District 1 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 811 S. First St., Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Road, Aztec, NM 87410 <u>District IV</u> 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	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Enterprise Field Services, LLC	OGRID: 151618
Contact Name: Thomas Long	Contact Telephone: 505-599-2286
Contact email:tjlong@eprod.com	Incident # (assigned by OCD): FJK1424831933
Contact mailing address: 614 Reilly Ave, Farmington, NM 87401	

Location of Release Source

GPS Coordinate Correction:

Latitude <u>36.729371</u>	Longitude _107.956689	(NAD 83 in decimal degrees to 5 decimal places)
Site Name Val Verde Plant	Site Type Natur	al Gas Processing Plant
Date Release Discovered: 10/9/2019	Serial Number (if	fapplicable): N/A

Unit Letter	Section	Township	Range	County
Α	14	29N	11W	San Juan

Surface Owner: State Federal Tribal Private (Name: Enterprise Field Services, LLC

Nature and Volume of Release

Materia	al(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): Estimated 5-10 Barrels of Amine/Water Mix	Volume/Weight Recovered (provide units)	
Cause of Release On October 9, 2019, an operator observed an amine (50% Water/50% Amine) leak on the Amine Ariel Cooler on E7304 on Train 7. The fluids were released in the unlined secondary containment below the cooling fan. Some of the fluids were released outside of the containment. An area approximately 30 feet long by 10 feet wide was impacted by the amine/water mix. All release fluids remained on the plant property. An estimated 5-10 barrels was released. From October 2019 through June 2020, Entperise remediated and delineated the release as much as practicable. Approximately 416 cubic yards of hydrocarbon/amine impacted soil was excavated and transported to a New Mexico Oil Conservation Division approved land farm facility. Residual impacted soils remain in place around and beneath operating equipment. Enterprise requests a deferment of additional remediation activities until facility decommissioning. A third party closure/remediation plan report is included with this "Final C-141."			

Test 1 (TD	—— Page 2 of 139
Incident ID	
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Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?		
Did this release impact groundwater or surface water?		
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?		
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No ⊠ Yes ☐ No	
Are the lateral extents of the release within 300 feet of a wetland?		
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No	
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No	
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No	
Did the release impact areas not on an exploration, development, production, or storage site?		
Die die release impact areas not on an exploration, development, production, or storage site?	Yes 🛛 No	

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

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

Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.

- 🛛 Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan

Received by OCD: 11/5/2020 1:01:38 PM State of New Mexico		Incident ID	—— Page 3 of 139
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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.

The share $(C, A) = (C, A)$			
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 rele	ease 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 advantate investigate and annealist and it.	by the OCD does not reneve the operator of hability should their operations have		
failed to adequately investigate and remediate contamination that po	se a threat to groundwater, surface water, human health or the environment. In		
addition, OCD acceptance of a C-141 report does not relieve the ope	erator of responsibility for compliance with any other federal, state, or local laws		
and/or regulations.			
Printed Name: Jon E Fields	Title: Director, Environmental		
	- 11/2CP220		
Signature: M.C. Trul	Date: 11/05/00		
email: jefields@eprod.com	Telephone: <u>713-381-6684</u>		

OCD Only	
Received by:	Date:
	4

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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)

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

Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

Extents of contamination must be fully delineated.

Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name:	Title: Director, Environmental	
Signature: for the former	Date: 11/05/2020	
email:jefields@eprod.com	Telephone: <u>713-381-6684</u>	
OCD Only		
Received by:	Date:	
Approved Approved with Attached Condition	ns of Approval 🗌 Denied	Deferral Approved
Signature: Nelson Velez	Date: 05/16/2022	



SITE CHARACTERIZATION REPORT AND REMEDIATION PLAN

Property:

Val Verde Plant Train 7 Amine Release (October 2019) NE ¼, S14 T29N R11W San Juan County, New Mexico

September 14, 2020 (Updated November 5, 2020) Ensolum Project No. 05A1226081

Prepared for:

Enterprise Field Services, LLC 614 Reilly Avenue Farmington, NM 87401 Attn: Mr. Thomas Long

Prepared by:

Ranee Deechilly Environmental Scientist

Umm

Kyle Summers, CPG Sr. Project Manager

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SITE CHARACTERIZATION REPORT AND REMEDIATION PLAN

Val Verde Plant Train 7 Amine Release (October 2019) NE ¼, S14 T29N R11W San Juan County, New Mexico

Ensolum Project No. 05A1226081

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Val Verde Plant Train 7 Amine Release (October 2019) (Site)
Incident ID	NCS1934534730
Location:	36.729371° North, 107.956689° West Northeast (NE) ¼ of Section 14, Township 29 North, Range 11 West San Juan County, New Mexico
Property:	Private (Enterprise)
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On October 9, 2019, Enterprise personnel identified a release of amine/water from a faulty valve on a Val Verde Plant Train 7 amine aerial cooler. Liquid from the valve flowed into the unlined secondary containment below the cooling fans as well as outside of the containment. Enterprise removed the standing liquids from the containment and subsequently initiated activities to remediate petroleum hydrocarbon impact.

