mail (optional): Joe_Wiley@kindermorgan.com	E-mail (optional): Jeffrey.Minchak@ch2m.com

FOR OSE INTERNAL USE	Application for Permit, Form wr-07, Rev 4/12/12
File Number: SJ-4127 POD5-POD9	Trn Number:
Trans Description (optional):	
Sub-Basin:	
PCW/LOG Due Date: November 25	, 2015

Page 1 of 4

SE Notation:		ciated with the s		on at the	NOV I
	Blanco South Fl	lare Pit and D Pl	lant Areas.		9
					AN II:
					32

Application for Permit, Form wr-0	FOR OSE INTERNAL USE	
Trn Number:	File Number: SJ-4127 POD5-POD9	
Page 2 of		



6

3

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

Exploratory:	Pollution Control and/or Recovery:	Construction De-Watering:	Mine De-Watering:
description of any proposed	control/recovery, that includes the following:	Include a description of the proposed dewatering	control/recovery, that includes the following:
pump test, if applicable.	A description of the need for the pollution control or recovery operation.	operation,	dewatering.
	The estimated maximum period of time for completion of the operation.	the operation,	for completion of the operation.
	<ul> <li>The annual diversion amount.</li> <li>The annual consumptive use</li> </ul>	water to be diverted,	The geohydrologic characteristics of the aquifer(s).
	amount.	for the dewatering operation, and,	The maximum amount of water to be diverted per annum.
	diverted and injected for the duration of the operation.	A description of how the diverted water will be disposed	The maximum amount of water to be diverted for the duration of the operation.
	The method and place of discharge.	of.	The quality of the water.
Monitoring:	The method of measurement of water produced and discharged.	Geo-Thermal:	The method of measurement of water diverted.
reason for the monitoring	The source of water to be injected.	geothermal heat exchange project,	The recharge of water to the aquifer.
well, and,	water injected.	The amount of water to be diverted and re-injected for the	hydrologic effect of the project.
duration of the planned	The method of determining the resulting annual consumptive use of	project,	An estimation of the effects on surface water rights and underground water rights
monitoring.	water and depletion from any related	constructing the geothermal	from the mine dewatering project.
	stream system. Proof of any permit required from the	heat exchange project, and,	A description of the methods employed to estimate effects on surface water rights and
	New Mexico Environment Department.	Preliminary surveys, design data, and additional	underground water rights.
	applicant is not the owner of the land on which the pollution plume control or	information shall be included to provide all essential facts	springs, and wetlands within the area of hydrologic effect.
1.1.1	recovery well is to be located.	relating to the request.	nyurologio eneot.

### ACKNOWLEDGEMENT

Print Name(s)

I, We (name of applicant(s)), Joseph Wiley

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

Applicant Signature

Applicant Signature
ACTION OF THE STATE ENGINEER

This application is:

🕱 approved 🗌 partially approved 🗌 denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the <u>attached</u> conditions of approval.

Witness my hand and seal this 25th day o	f <u>November</u> 20 <u>14</u> , f	or the State Engineer,
Scott A. Verhines, PE	, State Engineer	
By: Signature	Kimberly Print	Kirby
Title: Water Resource Spec., Water 1	Rights Division District V	
OSE Notation: Page 4 removed as i only had the Title underline	FOR OSE INTERNAL USE	Application for Permit, Form wr-07
carried over.	File Number: SJ-4127 POD5-POD9	Trn Number:
		Page 3 of 4

. 1

o. SJ-4127 POD10-POD11

Interstate Stream Commission	NEW MEXICO OFFICE OF APPLICATION FOR PERI WITH NO CONSUMPTI (check applic	MIT TO DRILL A WELL VE USE OF WATER	EER
	For fees, see State Engineer websi	ite: http://www.ose.state.nm.us/	20 ST
Purpose:	Pollution Control And / Or Recovery	Geo-Thermal	NOV ATEEN
Exploratory	Construction Site De-Watering	Other (Describe):	19 NEW
Monitoring	Mineral De-Watering		AM 11: :
A separate permit will b	e required to apply water to beneficial use.		3 - M
X Temporary Request	- Requested Start Date: 12/1/14	Requested End Da	
Plugging Plan of Opera	tions Submitted? 🗌 Yes 🛛 No		per email dated 11-24-14
	submitted for three existing u th this location (MW-5, MW-6 ar		

### 1. APPLICANT(S)

Name: Joseph Wiley	Name: Jeffrey Minchak
Contact or Agent: check here if Agent El Paso Natural Gas Co, LLC	Contact or Agent: check here if Agent CH2M HILL
Mailing Address: 1001 Louisiana Street, Room 956L	Mailing Address: 3721 Rutledge Road NE, Suite B-1
City: Houston	City: Albuquerque
State: TX Zip Code: 77002	State: NM Zip Code: 87109
Phone: (932) 279-1610	Phone: (505) 379-3222         □ Home ⊠ Cell           Phone (Work): (505) 855-5237
E-mail (optional): Joe_Wiley@kindermorgan.com	E-mail (optional): Jeffrey.Minchak@ch2m.com

 FOR OSE INTERNAL USE
 Application for Permit, Form wr-07, Rev 4/12/12

 File Number: SJ-4127 POD10-POD11
 Trn Number:

 Trans Description (optional):
 Sub-Basin:

 PCW/LOG Due Date:
 November 25, 2015

Lat/Long - WGS84).			ate Plane (NAD 83), UTM (NAD 83), <u>or</u> Latitude/Longitude a PLSS location in addition to above.		
<ul> <li>NM State Plane (NAD83)</li> <li>NM West Zone</li> <li>NM East Zone</li> <li>NM Central Zone</li> </ul>		JTM (NAD83) (Meter ]Zone 12N ]Zone 13N	rs)   Lat/Long (WGS84) (to the nearest 1/10 <sup>th</sup> of second)		
Well Number (if known):	XXXXXX <b>Easthig</b> XXXX X <b>kangitude</b> XXX Y	X <b>XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX</b>	Provide if known: -Public Land Survey System (PLSS) ( <i>Quarters or Halves , Section, Township, Range</i> ) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name		
<b>WW-80</b> (SJ-4127 POD10)	2085066.8509	2686234.3066	Section: 14, Township: 29N, Range: 11W		
<b>WW-81</b> (SJ-4127 POD11)	2084599.186	2686024.8882	Section: 14, Township: 29N, Range: 11W		
			2014 NOV		
E. 1	E		OV JEENON 19		
			AM II:		
NOTE: If more well location Additional well descriptions			WR-08 (Attachment 1 – POD Descriptions)		
and the second	to common landmark	ks, streets, or other:	Well locations are located on the south side of County Road		
Nell is on land owned by: EI	. Paso Natural	Gas Co. (per	email dated 11-24-14)		
<b>Well Information:</b> NOTE: If r If yes, how many	nore than one (1) we	ell needs to be desc	ribed, provide attachment. Attached? 🗌 Yes 🛛 No		
Approximate depth of well (fee	et): 50.00	0	Outside diameter of well casing (inches): 4.50		

### 3. ADDITIONAL STATEMENTS OR EXPLANATIONS

OSE Notation: Wells are associated with site investigation of the Blanco South Flare Pit and D Plant Areas. \*\*



4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate

<ul> <li>xes, to indicate</li> <li>Exploratory:         <ul> <li>Include a</li> <li>description of</li> <li>any proposed</li> <li>pump test, if</li> <li>applicable.</li> </ul> </li> <li>Monitoring:         <ul> <li>Include the</li> <li>reason for the</li> <li>monitoring</li> <li>well, and,</li> <li>The</li> <li>duration</li> <li>of the planned</li> <li>monitoring.</li> </ul> </li> </ul>	the information has been included and/or at the information has been included and/or at <b>Pollution Control and/or Recovery:</b> Include a plan for pollution control/recovery, that includes the following:       A description of the need for the pollution control or recovery operation.         The estimated maximum period of time for completion of the operation.       The annual diversion amount.         The annual diversion amount.       The maximum amount of water to be diverted and injected for the duration of the operation.         The method and place of discharge.       The method of measurement of water produced and discharged.         The method of measurement of water injected.       The method of determining the resulting annual consumptive use of water and depletion from any related stream system.         Proof of any permit required from the	Construction De-Watering: Include a description of the proposed dewatering operation, The estimated duration of the operation, The maximum amount of water to be diverted, A description of the need for the dewatering operation, and, A description of how the diverted water will be disposed of. Geo-Thermal: Include a description of the geothermal heat exchange project, The amount of water to be diverted and re-injected for the project, The time frame for constructing the geothermal heat exchange project, and, The duration of the project.	Mine De-Watering:
	New Mexico Environment Department. An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	underground water rights. Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
	AC	CKNOWLEDGEMENT	STATE AZTI 2014 NC
I, We (name of	applicant(s)), Joseph Wiley	rint Name(s)	
affirm that the f	oregoing statements are true to the best of Additional ature	(my, our) knowledge and belief.	e VGINEER OFFIC
	ACTION	OF THE STATE ENGINEER	6 DT
provided it is	☑ approved not exercised to the detriment of any others	having existing rights, and is not o	☐ denied contrary to the conservation of water in New
Mexico nor de	etrimental to the public welfare and further s	subject to the <u>attached</u> conditions of	of approval.
Witness my ha	nd and seal this $25 th$ day of Nor	vember 20 14	, for the State Engineer,

Scott A. Verhines, PE

By: Signature

Title:Water Resource Spec., Water Rigths Division District V

OSE Notation: Page 4 removed as it	FOR OSE INTERNAL USE	Application for Permit, Form wr-07
only had the Title underline carried over.	File Number: SJ-4127 POD10-POD11	Trn Number:
called over.	00 4127 10D10 10D11	Page 3 of 4

, State Engineer

Kimberly Kirby Print

The New Mexico Office of the State Engineer (NMOSE) has determined that existing water rights will not be impaired by this activity. This application is approved without publication provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state. This application is further subject to the following conditions of approval.