The **Topographic Map** depicting the location of the Site is included as **Figure 1**, and the **Site Vicinity Map** is included as **Figure 2** in **Appendix A**.

1.2 **Project Objective**

The primary objective of the initial remediation activities was to reduce constituent of concern (COC) concentrations in the on-site soils to below the applicable New Mexico EMNRD OCD closure criteria. After determining that further excavation would risk the integrity of the structural foundations, the remediation activities were halted. The primary objective of the delineation activities was to assess and characterize the release.

2.0 CLOSURE CRITERIA

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address the activities related to exempt oil and gas releases, the New Mexico EMNRD OCD references New Mexico Administrative Code (NMAC) 19.15.29 *Releases,* which establishes investigation and abatement action requirements for oil and gas release sites that are subject to reporting and/or corrective action. Ensolum, LLC (Ensolum) utilized information provided by Enterprise, the general site characteristics, and information available from the New Mexico Office of the State Engineer (OSE) and the New Mexico EMNRD OCD imaging database to determine the appropriate closure criteria for the Site.

Site Characterization Report and Remediation Plan Enterprise Field Services, LLC Val Verde Plant Train 7 Amine Release (October 2019) September 14, 2020 (Updated November 5, 2020)



- The OSE tracks the usage and assignment of water rights and water well installations and records this information in the Water Rights Reporting System (WRRS) database. Water wells and other points of diversion (PODs) are each assigned POD numbers in the database (which is searchable and includes an interactive map). Numerous PODs were identified within two (2) miles of the Site in the OSE WRRS database. The average depth to water is approximately 27 feet below grade surface (bgs). A nearby monitoring well network (SJ 04127) located in the Blanco Plant South Flare Pit and D Plant Area includes 11 permitted groundwater monitoring wells and several unpermitted monitoring wells. The records for the 11 permitted groundwater monitoring wells do not indicate water depth, however, the nearest monitoring well (unpermitted) is located approximately 570 feet southwest of the Site and based on data from previous monitoring events the depth to water is approximately 31 feet bgs (2013 Annual Groundwater Monitoring Report Blanco Plant South Flare Pit and D Plant Area Bloomfield, New Mexico, CH2M Hill, April, 2014). The records are not clear, but there appears to be an out-of-service industrial water well located at the facility (SJ 00007 approximately 450 feet northeast of the release area according to the original permit submittal). No depth to water is listed for SJ 0007, but the total depth of the well is indicated to be 752 feet bgs. Supporting documentation and a figure (Figure A) is provided in Appendix B.
- No cathodic protection wells were identified within a one mile search radius of the Site (Figure B of Appendix B).
- The Site is not located within 300 feet of a New Mexico EMNRD OCD-defined continuously flowing watercourse or significant watercourse. An irrigation canal is located approximately 1,056 feet southwest of the Site (**Figure C** of **Appendix B**).
- The Site is not located within 200 feet of a lakebed, sinkhole, or playa lake (**Figure C** of **Appendix B**).
- The Site is not located within 300 feet from a permanent residence, school, hospital, institution, or church (**Figure D** of **Appendix B**).
- Based on information identified in the OSE WRRS database, there are no springs or private domestic fresh water wells used by less than five (5) households for domestic or stock watering purposes were identified within 500 feet of the Site (**Figure E** of **Appendix B**).
- Based on information identified in the OSE WRRS database, there are no fresh water wells or springs within 1,000 feet of the Site (**Figure E** of **Appendix B**).
- The Site is located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to New Mexico Statutes Annotated (NMSA) 1978, Section 3-27-3. The Site is located within the City of Bloomfield.
- Based on information identified in the U.S. Fish & Wildlife Service National Wetlands Inventory Wetlands Mapper, the Site is not located within 300 feet of a wetland (**Figure F** of **Appendix B**).
- Based on information identified in the New Mexico Mining and Minerals Division's Geographic Information System (GIS), Maps and Mine Data database, the Site is not located within an area overlying a subsurface mine (**Figure G** of **Appendix B**).
- The Site is not located within an unstable area.
- Based on information identified in the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) geospatial database, the Site is not located within a 100-year floodplain (Figure H of Appendix B).



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Based on the identified siting criteria, cleanup goals for soils remaining in place at the Site include:

Closure Criteria for Soils Impacted by a Release									
Constituent	Method	Limit							
Chloride	EPA 300.0 or SM4500 CI B	600 mg/kg							
TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015	100 mg/kg							
BTEX	EPA SW-846 Method 8021 or 8260	50 mg/kg							
Benzene	EPA SW-846 Method 8021 or 8260	10 mg/kg							

3.0 SOIL REMEDIATION ACTIVITIES

During October 2019, Enterprise initiated activities to remediate impacted soils at the Site. During the remediation and corrective action activities West States Energy Contractors, Inc., provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

The final excavation underneath each amine cooler measured approximately 44 feet long and 31 feet wide at the maximum extents. The maximum depth of the excavation underneath each amine cooler measured approximately six (6) feet bgs. The excavation west of the two (2) amine coolers measured approximately 20 feet long and 16.5 feet wide at the maximum extents and approximately two (2) feet bgs.

The lithology encountered during the completion of remediation activities consisted primarily of semiconsolidated silty sand and gravel underlain by unconsolidated silty sand.

A total of approximately 416 cubic yards (yd³) of petroleum hydrocarbon affected soils were transported to the Envirotech, Inc. (Envirotech) landfarm near Hilltop, New Mexico for disposal/remediation. The executed C-138 solid waste acceptance forms are provided in **Appendix C**. The excavation was ultimately backfilled with imported fill and then contoured to surrounding grade.

Figure 3 (Appendix A) is a map that identifies approximate soil sample locations and depicts the approximate dimensions of the excavations. Photographic documentation of the field activities is included in **Appendix D**.

4.0 SOIL SAMPLING PROGRAM

Ensolum field screened the soil samples from the excavation utilizing a calibrated photoionization detector (PID) fitted with a 10.6 eV lamp to evaluate volatile organic compound (VOC) concentrations.

Ensolum's soil sampling program included the collection of 32 composite soil samples (S-1 through S-32) from the excavations. The composite samples were of five (5) aliquots each and represent an estimated 200 square foot sample area per guidelines outlined in 19.15.29.12 Section D NMAC. The New Mexico EMNRD OCD provided verbal approval to increase the sampling interval from 200 to 400 square feet on January 8, 2020. A clean shovel was utilized to obtain fresh aliquots from each area of the excavations. In addition, nine (9) grab soil samples were collected from four (4) soil borings locations (HA-1 through HA-4 and HA-6) utilizing a hand auger. Regulatory correspondence is provided in **Appendix G**.



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First Sampling Event

On December 4, 2019 composite soil samples S-1 through S-14 and S-16 (all at depths of 1" bgs) were collected from the initial scraped area and S-15 (1" to 3.5') was collected from the floor and sidewalls of the deeper portion of the initial excavation. A New Mexico EMNRD OCD representative was not present during the initial sampling event. The composite soil samples collected during this event were representative of 200 square feet, each. Analytical results from composite soil samples S-4 through S-16 indicated New Mexico EMNRD OCD total petroleum hydrocarbon (TPH) closure criteria exceedances. In response to the data exceedances, the areas were further scraped/excavated to remove impacted soils. Soils associated with composite soil samples S-16 were removed by scraping/excavation. The fate of soils associated with composite soil sample S-15 is presented in the third sampling event discussion below.

Second Sampling Event

On January 8, 2020, after the areas had been further scraped/excavated, a second sampling event was performed. A New Mexico EMNRD OCD representative was present during this sampling event and approved Enterprises' request to increase the composite sampling interval to 400 square feet. Composite soil samples S-17 (3'), S-18 (3'), S-19 (3'), S-20 (3'), S-21 (2'), and S-22 (2') were collected from the scraped/excavated areas to replace composite soil samples S-4 through S-14 and S-16, which had exhibited closure criteria exceedances and were removed by scraping/excavation and ultimately transported to the landfarm for disposal/remediation. The areas of the release that were heavily impacted (areas adjacent to the structural foundations) were not sampled at this time pending additional excavation.