1.

This application is approved as follows:

Permittee(s):

El Paso Natural Gas Co., LLC (via Jeffrey Minchak, CH2M HILL, as Agent) 1001 Louisiana St., Room 956L Houston, TX 77002

Permit Number:

SJ-4127

Groundwater

November 19, 2014

Application File Date:

**Priority:** 

N/A

Source:

Point(s) of Diversion:

SJ-4127 POD1–POD11, 11 newly proposed groundwater monitoring wells associated with a site investigation at the Blanco Plant South Flare Pit Area, located on land owned by the applicant in San Juan County, New Mexico. The wells (aka, points of diversion; PODs) are to be located within the NW/4 NE/4, NE/4 NW/4, SE/4 NW/4, SW/4 NE/4 of Section 14 and SE/4 SW/4 of Section 11, both in Township 29 North, Range 11 West, NMPM, at the following approximate point locations (State Plane NM West, NAD83; feet).

Table 1: Proposed Monitoring Wells	Tab	ole 1	:	Proposed	M	lonit	toring	Wel	ls
------------------------------------	-----	-------	---	----------	---	-------	--------	-----	----

POD Name and Owner's Well Identification	Х	Y
SJ-4127 POD1 (MW-71)	2685097.54	2085809.45
SJ-4127 POD2 (MW-72)	2685482.3535	2084534.0818
SJ-4127 POD3 (MW-73)	2685874.0635	2084835.7311
SJ-4127 POD4 (MW-74)	2685959.784	2084408.2137
SJ-4127 POD5 (MW-75)	2686216.9455	2084710.9481
SJ-4127 POD6 (MW-76)	2685504.0549	2084353.9603
SJ-4127 POD7 (MW-77)	2685745.6	2085323.44
SJ-4127 POD8 (MW-78)	2685752.76	2084774.14
SJ-4127 POD9 (MW-79)	2685775.4088	2085042.3455
SJ-4127 POD10 (MW-80)	2686234.3066	2085066.8509
SJ-4127 POD11 (MW-81)	2686024.8882	2084599.186

ş

NMOSE Permit to Drill a Non-consumptive Well(s) Conditions of Approval SJ-4127 POD1–POD11 Page 2 of 6 November 25, 2014

Table 2: Existing Monitoring W	ell (	(unpermitted)	to be	Plugged	and Abandoned.
--------------------------------	-------	---------------	-------	---------	----------------

POD Name and Owner's Well Identification	X	Y
MW-5 to be plugged	2685510.470	2084534.0
MW-6 to be plugged	2685886.720	2084836.0
MW-7 to be plugged	2685970.670	2084408.0

Purpose of Use:	Groundwater monitoring
Place of Use:	N/A
Amount of Water:	N/A

- 2. No water shall be appropriated and beneficially used from any wells approved under this permit.
- 3. No water shall be diverted from the well(s) except for sampling purposes, and upon completion of monitoring activities the well(s) shall be plugged in accordance with Subsection C of 19.27.4.30 NMAC, unless a permit to use water is acquired from the NMOSE.
- 4. The well(s) may continue to be used indefinitely for groundwater sampling or monitoring required for the current site investigation and any associated remediation, so long as they remain in good repair. A new permit shall be obtained from the NMOSE prior to replacing a well(s) or for any change in use as approved herein.
- 5. Water well drilling and well drilling activities, including well plugging, are regulated under NMOSE Regulations 19.27.4 NMAC. These regulations apply, and provide both general and specific direction regarding the drilling of wells in New Mexico. Note that the construction of any well that allows groundwater to flow uncontrolled to the land surface or to move appreciably between geologic units is prohibited. Based on the proposed well construction information provided regarding the subject well(s), the following variances have been provided from 19.27.4.29 and 19.27.4.30 NMAC.
  - a. Subsection C of 19.27.4.29 NMAC requires that drilling equipment be disinfected with a chlorine bleach solution. Due to the environmental investigative purpose of these wells, chlorine may bias or degrade contaminates under investigation in the soil and groundwater samples to be collected. Therefore, NMOSE is granting a variance to allow for steam and the use of a suitable cleaning solution for the cleaning of drilling equipment between the drilling of each borehole/well.
  - b. Paragraph (2) of Subsection A of 19.27.4.30 NMAC requires that for wells completed less than 20 feet below land surface, the seal be placed from land surface to the bottom of the blank casing. However, due to the need for collection of groundwater samples at particular and discrete intervals, and a screened

Page 29 of 68

NMOSE Permit to Drill a Non-Consumptive Well(s) Conditions of Approval SJ-4127 POD1–POD11 Page 3 of 6 November 25, 2014

interval that accounts for fluctuations in the water levels, the seal may be placed above the filter pack which may be extended up to two feet above the top of the screened interval.

- 6. In accordance with Subsection A of 19.27.4.29 NMAC, on-site supervision of well drilling/plugging is required by the holder of a New Mexico Well Driller License or a NMOSE-registered Drill Rig Supervisor. The New Mexico licensed Well Driller shall ensure that well drilling activities are completed in accordance with 19.27.4.29, 19.27.4.30 and 19.27.4.31 NMAC. However, pursuant to 72-12-12 NMSA 1978 and 19.27.4.8 NMAC, a driller's license is not required for the construction of a driven well with an outside casing diameter of 2<sup>3</sup>/<sub>8</sub> inches or less and that does not require the use of a drill rig for installation.
- 7. Based on existing on-site well information it appears unlikely that artesian conditions will be encountered at the proposed well location(s). However, if artesian conditions are encountered during drilling, all rules and regulations pertaining to the drilling and casing and plugging of artesian wells shall be followed.
- 8. A Well Record documenting the as-built well construction and materials used shall be filed for each of the new wells in accordance with Subsection K of 19.27.4.29 NMAC. Well Records shall be filed with the State Engineer (NMOSE District V, 100 Gossett Drive, Suite A, Aztec, NM, 87410) within 20 days after completion of the well(s). Well installation(s) shall be complete and the well record(s) filed no later than one year from the date of approval of this permit.
- 9. If the required Well Record documentation is not received within one year of the date of permit approval, this permit will automatically expire.
- 10. The November 19, 2014 application also includes a plugging plan for the proposed abandonment of three existing unpermitted monitoring wells (MW-5, MW-6 and MW-7) that have gone dry. The well plugging will be performed by National EWP under well driller license WD-1210. The wells/boring shall be plugged in accordance with Subsection C of 19.27.4.30 NMAC, the approved Plugging Plans of Operations and the following conditions of approval:
  - a. Obstructions in a well/borehole shall be identified and removed if possible. If an obstruction cannot be removed, the method used to grout below and around the obstruction shall be described in detail in the plugging record.
  - b. The theoretical volume of sealant required for abandonment of a 4-inch well casing is approximately 0.65 gallons per linear foot of casing. The theoretical volume of sealant required for abandonment of each well casing shall be determined prior to plugging. The total minimum volume of sealant shall be calculated based on the actual measured pluggable depth of the well and the volume factor for the casing diameter. The volume of sealing material placed in the well shall be compared with

NMOSE Permit to Drill a Non-consumptive Well(s) Conditions of Approval

SJ-4127 POD1-POD11 Page 4 of 6 November 25, 2014 Page 30 of 68

the theoretical volume to verify the actual volume of sealant is equal to or exceeds the theoretical volume.

The Well Plugging Plan of Operations submitted proposes the use of Portland cement c. as the plugging sealant; Portland Type I/II cement is required. The water mixed with the cement to create the plugging grout shall be potable water or of similar quality. Portland cement has a fundamental water demand of 5.2 gallons of water per 94-lb sack of cement. The mix rate proposed in the plan is approximately 5.2 gallons of water per 94-lb sack of cement. If necessary for pumpability, the use of a slightly higher amount of cement mixing water is acceptable as long as it remains at or below the six gallons per 94-lb sack limit allowed by NMOSE.

This plugging plan also proposes the addition of bentonite powder to the Portland cement slurry. Pure bentonite powder ("90 barrel yield") is allowed as a cement additive by NMOSE and American Water Works Association (AWWA) guidelines. Neither granular bentonite nor extended-yield bentonite shall be mixed with cement for the purpose of this plugging activity. When supplementing a cement slurry with bentonite powder, water demand for the mix increases at a rate of approximately 0.65 gallon of water for each 1% increment of bentonite bdwc (by dry weight cement) above the stated base water demand of six gallons of water per 94-lb sack of cement for neat cement. Bentonite powder must be hydrated separately with its required increment of water before being mixed into the wet neat cement. If water is otherwise added to the combination of dry ingredients or the dry bentonite is blended into wet cement, the alkalinity of the cement will restrict the yield of the bentonite powder, resulting in excess free water in the slurry and excessive cement shrinkage upon curing.

- d. Placement of the sealant within the well(s) shall be by pumping through a tremie pipe extended to near the bottom of the well and kept below the top of the slurry column (i.e., immersed in the slurry) as the well is plugged from bottom upwards in a manner that displaces the standing water column.
- e. Prior to, or upon completion of plugging, the well casing may be cut-off below grade as necessary to allow for approved construction onsite, provided a minimum six-inch thickness of reinforced abandonment plugging sealant or concrete completely covers the top of the cut-off casing. Any remaining void to the surface maybe filled with native soil, concrete, or asphalt as needed to match the surrounding surface material and blended with the surface topography to prevent ponding.
- f. Witnessing of the plugging work by NMOSE will not be required, but shall be facilitated if an NMOSE observer is onsite. NMOSE witnessing may be requested during normal work hours by calling the NMOSE - District V Office at (505) 334-4571, at least 48 hours in advance. NMOSE inspection will occur depending on personnel availability.