Third Sampling Event

On January 16, 2020, composite soil samples S-23 (2 to 2.5'), S-24 (3'), S-25 (3'), S-26 (1'' to 0.5'), and S-27 (1'' to 0.5') were collected from the floor and sidewalls of the further excavated areas adjacent to the structural foundations. A New Mexico EMNRD OCD representative was present during this sampling event. Subsequent analytical results for these composite soil samples still indicated New Mexico EMNRD OCD closure criteria exceedances for TPH. While deepening the excavation adjacent to the area where composite soil sample S-15 was previously collected, part of the prior excavation was inadvertently backfilled with slough from the scraping activities. As a result, composite soil sample S-24 was ultimately collected from a shallower depth than the original S-15 sample. In response to the data exceedances, additional excavation was performed to remove impacted soils. Soils associated with composite soil samples S-23 through S-27 were removed by excavation and transported to the landfarm for disposal/remediation. This excavation event also removed soils associated with composite soil sample S-15.

Fourth Sampling Event

On February 13, 2020 composite soil samples S-28 (2.5' to 5'), S-29 (3'-6'), S-30 (3'-5'), S-31 (0.5' to 2'), and S-32 (0.5' to 2') were collected from the floor and sidewalls of the deepened excavation to replace previous composite soil samples S-23 through S-27. A New Mexico EMNRD OCD representative was not present during this sampling event. Subsequent analytical results for composite soil samples S-28, S-29, and S-31 indicated New Mexico EMNRD OCD closure criteria exceedances. Due to safety concerns regarding the depth of the excavation adjacent to the structural foundations, further excavation was suspended. Soils associated with composite soil samples S-28, S-29, and S-31 remain in place.

Fifth Sampling Event

On March 10, 2020, four (4) soil borings (HA-1 through HA-4) were advanced adjacent to the amine concrete containment (underneath the amine coolers) to vertically delineate soil impact near the structural foundations. The soil borings were advanced up to 17.5 feet bgs utilizing a hand auger. Soil boring samples HA-1 (10'), HA-1 (17.5'), HA-2 (9'), HA-2 (17'), HA-3 (10'), HA-3 (17.5'), HA-4 (10.5'), and HA-4 (17.5') were collected from the soil borings for laboratory analysis. A New Mexico EMNRD OCD representative was not present during this sampling event.

Site Characterization Report and Remediation Plan Enterprise Field Services, LLC Val Verde Plant Train 7 Amine Release (October 2019) September 14, 2020 (Updated November 5, 2020)



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Sixth Sampling Event

On June 22, 2020, two (2) soil borings (HA-5 and HA-6) were advanced adjacent to the amine concrete containment (west of the amine coolers) to vertically delineate soil impact west of the structural foundations. Soil boring HA-5 encountered auger refusal at four (4) feet and no sample was collected. Soil boring HA-6 was advanced to 12 feet bgs and sample HA-6 (12') was collected from the termination of the soil boring. A New Mexico EMNRD OCD representative was not present during this sampling event.

The soil samples were collected and placed in laboratory prepared glassware. The containers were labeled and sealed using the laboratory supplied labels and custody seals and were stored on ice in a cooler. The samples were relinquished to the courier for Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, under proper chain-of-custody procedures.

5.0 SOIL LABORATORY ANALYTICAL METHODS

The composite and grab soil samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) using Environmental Protection Agency (EPA) SW-846 Method #8021; TPH gasoline range organics (GRO), diesel range organics (DRO), and motor oil/lube oil range organics (MRO) using EPA SW-846 Method #8015; and chlorides using EPA Method #300.0.

The laboratory analytical results are summarized in **Table 1** in **Appendix E**. The laboratory data sheets and executed chain-of-custody forms are provided in **Appendix F**.

6.0 DATA EVALUATION

Ensolum compared the BTEX, TPH, and chloride laboratory analytical results associated with the composite soil samples (S-1 through S-3, S-17 through S-22, and S-28 through S-32) and grab samples (HA-1 (10'), HA-1 (17.5'), HA-2 (9'), HA-2 (17'), HA-3 (10'), HA-3 (17.5'), HA-4 (10.5'), HA-4 (17.5'), and HA-6 (12')) to the applicable New Mexico EMNRD OCD closure criteria. In the event that the laboratory did not quantify a result for BTEX or chloride, Ensolum compared the laboratory supplied practical quantitation limits (PQLs) / reporting limits (RLs) to the New Mexico EMNRD OCD closure criteria. Due to the high PQLs/RLs associated with the TPH MRO range when using EPA SW-846 Method #8015, Ensolum only compared the quantified results to the New Mexico EMNRD OCD closure criteria. Soils associated with composite soil samples S-4 through S-16, and S-23 through S-27 were transported to Envirotech landfarm for disposal/remediation and are not included in the following discussion.