NMOSE Permit to Drill a Non-Consumptive Well(s) Conditions of Approval SJ-4127 POD1–POD11 Page 5 of 6 November 25, 2014

- g. Within 20 days after completion of well plugging, a complete well Plugging Record shall be filed with the State Engineer in accordance with Paragraph (3) of Subsection C of 19.27.4.30 NMAC for each well plugged. The Well Plugging Record(s) shall be filed with the State Engineer at the NMOSE District V Office, 100 Gossett Drive, Suite A, Aztec, NM 87410. The required well plugging record form is available at http://www.ose.state.nm.us/PDF/WellDrillers/WD-11.pdf.
- h. Additionally, the work plan attached to the application indicates that up to 32 soil borings will be drilled for soil sample collection, 11 of which will be completed as the proposed monitoring wells authorized by this permit. Those soil borings not completed as monitoring wells may or may not encounter groundwater; yet will be plugged, as proposed, in the same manner as the three monitoring wells proposed for abandonment.
  - i. No water shall be appropriated and beneficially used from the boring(s) during the time between drilling completion and plugging. Groundwater samples associated with the site investigation may be collected prior to plugging.
  - ii. A Plugging Record is <u>not</u> required to be filed with the State Engineer for the soil borings.
- 11. Should another regulatory agency sharing jurisdiction of the project authorize, or by regulation require, more stringent requirements than stated herein, the more stringent procedure should be followed. These, among others, may include provisions regarding pre-authorization to proceed, type of methods and materials used, inspection, or prohibition of free discharge of any fluid or other material to or from the well that is related to the drilling and/or monitoring process.
- 12. The State Engineer retains jurisdiction of this permit.

The application for non-consumptive use for well(s) <u>SJ-4127 POD1–POD11</u>, submitted on <u>November 19, 2014</u>, including a plugging plan for three existing unpermitted wells, is hereby approved with the aforesaid conditions applied, when signed by an authorized designee of the State Engineer:

Witness my hand and seal this <u>25<sup>th</sup></u> day of <u>November</u>, A.D. 2014. Scott A. Verhines, P.E., State Engineer

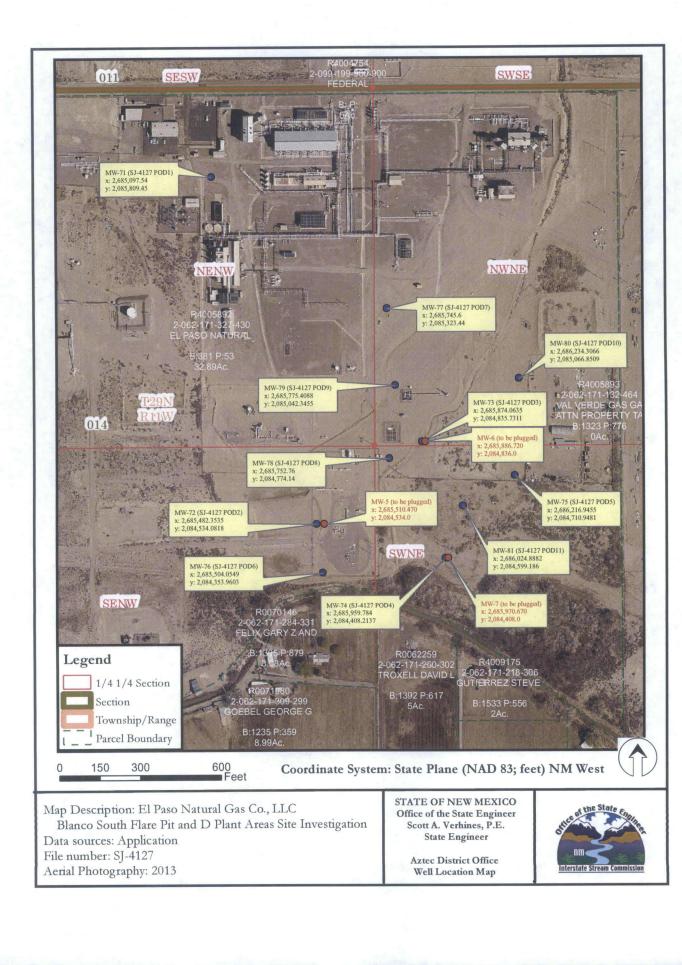
By:

Kimberly D. Kirby, Water Resource Specialist District V, Water Rights Division Received by OCD: 1/23/2023 12:18:51 PM

Conditions of Approval

SJ-4127 POD1–POD11 Page 6 of 6

Page 6 of 6 November 25, 2014



Page 33 of 68

Received by OCD: 1/23/2023 12:18:51 PM



### STATE OF NEW MEXICO OFFICE OF THE STATE ENGINEER AZTEC

Scott A. Verhines, P.E. State Engineer 100 Gossett Drive, Suite A Aztec, New Mexico 87410

November 25, 2014

Joseph Wiley El Paso Natural Gas Company, LLC 1001 Louisiana St, Room 956L Houston, TX 77002

RE: Permit Approval to Drill Non-Consumptive Wells, SJ-4127 POD1-POD11, and Plugging Plan Approval, El Paso Natural Gas Co., Blanco South Flare Pit and D Plant Areas Site Investigation

Dear Mr. Wiley:

On November 19, 2014, the New Mexico Office of the State Engineer (NMOSE) received an application for a permit to install 11 groundwater monitoring wells for the above referenced location. A Plugging Plan of Operations was also received with the application, for abandonment of three existing unpermitted monitoring wells. Additional information and corrections were received on November 24, 2014. Enclosed are copies of the above numbered permit and plugging plan that have been approved subject to the conditions set forth on the approval pages and in the attached Conditions of Approval.

Please be aware that there are deadlines to submit well records for the newly installed monitoring wells and plugging records for the abandoned wells. These deadlines can be found in the attached Conditions of Approval in Conditions 8 and 10.g, respectively.

Also, the application indicates that there are additional existing wells at this location, which do not appear to have permit coverage. The NMOSE is requesting that these existing wells be brought into compliance by obtaining permit coverage. Please submit an application to NMOSE as soon as practicable to obtain permit coverage for these wells.

If you have any questions regarding this permitting action, please feel free to contact me at (505) 334-4282.

Sincerely,

Kimberly Kirby Water Resource Specialist

Water Resource Specialist Water Rights Division – District V

Enclosures

cc: Aztec Reading (w/o enclosures) SJ-4127 File WATERS

Jeffrey Minchak, CH2M HILL, via email: <u>Jeffrey.Minchak@ch2m.com</u> Bryan Nydoske, National EWP, via email: <u>bnydoske@nationalewp.com</u>

.

Monitoring Well	TOC Elevation (ft amsl)	Measurement Date	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)
MW-79	5583.35	2/11/2015	35.67	5547.68
		12/16/2015	33.73	5549.62
		12/14/2016	33.74	5549.61
		11/15/2017	33.17	5550.18
		1/28/2018	34.35	5549.00
		11/15/2018	33.57	5549.78
		4/16/2019	35.96	5547.39
		9/23/2019	34.12	5549.23
		10/15/2019	33.98	5549.37
		11/17/2020	33.39	5549.96
MW-80	5587.4	2/10/2015	29.43	5557.97
		12/16/2015	26.65	5560.75
		12/14/2016	28.82	5558.58
		11/15/2017	27.49	5559.91
		1/28/2018	28.81	5558.59
		11/15/2018	30.50	5556.90
		4/16/2019	30.51	5556.89
		9/23/2019	27.50	5559.90
		10/15/2019	27.56	5559.84
		11/17/2020	30.90	5556.50
MW-81	5576.5	2/11/2015	30.25	5546.25
		12/16/2015	28.03	5548.47
		12/14/2016	27.95	5548.55
		11/15/2017	27.39	5549.11
		1/28/2018	29.08	5547.42
		11/15/2018	27.78	5548.72
		4/16/2019	30.78	5545.72
		9/23/2019	28.10	5548.40
		10/15/2019	27.98	5548.52
		11/17/2020	27.25	5549.25

Table 1 Groundwater Elevation Data Blanco Gas Plant South Flare Pit - Bloomfield, New Mexico

Data from monitoring wells abandoned prior to 2018 have been removed from the table