- The laboratory analytical results for the composite/grab soil samples collected from soils remaining at the Site indicate benzene is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable New Mexico EMNRD OCD closure criteria of 10 milligrams per kilogram (mg/kg).
- The laboratory analytical results for the composite/grab soil samples collected from soils remaining at the Site indicate total BTEX is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable New Mexico EMNRD OCD closure criteria of 50 mg/kg.
- The laboratory analytical results for composite soil samples S-28, S-29, and S-31 indicate combined TPH GRO/DRO/MRO concentrations ranging from 1,200 mg/kg (S-28) to 4,300 mg/kg (S-31), which exceed the applicable New Mexico EMNRD OCD closure criteria of 100 mg/kg. The laboratory analytical results for composite/grab soil samples S-1 through S-3, S-17, S-30, and HA-2 (9') indicate combined TPH GRO/DRO/MRO concentrations ranging from 11 mg/kg (HA-2 (9')) to 81 mg/kg (S-1), which do not exceed the applicable New Mexico EMNRD OCD closure criteria



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of 100 mg/kg. The laboratory analytical results for the remaining composite/grab soil samples collected from soils remaining at the Site indicate combined TPH GRO/DRO/MRO is not present at concentrations greater than the laboratory PQLs/RLs, with no quantified combined values greater than the New Mexico EMNRD OCD closure criteria of 100 mg/kg.

• The laboratory analytical results for the composite/grab soil samples collected from soils remaining at the Site indicate chloride is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable New Mexico EMNRD OCD closure criteria of 600 mg/kg for chlorides.

The laboratory analytical results are summarized in **Table 1** (Appendix E).

7.0 **REMEDIATION**

The excavation was backfilled with imported fill. Enterprise requests deferment of final remediation and reclamation at the Site until after the facility is decommissioned, to avoid damaging existing structures/appurtenances at the facility. At that time, Enterprise will perform final remediation and reclamation at the Site. The exact subgrade dimensions of the structural foundations were not provided to Ensolum, but based on depth-delineation samples HA-1 (10'), HA-2 (9'), HA-3 (10'), HA-4 (10.5') and HA-6 (12') it appears that less than 200 yd³ of affected soils remain in place adjacent to the structural foundations.

8.0 FINDINGS

- A total of 32 composite soil samples were collected from the excavation for laboratory analysis. In addition, nine (9) grab soil samples were collected from soil borings advanced near the structural foundations.
- Based on soil laboratory analytical results, no benzene, BTEX, or chloride exceedances were
 identified in the Site soils. Combined TPH concentrations that exceed the New Mexico EMNRD
 OCD closure criteria are present in the immediate vicinity of the central concrete
 containment/structural foundations (from 2.5 feet bgs to approximately 10 feet bgs). Results from
 the delineation activities indicate that soils below 10 feet bgs do not exhibit COC concentrations
 above the applicable New Mexico EMNRD OCD closure criteria. Ensolum estimates that less than
 200 yd³ of affected soils remain in place at the release location.
- A total of approximately 416 yd³ of petroleum hydrocarbon affected soils were transported to the Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with imported fill and was then contoured to surrounding grade.

9.0 **RECOMMENDATION**

Enterprise requests the deferment of final reclamation, including remediation of the upper four (4) feet of soil to comply with the requirements of NMAC 19.15.29.13(D)(1), until after the facility is decommissioned, to avoid damaging existing structures/appurtenances at the facility.

Site Characterization Report and Remediation Plan Enterprise Field Services, LLC Val Verde Plant Train 7 Amine Release (October 2019) September 14, 2020 (Updated November 5, 2020)



10.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE

10.1 Standard of Care

Ensolum's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Ensolum makes no warranties, express or implied, as to the services performed hereunder. Additionally, Ensolum does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties).

10.2 Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Ensolum cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during the investigation. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Ensolum's findings and recommendation are based solely upon data available to Ensolum at the time of these services.

10.3 Reliance

This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization of Enterprise and Ensolum. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the report, and Ensolum's Master Services Agreement. The limitation of liability defined in the agreement is the aggregate limit of Ensolum's liability to the client.