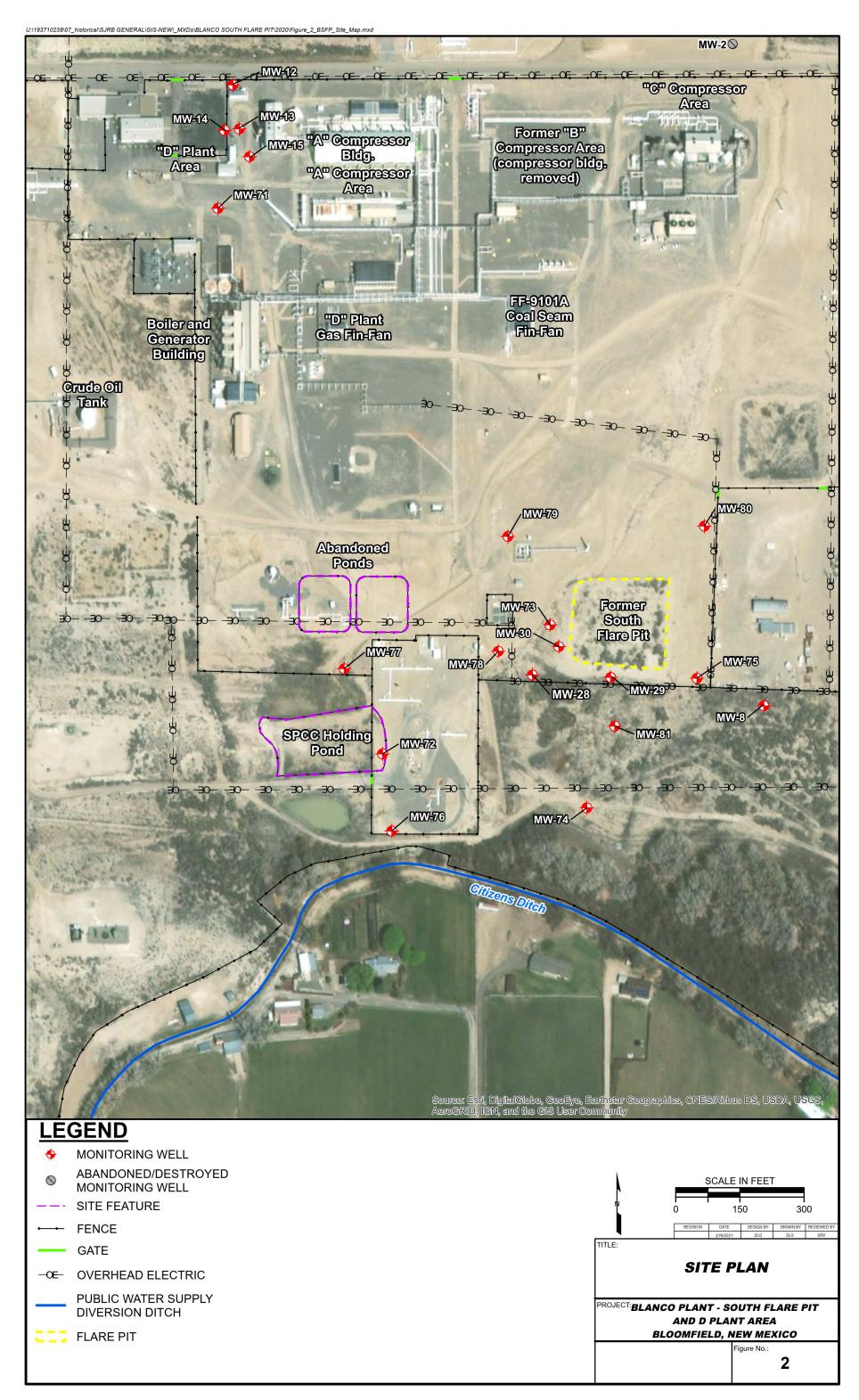
NA = Historical data is not available

NM = not measured

ft btoc = feet below top of casing

ft amsl = feet above mean sea level

TOC = top of casing



Released to Imaging: 5/3/2028 9:51:25 AMAM



APPENDIX B

Photographic Log

Released to Imaging: 5/3/2023 9:51:25 AM





Photographic Log Val Verde Plant Harvest Four Corners, LLC San Juan County, New Mexico

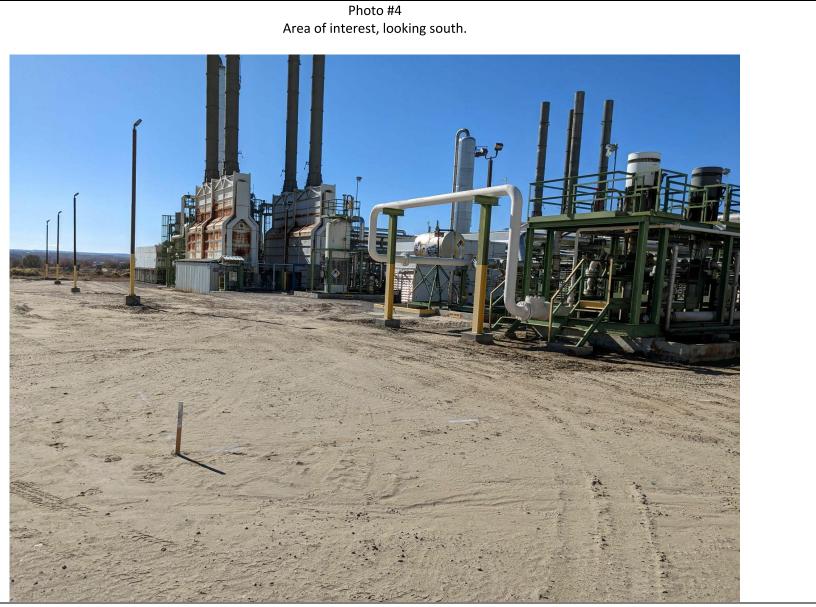
Photo #2 Hand excavation areas.







Photographic Log Val Verde Plant Harvest Four Corners, LLC San Juan County, New Mexico



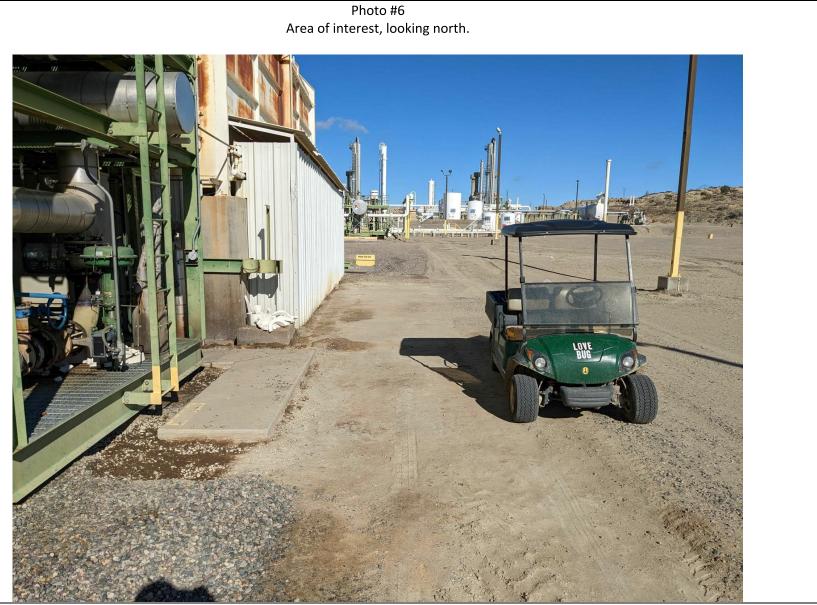


Photographic Log Val Verde Plant Harvest Four Corners, LLC San Juan County, New Mexico

Photo #5 Area of interest, looking west.



Photographic Log Val Verde Plant Harvest Four Corners, LLC San Juan County, New Mexico





# APPENDIX C

# Laboratory Analytical Reports

Released to Imaging: 5/3/2023 9:51:25 AM



December 02, 2022 Jennifer Deal Harvest

1755 Arroyo Dr. Bloomfield, NM 87413 TEL: (505) 632-4475 FAX

RE: Val Verde Gas Plant

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

OrderNo.: 2211B87

Dear Jennifer Deal:

Hall Environmental Analysis Laboratory received 15 sample(s) on 11/19/2022 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 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Project: Val Verde Gas Plant

**Analytical Report** Lab Order 2211B87

### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/2/2022 Client Sample ID: BH1-0-0.5 Collection Date: 11/18/2022 11:35:00 AM

Lab ID: 2211B87-001	Matrix: SOIL		<b>Received Date:</b> 11/19/2022 7:05:00 AM				
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS					Analyst	: JTT	
Chloride	ND	60	mg/Kg	20	11/29/2022 1:23:20 PM	71740	
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS				Analyst	DGH	
Diesel Range Organics (DRO)	330	14	mg/Kg	1	11/29/2022 11:05:51 Al	M 71704	
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	11/29/2022 11:05:51 AI	M 71704	
Surr: DNOP	105	21-129	%Rec	1	11/29/2022 11:05:51 AI	M 71704	
EPA METHOD 8015D: GASOLINE RAN	IGE				Analyst	: NSB	
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	11/28/2022 8:21:52 PM	71675	
Surr: BFB	93.4	37.7-212	%Rec	1	11/28/2022 8:21:52 PM	71675	
EPA METHOD 8021B: VOLATILES					Analyst	NSB	
Benzene	ND	0.024	mg/Kg	1	11/28/2022 8:21:52 PM	71675	
Toluene	ND	0.049	mg/Kg	1	11/28/2022 8:21:52 PM	71675	
Ethylbenzene	ND	0.049	mg/Kg	1	11/28/2022 8:21:52 PM	71675	
Xylenes, Total	ND	0.098	mg/Kg	1	11/28/2022 8:21:52 PM	71675	
Surr: 4-Bromofluorobenzene	90.1	70-130	%Rec	1	11/28/2022 8:21:52 PM	71675	
SM4500H+B/EPA 9040C					Analyst	SNS	
рН	9.13		pH Units	s 1	11/29/2022 4:20:00 PM	R92891	

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of standard limits. If undiluted results may be estimated. S
- в Analyte detected in the associated Method Blank
- Е Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits Sample pH Not In Range
- Р Reporting Limit

RL

Page 1 of 20

Val Verde Gas Plant

2211B87-002

**Project:** 

Lab ID:

Analytical Report Lab Order 2211B87

### Hall Environmental Analysis Laboratory, Inc.

Lab Order **2211B87** Date Reported: **12/2/2022** 

Client Sample ID: BH1-2.5-3
Collection Date: 11/18/2022 11:38:00 AM
Received Date: 11/19/2022 7:05:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed Batch
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>
Chloride	ND	60	mg/Kg	20	11/29/2022 1:35:44 PM 71740
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	11/29/2022 12:16:51 PM 71704
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	11/29/2022 12:16:51 PM 71704
Surr: DNOP	107	21-129	%Rec	1	11/29/2022 12:16:51 PM 71704
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	11/28/2022 9:32:55 PM 71675
Surr: BFB	94.6	37.7-212	%Rec	1	11/28/2022 9:32:55 PM 71675
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	11/28/2022 9:32:55 PM 71675
Toluene	ND	0.049	mg/Kg	1	11/28/2022 9:32:55 PM 71675
Ethylbenzene	ND	0.049	mg/Kg	1	11/28/2022 9:32:55 PM 71675
Xylenes, Total	ND	0.098	mg/Kg	1	11/28/2022 9:32:55 PM 71675
Surr: 4-Bromofluorobenzene	92.9	70-130	%Rec	1	11/28/2022 9:32:55 PM 71675
SM4500H+B/EPA 9040C					Analyst: SNS
рН	7.55		pH Units	s 1	11/29/2022 4:20:00 PM R9289

Matrix: SOIL

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated ValueJ Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 20

Val Verde Gas Plant

2211B87-003

**Project:** 

Lab ID:

**Analytical Report** Lab Order 2211B87

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/2/2022 Client Sample ID: BH1-4.5-5

Collection Date: 11/18/2022 11:42:00 AM Matrix: SOIL Received Date: 11/19/2022 7:05:00 AM . . . ----~ --\_

Analyses	Result	RL	Qual U	Inits	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	JTT
Chloride	ND	60	m	ng/Kg	20	11/29/2022 1:48:09 PM	71740
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	DGH
Diesel Range Organics (DRO)	ND	14	m	ng/Kg	1	11/29/2022 2:39:12 PM	71704
Motor Oil Range Organics (MRO)	ND	48	m	ng/Kg	1	11/29/2022 2:39:12 PM	71704
Surr: DNOP	97.6	21-129	%	6Rec	1	11/29/2022 2:39:12 PM	71704
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	m	ng/Kg	1	11/28/2022 9:56:34 PM	71675
Surr: BFB	91.1	37.7-212	%	6Rec	1	11/28/2022 9:56:34 PM	71675
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025	m	ng/Kg	1	11/28/2022 9:56:34 PM	71675
Toluene	ND	0.049	m	ng/Kg	1	11/28/2022 9:56:34 PM	71675
Ethylbenzene	ND	0.049	m	ng/Kg	1	11/28/2022 9:56:34 PM	71675
Xylenes, Total	ND	0.098	m	ng/Kg	1	11/28/2022 9:56:34 PM	71675
Surr: 4-Bromofluorobenzene	88.3	70-130	%	6Rec	1	11/28/2022 9:56:34 PM	71675
SM4500H+B/EPA 9040C						Analyst	SNS
рН	6.80		pl	H Units	1	11/29/2022 4:20:00 PM	R92891

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of standard limits. If undiluted results may be estimated. S
- в Analyte detected in the associated Method Blank
- Е Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range Reporting Limit
- RL

Page 3 of 20

Project: Val Verde Gas Plant

Analytical Report Lab Order 2211B87

11/29/2022 4:20:00 PM R92891

### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/2/2022 Client Sample ID: BH2-0-0.5 Collection Date: 11/18/2022 12:05:00 PM

Lab ID: 2211B87-004	Matrix: SOIL		<b>Received Dat</b>	<b>e:</b> 11	/19/2022 7:05:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed Ba	atch
EPA METHOD 300.0: ANIONS					Analyst: J	тт
Chloride	ND	60	mg/Kg	20	11/29/2022 2:00:34 PM 7	1740
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst: D	GH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	11/29/2022 3:02:55 PM 7	1704
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	11/29/2022 3:02:55 PM 7'	1704
Surr: DNOP	102	21-129	%Rec	1	11/29/2022 3:02:55 PM 7'	1704
EPA METHOD 8015D: GASOLINE RANG	E				Analyst: N	SB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	11/28/2022 10:20:11 PM 7	1675
Surr: BFB	93.0	37.7-212	%Rec	1	11/28/2022 10:20:11 PM 7	1675
EPA METHOD 8021B: VOLATILES					Analyst: N	SB
Benzene	ND	0.025	mg/Kg	1	11/28/2022 10:20:11 PM 7	1675
Toluene	ND	0.050	mg/Kg	1	11/28/2022 10:20:11 PM 7	1675
Ethylbenzene	ND	0.050	mg/Kg	1	11/28/2022 10:20:11 PM 7	1675
Xylenes, Total	ND	0.10	mg/Kg	1	11/28/2022 10:20:11 PM 7	1675
Surr: 4-Bromofluorobenzene	89.6	70-130	%Rec	1	11/28/2022 10:20:11 PM 7	1675
SM4500H+B/EPA 9040C					Analyst: S	NS

7.67

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

Qualifiers:

pН

- \* 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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value

pH Units 1

- JAnalyte detected below quantitation limitsPSample pH Not In Range
- P Sample pH Not In RL Reporting Limit

Page 4 of 20

Val Verde Gas Plant 2211B87-005

**Project:** 

Lab ID:

Analytical Report Lab Order 2211B87

### Hall Environmental Analysis Laboratory, Inc.

Lab Order **2211B87** Date Reported: **12/2/2022** 

Client Sample ID: BH2-3-4
Collection Date: 11/18/2022 12:08:00 PM
Received Date: 11/19/2022 7:05:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed Batch		
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>		
Chloride	ND	60	mg/Kg	20	11/29/2022 2:12:58 PM 71740		
EPA METHOD 8015M/D: DIESEL RANGE C	ORGANICS				Analyst: DGH		
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	11/30/2022 4:17:47 PM 71704		
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	11/30/2022 4:17:47 PM 71704		
Surr: DNOP	99.8	21-129	%Rec	1	11/30/2022 4:17:47 PM 71704		
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB		
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	11/28/2022 10:43:50 PM 71675		
Surr: BFB	89.3	37.7-212	%Rec	1	11/28/2022 10:43:50 PM 71675		
EPA METHOD 8021B: VOLATILES					Analyst: NSB		
Benzene	ND	0.024	mg/Kg	1	11/28/2022 10:43:50 PM 71675		
Toluene	ND	0.049	mg/Kg	1	11/28/2022 10:43:50 PM 71675		
Ethylbenzene	ND	0.049	mg/Kg	1	11/28/2022 10:43:50 PM 71675		
Xylenes, Total	ND	0.098	mg/Kg	1	11/28/2022 10:43:50 PM 71675		
Surr: 4-Bromofluorobenzene	86.7	70-130	%Rec	1	11/28/2022 10:43:50 PM 71675		
SM4500H+B/EPA 9040C					Analyst: SNS		
рН	8.13		pH Units	5 1	11/29/2022 4:20:00 PM R928		

Matrix: SOIL

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated ValueJ Analyte detected below quantitation limits
- JAnalyte detected below quantitation limitsPSample pH Not In Range
- RL Reporting Limit

Page 5 of 20

Project: Val Verde Gas Plant

Analytical Report Lab Order 2211B87

Date Reported: 12/2/2022

### Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: BH3-0-0.5 Collection Date: 11/18/2022 12:30:00 PM

Lab ID: 2211B87-006	Matrix: SOIL	Matrix:         SOIL         Received Date: 11/19/2022 7:05:				
Analyses	Result	RL	Qual Units	DF	Date Analyzed Batch	
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>	
Chloride	ND	60	mg/Kg	20	11/29/2022 2:25:23 PM 71740	
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analyst: DGH	
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	11/29/2022 7:22:27 PM 71704	
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	11/29/2022 7:22:27 PM 71704	
Surr: DNOP	102	21-129	%Rec	1	11/29/2022 7:22:27 PM 71704	
EPA METHOD 8015D: GASOLINE RAM	NGE				Analyst: NSB	
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	11/28/2022 11:54:29 PM 71675	
Surr: BFB	94.1	37.7-212	%Rec	1	11/28/2022 11:54:29 PM 71675	
EPA METHOD 8021B: VOLATILES					Analyst: NSB	
Benzene	ND	0.024	mg/Kg	1	11/28/2022 11:54:29 PM 71675	
Toluene	ND	0.048	mg/Kg	1	11/28/2022 11:54:29 PM 71675	
Ethylbenzene	ND	0.048	mg/Kg	1	11/28/2022 11:54:29 PM 71675	
Xylenes, Total	ND	0.097	mg/Kg	1	11/28/2022 11:54:29 PM 71675	
Surr: 4-Bromofluorobenzene	91.9	70-130	%Rec	1	11/28/2022 11:54:29 PM 71675	
SM4500H+B/EPA 9040C					Analyst: SNS	
рН	7.97		pH Units	s 1	11/29/2022 4:20:00 PM R92891	

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
   E Above Quantitation Range/Estimated Value
- E
   Above Quantitation Range/Estimated Value