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APPENDIX A

Figures

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APPENDIX B

Siting Figures and Documentation

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New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced	(R=POD has been replaced O=orphaned,												
& no longer serves a water right file.)	C=the file is closed)							IE 3=SW largest)		UTM in meters)		(In fee	t)
POD Number	POD Sub- Code basin (County		Q 16		Sec	Tws	Rna	х	Y			Water Column
SJ 00007	SJM2	SJ					29N		236085	4069024* 🌍	752		
SJ 00151	SJM2	SJ	4	3	1	22	29N	11W	233396	4067109* 🌍	45	18	27
SJ 00320	SJM2	SJ	1	3	1	22	29N	11W	233196	4067309* 🌍	38	10	28
SJ 00484	SJM2	SJ	1	3	1	22	29N	11W	233196	4067309* 🌍	37	10	27
SJ 00696	SJM2	SJ		3	4	22	29N	11W	234085	4066368* 🌍	34	12	22
<u>SJ 00704</u>	SJM2	SJ		2	1	22	29N	11W	233714	4067596* 🌍	55	20	35
SJ 00796	SJM2	SJ		2	1	22	29N	11W	233714	4067596* 🌍	50	8	42
SJ 00812	SJM2	SJ		4	1	23	29N	11W	235313	4067146* 🌍	44		
<u>SJ 00987</u>	SJM2	SJ			4	13	29N	11W	237549	4068086* 🌍	415	300	115
SJ 01214	SJM2	SJ		3	1	22	29N	11W	233297	4067210* 🌍	49	12	37
SJ 01426	SJM2	SJ		4	1	14	29N	11W	235366	4068747* 🌍	155	10	145
SJ 01557	SJM2	SJ		2	1	22	29N	11W	233714	4067596* 🌍	70	11	59
SJ 01573	SJM2	SJ		3	2	23	29N	11W	235717	4067135* 🌍	41	21	20
<u>SJ 01610</u>	SJM2	SJ		2	2	23	29N	11W	236133	4067524* 🌍	52	25	27
<u>SJ 01703</u>	SJM2	SJ		2	1	22	29N	11W	233714	4067596* 🌍	68	3	65
SJ 01774	SJM2	SJ	2	4	3	14	29N	11W	235440	4068045* 🌍	82	6	76
SJ 01851	SJM2	SJ		4	4	10	29N	11W	234586	4069572* 🌍	125	48	77
SJ 01870	SJM2	SJ			2	23	29N	11W	235918	4067336* 🌍	58	30	28
<u>SJ 01962</u>	SJM2	SJ	2	2	1	24	29N	11W	237033	4067599* 🌍	45	12	33
<u>SJ 01974</u>	SJM2	SJ	3	3	4	22	29N	11W	233984	4066267* 🌍	47	11	36
<u>SJ 02020</u>	SJM2	SJ		3	3	22	29N	11W	233273	4066412* 🌍	27	6	21
SJ 02138	SJM2	SJ		2	4	22	29N	11W	234497	4066770* 🌍	40	7	33
<u>SJ 02200</u>	SJM2	SJ				22	29N	11W	233876	4067015* 🌍	60	22	38
<u>SJ 02378</u>	SJM2	SJ	2	3	4	15	29N	11W	234229	4068080* 🌍	75	12	63
SJ 02466	SJM2	SJ	3	3	4	11	29N	11W	235669	4069518 🌍	66		
SJ 02466 S	SJM2	SJ	3	3	4	11	29N	11W	235693	4069503 🌍	65		
M location was derived from P	PLSS - see Help												

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(A CLW##### in the
POD suffix indicates the
POD has been replaced
& no longer serves a
water right file.)

(R=POD has been replaced, O=orphaned, C=the file is (quarters are 1=NW 2=NE 3=SW 4=SE) closed) (quarters are smallest to largest) (NAD83 UTM in meters)