   J
   Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 6 of 20

Analytical Report
Lab Order 2211B87

### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/2/2022

CLIENT: Harvest		Cl	ient Sample II	): Bł	H3-3-4		
<b>Project:</b> Val Verde Gas Plant	Collection Date: 11/18/2022 12:34:00 PM						
Lab ID: 2211B87-007	Matrix: SOIL		<b>Received Date</b>	e: 11	/19/2022 7:05:00 AM		
Analyses	Result	RL	Qual Units	DF	Date Analyzed Batch		
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>		
Chloride	ND	60	mg/Kg	20	11/29/2022 2:37:47 PM 71740		
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst: DGH		
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	11/29/2022 7:45:50 PM 71704		
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	11/29/2022 7:45:50 PM 71704		
Surr: DNOP	96.0	21-129	%Rec	1	11/29/2022 7:45:50 PM 71704		
EPA METHOD 8015D: GASOLINE RANGE	E				Analyst: NSB		
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	11/29/2022 12:17:57 AM 71675		
Surr: BFB	91.1	37.7-212	%Rec	1	11/29/2022 12:17:57 AM 71675		
EPA METHOD 8021B: VOLATILES					Analyst: NSB		
Benzene	ND	0.025	mg/Kg	1	11/29/2022 12:17:57 AM 71675		
Toluene	ND	0.050	mg/Kg	1	11/29/2022 12:17:57 AM 71675		
Ethylbenzene	ND	0.050	mg/Kg	1	11/29/2022 12:17:57 AM 71675		
Xylenes, Total	ND	0.099	mg/Kg	1	11/29/2022 12:17:57 AM 71675		
Surr: 4-Bromofluorobenzene	88.2	70-130	%Rec	1	11/29/2022 12:17:57 AM 71675		
SM4500H+B/EPA 9040C					Analyst: SNS		
рН	8.33		pH Units	s 1	11/29/2022 4:20:00 PM R92891		

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- JAnalyte detected below quantitation limitsPSample pH Not In Range
- P Sample pH Not Ir RL Reporting Limit
- Page 7 of 20

Project: Val Verde Gas Plant

**Analytical Report** Lab Order 2211B87

### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/2/2022 Client Sample ID: BH4-0-0.5 Collection Date: 11/18/2022 12:55:00 PM

Lab ID: 2211B87-008	Matrix: SOIL		Received Date	e: 11	/19/2022 7:05:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	JTT
Chloride	ND	60	mg/Kg	20	11/29/2022 3:15:00 PM	71740
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst:	DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	11/29/2022 8:09:12 PM	71704
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	11/29/2022 8:09:12 PM	71704
Surr: DNOP	106	21-129	%Rec	1	11/29/2022 8:09:12 PM	71704
EPA METHOD 8015D: GASOLINE RANG	E				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	11/29/2022 12:41:28 AM	71675
Surr: BFB	90.1	37.7-212	%Rec	1	11/29/2022 12:41:28 AM	71675
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.024	mg/Kg	1	11/29/2022 12:41:28 AM	71675
Toluene	ND	0.048	mg/Kg	1	11/29/2022 12:41:28 AM	71675
Ethylbenzene	ND	0.048	mg/Kg	1	11/29/2022 12:41:28 AM	71675
Xylenes, Total	ND	0.097	mg/Kg	1	11/29/2022 12:41:28 AM	71675
Surr: 4-Bromofluorobenzene	87.9	70-130	%Rec	1	11/29/2022 12:41:28 AM	71675
SM4500H+B/EPA 9040C					Analyst:	SNS
рН	7.78		pH Units	s 1	11/29/2022 4:20:00 PM	R92891

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of standard limits. If undiluted results may be estimated. S
- в Analyte detected in the associated Method Blank
- Е Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range Reporting Limit
- RL

Page 8 of 20

Project: Val Verde Gas Plant

Analytical Report Lab Order 2211B87

11/29/2022 4:20:00 PM R92891

### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/2/2022

Client Sample ID: BH4-2-3 Collection Date: 11/18/2022 12:58:00 PM Pageived Date: 11/19/2022 7:05:00 AM

Lab ID: 2211B87-009	Matrix: SOIL		<b>Received Dat</b>	<b>e:</b> 11	/19/2022 7:05:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	JTT
Chloride	ND	60	mg/Kg	20	11/29/2022 3:27:25 PM	71740
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	11/29/2022 8:56:32 PM	71704
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	11/29/2022 8:56:32 PM	71704
Surr: DNOP	94.0	21-129	%Rec	1	11/29/2022 8:56:32 PM	71704
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	11/29/2022 1:04:55 AM	71675
Surr: BFB	89.4	37.7-212	%Rec	1	11/29/2022 1:04:55 AM	71675
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	11/29/2022 1:04:55 AM	71675
Toluene	ND	0.049	mg/Kg	1	11/29/2022 1:04:55 AM	71675
Ethylbenzene	ND	0.049	mg/Kg	1	11/29/2022 1:04:55 AM	71675
Xylenes, Total	ND	0.099	mg/Kg	1	11/29/2022 1:04:55 AM	71675
Surr: 4-Bromofluorobenzene	88.2	70-130	%Rec	1	11/29/2022 1:04:55 AM	71675
SM4500H+B/EPA 9040C					Analyst	SNS

7.88

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

Qualifiers:

pН

- \* 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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated ValueJ Analyte detected below quantitation limits
- JAnalyte detected below quantitation limitsPSample pH Not In Range

pH Units 1

RL Reporting Limit

Page 9 of 20

Analytical Report
Lab Order 2211B87

11/29/2022 4:20:00 PM R92891

#### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/2/2022
Client Sample ID: BH5-0-0.5

**Project:** Val Verde Gas Plant Collection Date: 11/18/2022 1:16:00 PM Lab ID: 2211B87-010 Matrix: SOIL Received Date: 11/19/2022 7:05:00 AM Result **RL** Qual Units **DF** Date Analyzed Batch Analyses **EPA METHOD 300.0: ANIONS** Analyst: JTT 11/29/2022 3:39:49 PM 71740 Chloride ND 60 mg/Kg 20 EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: DGH **Diesel Range Organics (DRO)** ND 15 mg/Kg 1 11/29/2022 9:44:05 PM 71704 Motor Oil Range Organics (MRO) ND 50 mg/Kg 1 11/29/2022 9:44:05 PM 71704 Surr: DNOP 100 21-129 %Rec 1 11/29/2022 9:44:05 PM 71704 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB 11/29/2022 1:28:17 AM 71675 Gasoline Range Organics (GRO) ND 4.8 mg/Kg 1 Surr: BFB 89.3 11/29/2022 1:28:17 AM 71675 37.7-212 %Rec 1 **EPA METHOD 8021B: VOLATILES** Analyst: NSB 11/29/2022 1:28:17 AM 71675 Benzene ND 0.024 mg/Kg 1 Toluene ND 0.048 mg/Kg 1 11/29/2022 1:28:17 AM 71675 Ethylbenzene ND 0.048 mg/Kg 1 11/29/2022 1:28:17 AM 71675 Xylenes, Total 0.097 mg/Kg ND 1 11/29/2022 1:28:17 AM 71675 Surr: 4-Bromofluorobenzene 87.4 70-130 %Rec 1 11/29/2022 1:28:17 AM 71675 SM4500H+B/EPA 9040C Analyst: SNS

8.05

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

Qualifiers:

pН

- Value exceeds Maximum Contaminant Level
   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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value J Analyte detected below quantitation limits
- J Analyte detected below quantitation limits P Sample pH Not In Range

pH Units 1

RL Reporting Limit

Page 10 of 20

Analytical Report
Lab Order 2211B87

#### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/2/2022
Client Sample ID: BH5-2-3

**Project:** Val Verde Gas Plant Collection Date: 11/18/2022 1:19:00 PM Lab ID: 2211B87-011 Matrix: SOIL Received Date: 11/19/2022 7:05:00 AM Result **RL** Qual Units **DF** Date Analyzed Batch Analyses **EPA METHOD 300.0: ANIONS** Analyst: JTT 11/29/2022 3:52:14 PM 71740 Chloride ND 60 mg/Kg 20 EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: DGH **Diesel Range Organics (DRO)** ND 15 mg/Kg 1 11/29/2022 10:07:50 PM 71704 Motor Oil Range Organics (MRO) ND 49 mg/Kg 1 11/29/2022 10:07:50 PM 71704 Surr: DNOP 99.9 21-129 %Rec 1 11/29/2022 10:07:50 PM 71704 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: **NSB** Gasoline Range Organics (GRO) ND 11/29/2022 1:51:40 AM 71675 4.8 mg/Kg 1 Surr: BFB 88.2 11/29/2022 1:51:40 AM 71675 37.7-212 %Rec 1 **EPA METHOD 8021B: VOLATILES** Analyst: NSB 11/29/2022 1:51:40 AM 71675 Benzene ND 0.024 mg/Kg 1 Toluene ND 0.048 mg/Kg 1 11/29/2022 1:51:40 AM 71675 Ethylbenzene ND 0.048 mg/Kg 1 11/29/2022 1:51:40 AM 71675 Xylenes, Total 0.097 mg/Kg 11/29/2022 1:51:40 AM 71675 ND 1 Surr: 4-Bromofluorobenzene 86.9 70-130 %Rec 1 11/29/2022 1:51:40 AM 71675 SM4500H+B/EPA 9040C Analyst: SNS pН 8.41 pH Units 1 11/29/2022 4:20:00 PM R92891

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

Qualifiers:

- Value exceeds Maximum Contaminant Level
   Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- POL Practical Quanitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value J Analyte detected below quantitation limits
- J Analyte detected below quantitation limits P Sample pH Not In Range
- RL Reporting Limit

nit

Page 11 of 20

**Analytical Report** Lab Order 2211B87

### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/2/2022 Client Sample ID: BH6-0-0.5 Collection Date: 11/18/2022 1:42:00 PM

<b>Project:</b>	Val Verde Gas Plant		(	Collection Date	e: 11	/18/2022 1:42:00 PM	
Lab ID:	2211B87-012	Matrix: SOIL		<b>Received Date</b>	e: 11	/19/2022 7:05:00 AM	
Analyses		Result	RL	Qual Units	DF	Date Analyzed	Batch
ΕΡΑ ΜΕΤ	HOD 300.0: ANIONS					Analys	t: JTT
Chloride		ND	60	mg/Kg	20	11/29/2022 4:04:39 PM	1 71740
EPA MET	HOD 8015M/D: DIESEL RAN	GE ORGANICS				Analys	t: DGH
Diesel R	ange Organics (DRO)	ND	14	mg/Kg	1	11/29/2022 10:31:34 P	M 71704
Motor Oi	I Range Organics (MRO)	ND	47	mg/Kg	1	11/29/2022 10:31:34 P	M 71704
Surr: [	DNOP	95.3	21-129	%Rec	1	11/29/2022 10:31:34 P	M 71704
EPA MET	HOD 8015D: GASOLINE RAI	NGE				Analys	t: NSB
Gasoline	Range Organics (GRO)	ND	4.9	mg/Kg	1	11/29/2022 2:15:03 AM	1 71675
Surr: E	3FB	89.6	37.7-212	%Rec	1	11/29/2022 2:15:03 AM	1 71675
EPA MET	HOD 8021B: VOLATILES					Analys	t: NSB
Benzene		ND	0.025	mg/Kg	1	11/29/2022 2:15:03 AM	1 71675
Toluene		ND	0.049	mg/Kg	1	11/29/2022 2:15:03 AN	1 71675
Ethylben	zene	ND	0.049	mg/Kg	1	11/29/2022 2:15:03 AM	1 71675
Xylenes,	Total	ND	0.099	mg/Kg	1	11/29/2022 2:15:03 AM	1 71675
Surr: 4	1-Bromofluorobenzene	88.2	70-130	%Rec	1	11/29/2022 2:15:03 AM	1 71675
SM4500H	I+B/EPA 9040C					Analys	t: SNS
pН		8.49		pH Units	s 1	11/29/2022 4:20:00 PM	I R92891

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of standard limits. If undiluted results may be estimated. S
- в Analyte detected in the associated Method Blank
- Е Above Quantitation Range/Estimated Value J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 12 of 20

Val Verde Gas Plant

2211B87-013

**Project:** 

Lab ID:

Analytical Report Lab Order 2211B87

### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/2/2022

Client Sample ID: BH6-2-3 Collection Date: 11/18/2022 1:45:00 PM Received Date: 11/19/2022 7:05:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed Batc
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>
Chloride	ND	61	mg/Kg	20	11/29/2022 4:17:03 PM 7174
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	13	mg/Kg	1	11/29/2022 10:55:20 PM 7170
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	11/29/2022 10:55:20 PM 7170
Surr: DNOP	97.3	21-129	%Rec	1	11/29/2022 10:55:20 PM 7170
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	11/29/2022 2:38:30 AM 7167
Surr: BFB	87.4	37.7-212	%Rec	1	11/29/2022 2:38:30 AM 7167
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	11/29/2022 2:38:30 AM 7167
Toluene	ND	0.050	mg/Kg	1	11/29/2022 2:38:30 AM 7167
Ethylbenzene	ND	0.050	mg/Kg	1	11/29/2022 2:38:30 AM 7167
Xylenes, Total	ND	0.10	mg/Kg	1	11/29/2022 2:38:30 AM 7167
Surr: 4-Bromofluorobenzene	86.1	70-130	%Rec	1	11/29/2022 2:38:30 AM 7167
SM4500H+B/EPA 9040C					Analyst: SNS
рН	8.70		pH Units	s 1	11/29/2022 4:20:00 PM R928

Matrix: SOIL

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated ValueJ Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 13 of 20

Analytical Report
Lab Order 2211B87

#### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/2/2022
Client Sample ID: BH7-0-0.5

**Project:** Val Verde Gas Plant Collection Date: 11/18/2022 2:03:00 PM Lab ID: 2211B87-014 Matrix: SOIL Received Date: 11/19/2022 7:05:00 AM Result **RL** Qual Units **DF** Date Analyzed Batch Analyses **EPA METHOD 300.0: ANIONS** Analyst: JTT 11/29/2022 4:29:27 PM 71740 Chloride ND 60 mg/Kg 20 EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: DGH **Diesel Range Organics (DRO)** ND 15 mg/Kg 1 11/29/2022 11:19:05 PM 71704 Motor Oil Range Organics (MRO) ND 49 mg/Kg 1 11/29/2022 11:19:05 PM 71704 Surr: DNOP 99.9 21-129 %Rec 1 11/29/2022 11:19:05 PM 71704 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 11/29/2022 3:01:56 AM 71675 4.8 mg/Kg 1 Surr: BFB 89.2 11/29/2022 3:01:56 AM 71675 37.7-212 %Rec 1 **EPA METHOD 8021B: VOLATILES** Analyst: NSB 11/29/2022 3:01:56 AM 71675 Benzene ND 0.024 mg/Kg 1 Toluene ND 0.048 mg/Kg 1 11/29/2022 3:01:56 AM 71675 Ethylbenzene ND 0.048 mg/Kg 1 11/29/2022 3:01:56 AM 71675 Xylenes, Total 0.097 mg/Kg 11/29/2022 3:01:56 AM 71675 ND 1 Surr: 4-Bromofluorobenzene 88.1 70-130 %Rec 1 11/29/2022 3:01:56 AM 71675 SM4500H+B/EPA 9040C Analyst: SNS pН 7.65 pH Units 1 11/29/2022 4:20:00 PM R92891

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

Qualifiers:

- Value exceeds Maximum Contaminant Level
   Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- POL Practical Quanitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
   E Above Quantitation Range/Estimated Value
- E Above Quantitation Range/Estimated Value J Analyte detected below quantitation limits
- J Analyte detected below quantitation limitsP Sample pH Not In Range
- RL Reporting Limit

Page 14 of 20

Project: Val Verde Gas Plant

Analytical Report Lab Order 2211B87

### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/2/2022 Client Sample ID: BH7-2-3 Collection Date: 11/18/2022 2:05:00 PM

Lab ID: 2211B87-015	Matrix: SOIL		Received Date	e: 11	/19/2022 7:05:00 AM
Analyses	Result	RL	Qual Units	DF	Date Analyzed Batch
EPA METHOD 300.0: ANIONS					Analyst: <b>JTT</b>
Chloride	ND	60	mg/Kg	20	11/29/2022 4:41:51 PM 71740
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	11/30/2022 12:06:32 AM 71704
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	11/30/2022 12:06:32 AM 71704
Surr: DNOP	90.9	21-129	%Rec	1	11/30/2022 12:06:32 AM 71704
EPA METHOD 8015D: GASOLINE RANG	E				Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	11/29/2022 3:25:20 AM 71675
Surr: BFB	88.3	37.7-212	%Rec	1	11/29/2022 3:25:20 AM 71675
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	11/29/2022 3:25:20 AM 71675
Toluene	ND	0.048	mg/Kg	1	11/29/2022 3:25:20 AM 71675
Ethylbenzene	ND	0.048	mg/Kg	1	11/29/2022 3:25:20 AM 71675
Xylenes, Total	ND	0.096	mg/Kg	1	11/29/2022 3:25:20 AM 71675
Surr: 4-Bromofluorobenzene	86.7	70-130	%Rec	1	11/29/2022 3:25:20 AM 71675
SM4500H+B/EPA 9040C					Analyst: SNS
рН	7.89		pH Units	s 1	11/29/2022 4:20:00 PM R9289

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
   E Above Quantitation Range/Estimated Value
- E Above Quantitation Range/Estimated ValueJ Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 15 of 20

Client: Project:	Harvest Val Verd	le Gas Plar	ıt								
Sample ID: N	1B-71740	SampT	ype: MI	BLK	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: P	BS	Batch	n ID: <b>71</b>	740	F	unNo: <b>9</b> 2	2899				
Prep Date:	11/29/2022	Analysis D	ate: 1	1/29/2022	S	eqNo: 3	344980	Units: <b>mg/K</b>	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID: L	CS-71740	SampT	ype: LC	s	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: L	CSS	Batch	n ID: <b>71</b>	740	F	unNo: <b>9</b> ;	2899				
Prep Date:	11/29/2022	Analysis D	ate: 1	1/29/2022	S	eqNo: 3	344981	Units: <b>mg/K</b>	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	91.0	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 16 of 20

2211B87

02-Dec-22

WO#:

# QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

<b>2211B87</b>	WO#:
02-Dec-22	

Client:	Harvest										
Project:	Val Verde	e Gas Plan	ıt								
Sample ID: ME	3-71704	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: PB	S	Batch	n ID: <b>71</b> 7	704	F	RunNo: <b>9</b> 2	2913				
Prep Date: 1	1/28/2022	Analysis D	)ate: 11	1/29/2022	S	SeqNo: 3	345472	Units: mg/K	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Orga	nics (DRO)	ND	15								
Motor Oil Range Or	rganics (MRO)	ND	50								
Surr: DNOP		9.2		10.00		92.5	21	129			
Sample ID: LC	S-71704	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: LC	SS	Batch	n ID: <b>71</b> 7	704	F	RunNo: <b>9</b> ;	2913				
Prep Date: 1	1/28/2022	Analysis D	)ate: 11	1/29/2022	5	SeqNo: 3	345473	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Orga	nics (DRO)	44	15	50.00	0	88.9	64.4	127			
Surr: DNOP		4.2		5.000		84.2	21	129			
Sample ID: 22	11B87-001AMS	SampT	- уре: <b>МS</b>	3	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: BH	11-0-0.5	Batch	n ID: 717	704	F	RunNo: <b>9</b> 2	2913				
Prep Date: 1	1/28/2022	Analysis D	)ate: 11	/29/2022	S	SeqNo: 3	345476	Units: mg/K	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Orga	nics (DRO)	300	14	46.17	330.7	-72.5	36.1	154			S
Surr: DNOP		4.7		4.617		101	21	129			
Sample ID: 22	11B87-001AMSE	) SampT	ype: <b>MS</b>	SD	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: BH	11-0-0.5	Batch	n ID: <b>71</b> 7	704	F	RunNo: <b>9</b> :	2913				
Prep Date: 1	1/28/2022	Analysis D	)ate: 11	1/29/2022	5	SeqNo: 3	345477	Units: mg/K	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Orga	nics (DRO)	370	15	50.40	330.7	86.9	36.1	154	23.0	33.9	
Surr: DNOP		5.3		5.040		105	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 Quanitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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.