	POD Sub-				Q						-	-	Water
POD Number	Code basin (-						-	X	Y			Column
<u>SJ 02529</u>	SJM2	SJ					29N		234396	4066669* 🌍	30	9	21
SJ 02578	SJM2	SJ	3	3	2	22	29N	11W	234007	4067082* 🌍	58	24	34
<u>SJ 02721</u>	SJM2	SJ		4	1	22	29N	11W	233702	4067197* 🌍		59	
<u>SJ 02799</u>	SJM2	SJ	1	1	4	23	29N	11W	235602	4066839* 🌍	56	15	41
<u>SJ 02813</u>	SJM2	SJ	3	2	1	22	29N	11W	233613	4067495* 🌍	59	16	43
SJ 02991	SJM2	SJ	2	4	3	13	29N	11W	237048	4067998* 🌍	60		
<u>SJ 03049</u>	SJM2	SJ	4	2	4	22	29N	11W	234596	4066669* 🌍	33	10	23
SJ 03073	SJM2	SJ	1	3	2	23	29N	11W	235616	4067234* 🌍	30		
SJ 03093	SJM2	SJ	4	3	2	22	29N	11W	234207	4067082* 🌍	42	22	20
SJ 03130	SJM2	SJ	3	1	2	23	29N	11W	235631	4067434* 🌍	50	30	20
SJ 03136	SJM2	SJ	4	4	3	13	29N	11W	237048	4067798* 🌍	20		
SJ 03164	SJM2	SJ	1	2	4	14	29N	11W	236060	4068423* 🌍	75	56	19
SJ 03175	SJM2	SJ	1	2	4	14	29N	11W	236060	4068423* 🌍	60	24	36
SJ 03188	SJM2	SJ	2	2	3	22	29N	11W	233790	4066892* 🌍	45	11	34
<u>SJ 03189</u>	SJM2	SJ	1	2	3	22	29N	11W	233590	4066892* 🌍	45	20	25
<u>SJ 03201</u>	SJM2	SJ	3	1	2	23	29N	11W	235631	4067434* 🌍	60	30	30
SJ 03286	SJM2	SJ	1	3	3	23	29N	11W	234784	4066470* 🌍	38	28	10
<u>SJ 03343</u>	SJM2	SJ	1	4	1	24	29N	11W	236818	4067200* 🌍	35	18	17
SJ 03353	SJM2	SJ	3	1	2	23	29N	11W	235631	4067434* 🌍	45	25	20
SJ 03360	SJM2	SJ	2	4	3	14	29N	11W	235440	4068045* 🌍	40		
SJ 03479	SJM2	SJ	3	2	4	22	29N	11W	234396	4066669* 🌍	43	4	39
SJ 03503	SJM2	SJ	3	3	2	22	29N	11W	234007	4067082* 🌍	72	18	54
SJ 03532	SJM2	SJ	3	3	1	22	29N	11W	233196	4067109* 🌍	49	14	35
SJ 03546	SJM2	SJ	2	4	1	23	29N	11W	235412	4067245* 🌍	50	15	35
SJ 03548	SJM2	SJ	1	1	4	23	29N	11W	235602	4066839* 🌍	50	15	35
<u>SJ 03550</u>	SJM2	SJ	1	2	3	14	29N	11W	235252	4068445* 🌍	10		
SJ 03557	SJM2	SJ	1	3	1	23	29N	11W	234808	4067256* 🌍	50	15	35
SJ 03558	SJM2	SJ	1	3	1	23	29N	11W	234808	4067256* 🌍	50	15	35
<u>SJ 03559</u>	SJM2	SJ	4	3	1	23	29N	11W	235008	4067056* 🌍	45	15	30

*UTM location was derived from PLSS - see Help

(A CLW##### in the
POD suffix indicates the
POD has been replaced
& no longer serves a

water right file.)

(R=POD has been replaced, O=orphaned, (quarters are 1=NW 2=NE 3=SW 4=SE) C=the file is (quarters are smallest to largest) (NAD83 UTM in meters) closed)

(In feet)