	Harvest Val Verde Gas Pla	ant								
Sample ID: mb-7167	<b>'5</b> Sam	oType: ME	BLK	Tes	tCode: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID: PBS	Bat	ch ID: 71	675	F	RunNo: <b>9</b> 2	2828				
Prep Date: 11/22/2	022 Analysis	Date: 1	1/28/2022	S	SeqNo: 3	342324	Units: mg/K	g		
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		93.3	37.7	212			
Sample ID: Ics-7167	5 Sam	oType: LC	s	Tes	tCode: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCSS	Bat	ch ID: 71	675	F	RunNo: <b>9</b> 2	2828				
Prep Date: 11/22/2	022 Analysis	Date: 1'	1/28/2022	S	SeqNo: 3	342325	Units: <b>mg/K</b>	g		
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	72.3	137			
Surr: BFB	2000		1000		197	37.7	212			

**Qualifiers:** 

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of standard limits. If undiluted results may be estimated. S
- В Analyte detected in the associated Method Blank
- Е Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

2211B87

02-Dec-22

WO#:

Page 18 of 20

Harvest

**Client:** 

## **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc.

WO#:	2211B87
	02-Dec-22

02-Dec-22

Project: Val Verd	le Gas Plar	nt								
Sample ID: mb-71675	Samp	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batc	h ID: 710	675	F	RunNo: <b>9</b>	2828				
Prep Date: 11/22/2022	Analysis [	Date: 11	/28/2022		SeqNo: 3		Units: <b>mg/ł</b>	٢g		
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								
Kylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		89.7	70	130			
Sample ID: LCS-71675	Samp	Гуре: <b>LC</b>	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batc	h ID: <b>71</b>	675	F	RunNo: <b>9</b> ;	2828				
Prep Date: 11/22/2022	Analysis [	Date: 11	/28/2022	S	SeqNo: 3	342396	Units: <b>mg/ł</b>	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	89.0	80	120			
Toluene	0.91	0.050	1.000	0	91.1	80	120			
thylbenzene	0.91	0.050	1.000	0	91.4	80	120			
(ylenes, Total	2.8	0.10	3.000	0	93.7	80	120			
Surr: 4-Bromofluorobenzene	0.91		1.000		90.7	70	130			
Sample ID: 2211b87-001ams	Samp	Гуре: МS	6	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: BH1-0-0.5	Batc	h ID: 710	675	F	RunNo: <b>9</b> 2	2828				
Prep Date: 11/22/2022	Analysis [	Date: 11	/28/2022	S	SeqNo: 3	342399	Units: mg/ł	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.025	0.9881	0	82.0	68.8	120			
Toluene	0.84	0.049	0.9881	0	84.7	73.6	124			
Ethylbenzene	0.84	0.049	0.9881	0	85.2	72.7	129			
Kylenes, Total	2.6	0.099	2.964	0.01924	85.9	75.7	126			
Surr: 4-Bromofluorobenzene	0.89		0.9881		90.2	70	130			
Sample ID: 2211b87-001ams	d Samp	Гуре: <b>МS</b>	SD	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: BH1-0-0.5	Batc	h ID: 710	675	F	RunNo: <b>9</b> :	2828				
Prep Date: 11/22/2022	Analysis [	Date: 11	/28/2022	S	SeqNo: 3	342400	Units: mg/ł	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.77	0.025	0.9881	0	77.5	68.8	120	5.63	20	
Toluene	0.80	0.049	0.9881	0	80.9	73.6	124	4.63	20	
Ethylbenzene	0.81	0.049	0.9881	0	81.7	72.7	129	4.11	20	
(ylenes, Total	2.5	0.099	2.964	0.01924	82.0	75.7	126	4.53	20	
Surr: 4-Bromofluorobenzene	0.87		0.9881		88.3	70	130	0	0	

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of standard limits. If undiluted results may be estimated. S
- В Analyte detected in the associated Method Blank
- Е Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 19 of 20

Client: Project:	Harvest Val Verde	Gas Plant	t								
Sample ID:	2211B87-004ADUP	SampTy	ype: Dl	JP	Tes	tCode: SI	M4500H+B/	EPA 9040C			
Client ID:	BH2-0-0.5	Batch	ID: R9	2891	F	RunNo: <b>9</b> 2	2891				
Prep Date:		Analysis Da	ate: 1	1/29/2022	S	SeqNo: 3	344517	Units: <b>pH U</b>	nits		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pН		7.72									

#### 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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 20 of 20

2211B87

02-Dec-22

WO#:

Received by	OCD:	1/23/2023	12:18:51 PM
-------------	------	-----------	-------------

HALL ENVIRONMENTAL ANALYSIS LABORATORY	TEL: 505-345-3	ntal Analysis Labo 4901 Hawk Albuquerque, NM 975 FAX: 505-343 v.hallenvironment	ins NE 87109 <b>Sarr</b> 5-4107	Sample Log-In Check List			
Client Name: Harvest	Work Order Number: 2211B87			RcptNo: 1			
Received By: Juan Rojas	11/19/2022 7:05:00	) AM	Warren g	-			
Completed By: Juan Rojas	11/19/2022 7:13:41	AM	Hearing				
Reviewed By: KPL 11・19-フ	-7						
Chain of Custody							
1. Is Chain of Custody complete?		Yes 🗹	No 🗌	Not Present			
2. How was the sample delivered?		<u>Courier</u>					
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 🗌				
$7_{\rm c}$ Are samples (except VOA and ONG) propert	y 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 broke	n?	Yes	No 🗹	# of preserved			
11. Does paperwork match bottle labels?		Yes 🔽	No 🗔	bottles checked for pH: (<2 or >12 unless noted)			
(Note discrepancies on chain of custody) 12. Are matrices correctly identified on Chain of	Custody?	Yes 🗹	No 🗖	Adjusted?			
13. Is it clear what analyses were requested?	Custody?	Yes 🗹	No 🗌				
14. Were all holding times able to be met?		Yes 🗹	No 🗆	Checked by: MILIA2			
(If no, notify customer for authorization.) Special Handling (if applicable)			1				
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							
	eal Intact Seal No	Seal Date	Signed By				

Page 1 of 1

Custody Record     Turn-Around Time:       Custody Record     Turn-Around Time:       Multiple Standard     Analysis Laboratory       Project Name:     Now.hallenvironmental.com       Project #:     Project #:       Project #:     Tel. 505-345-3975	Container Preservative HEALNO, Container Project Manager: Clauvechmidstream, Clauvechmids	Sample Name         Iype and # Iype         I way =         I way = <thi way="&lt;/th"> <thi way="&lt;/th"> <thi way="&lt;/th"></thi></thi></thi>	uished by: Received by: Via: Date Time Remarks: My Man Men Men Men Son Ensolution Con UN Man Man Men CC: Aburns E ensolution Con Unished by: Received by: Via: Date Time Date Time
Client: Hurvest Milstond Client: Hurvest Milston Alth: Jen Fer Deal Mailing Address:	Fax#: Ó ∠ ↔ ackage: ard ard C □ Az Cor C □ Other Type)	Nation 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Date: Time: Relinquished by: 1.8. 15 b V V A Date: Time: Relinquished by:

•

R	eceive	ed by	<i><b>OCI</b></i>	<b>D: 1</b> /	23/2	023	12:	<del>18:51</del>	PM -					1			<b></b>	Г					P	age 67	ef
	HALL ENVIRONMENTAL		www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis Request	\$O4	sins sce's	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	8/8/8 906 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )	Vestic Metho 8 Me 8 Me 8 Me 8 Me 8 Me	120181 P 8081 P 8081 P 8260 ( 8260 ( 8260 ( 7) F 10tal C ( 7) F 7)	X									. cc :	rhanson a encomme com	This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
2								_					BIEX										Remarks	1-	e nossibil
prove 205	Turn-Around Time:	X Standard C Rush	-	Val Vede Gas Mart	Project #:	The second se		bhub Censsium. Com	Sampler: 12000, Hanson	L-Yes	# of Coolers:	Cooler Temp(Induding CF): 0-3-0 = 0.3 (°C)	Container Preservative HEALNo	1.145	610- 1	× 1 -015				The second s	The second	a construction of the second se	Va: Date	Received by: Via: Date Time	
	Chain-of-Custody Record	Client: Horvest Milster	Attn: Senife Deal	Mailing Address:		Phone #:	email or Fax#: ? dev @ have trub shew in Project Manager:	QA/QC Package: Standard     I evel 4 (Full Validation)	: D Az Con		EDD (Type)		Date Time Matrix Sample Name	1- (745 521 1	[403] [B	C-Z-ZHSI 7 50HI 1							12 15 16	Date: Time: Relinquished by:	Hall Environr

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

Operator:	OGRID:
Harvest Four Corners, LLC	373888
1755 Arroyo Dr	Action Number:
Bloomfield, NM 87413	178541
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created	Condition	Condition
Ву		Date
nvelez	Deferral request approved. 19.15.29.13 NMAC appears to be the only applicable issue.	5/3/2023

CONDITIONS

Page 68 of 68

Action 178541