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water right file.)	closed)	(quai	ter	sa	res	smai	lest to	largest)	(NAD83	S UT M IN meters)		(in reet	.)
POD Number	POD Sub- Code basin (County		Q 16	-	Sec	Tws	Rna	х	Y			Water Column
SJ 03567	SJM2	SJ					29N	-	235226	4067445* 🌍	50	22	28
SJ 03579	SJM2	SJ	1	4	4	15	29N	11W	234431	4068068* 🌍	83	30	53
<u>SJ 03591</u>	SJM2	SJ	4	4	1	23	29N	11W	235412	4067045* 🌍	55	20	35
SJ 03733 POD1	SJM2	SJ	1	2	4	15	29N	11W	234444	4068469* 🌍	64	20	44
SJ 03747 POD1	SJM2	SJ	3	2	1	22	29N	11W	233613	4067495* 🌍	47	27	20
SJ 03847 POD1	SJM2	SJ	3	3	3	14	29N	11W	234873	4067937 🌍	74	27	47
SJ 03934 POD1	SJM2	SJ	4	2	4	22	29N	11W	234658	4066717 🌍	30	8	22
SJ 03935 POD1	SJM2	SJ	4	2	4	22	29N	11W	234693	4066639 🌍	30	10	20
SJ 03980 POD1	SJM2	SJ	4	4	3	14	29N	11W	236351	4067548 🌍	70	60	10
SJ 03982 POD1	SJM2	SJ	3	1	1	22	29N	11W	233220	4067494 🌍	54	9	45
SJ 04015 POD1	SJM2	SJ	1	4	4	22	29N	11W	234392	4066411 🌍	50	14	36
SJ 04016 POD1	SJM2	SJ	2	4	4	22	29N	11W	234636	4066431 🌍	50	10	40
SJ 04137 POD1	SJM2	SJ	4	3	2	23	29N	11W	235865	4067052 🌍	44	36	8
SJ 04234 POD1	SJ	SJ				23	29N	11W	236117	4066717 🌍	11	6	5
SJ 04234 POD2	SJ	SJ				23	29N	11W	235948	4066623 🌍	10		
SJ 04254 POD1	SJ	SJ		3	4	11	29N	11W	235793	4069359 🌍	100	63	37
SJ 04254 POD2	SJ	SJ		3	4	11	29N	11W	235791	4069416 🌍	102	60	42
SJ 04254 POD3	SJ	SJ		3	4	11	29N	11W	235688	4069482 🌍	85	46	39
SJ 04254 POD4	SJ	SJ		3	4	11	29N	11W	235754	4069504 🌍	100	41	59
SJ 04254 POD5	SJ	SJ		3	4	11	29N	11W	235721	4069524 🌍	100	63	37
SJ 04254 POD6	SJ	SJ		3	4	11	29N	11W	235774	4069567 🌍	100	64	36
SJ 04254 POD7	SJ	SJ		3	4	11	29N	11W	235615	4069664 🌍	85	35	50
SJ 04254 POD8	SJ	SJ		3	4	11	29N	11W	235667	4069675 🌍	88	39	49
SJ 04254 POD9	SJ	SJ		3	4	11	29N	11W	235645	4069741 🌍	79	23	56
SJ 04273 POD1	SJM2	SJ	1	1	3	14	29N	11W	234900	4068537 🌍	50		
SJ 04291 POD1	SJM2	SJ	1	4	3	14	29N	11W	235314	4067967 🌍	55		
SJ 04349 POD1	SJM2	SJ	3	3	1	22	29N	11W	233159	4067219 🌍	56	56	0

*UTM location was derived from PLSS - see Help

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.

ived by OCD: 11/5/2020 1:0 1 :38 PM		Page 30	of 13
	Average Depth to Water:	27 feet	
	Minimum Depth:	3 feet	
	Maximum Depth:	300 feet	
Record Count: 82	Maximum Depth:	300 feet	

Section(s): 14, 10, 11, 12, Township: 29N Range: 11W 13, 15, 22, 23, 24



APPENDIX C

Executed C-138 Solid Waste Acceptance Forms

. Released to Imaging: 5/16/2022 12:29:26 PM

District 1 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

c

State of New Mexico	
Energy Minerals and Natural Resources	97057-1053
Oil Conservation Division	*Surface Waste Manage
1220 South St. Francis Dr.	*Surface Waste Manage and Generator shall
Santa Fe, NM 87505	documentation available

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Form C-138 Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401		
2. Originating Site: Val Verde Plant		
3. Location of Material (Street Address, City, State or ULSTR): Unit B Sec 14 T 29N R 11W; 36.73073, -107.955920Nov. 2019		
 Source and Description of Waste: Source: Amine Spill Cleanup activities. Description: Hydrocarbop/Amine impacted soil associated with an amine leak. Estimated Volume 50 (vd³) obls Known Volume (to be entered by the operator at the end of the haul) (22 (vd³) obls 		
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS		
I, Thomas Long , representative or authorized agent for Enterprise Products Operating do hereby Generator Signature certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)		
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non- exempt waste. <u>Operator Use Only: Waste Acceptance Frequency Monthly Weekty Per Load</u>		
RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)		
🗖 MSDS Information 🔲 RCRA Hazardous Waste Analysis 🔲 Process Knowledge 🔲 Other (Provide description in Box 4)		
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS		
I, Thomas Long 11-19-19, representative for Enterprise Products Operating authorize <u>Envirotech, Inc</u> . to complete Generator Signature the required testing/sign the Generator Waste Testing Certification.		
I, <u>Grag</u> <u>Grabbase</u> , representative for <u>Envirotech, Inc.</u> do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.		
5. Transporter: West States Energy Contractors Doug Foutz		
OCD Permitted Surface Waste Management Facility Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM01-0011 Address of Facility: Hill Top, NM Method of Treatment and/or Disposal: Evaporation Injection Treating Plant Andfarm Indefinition Other Works Accounting Status		
Waste Acceptance Status:		
PRINT NAME: Given Chaltree TITLE: Enviro MANAger DATE: 11/24/19		
SIGNATURE: TELEPHONE NO.: _505-632-0615		

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, 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 Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

97057-1082 Form C-138 Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE		
1. Generator Name and Address:	AFE: N:421490	
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401	PayKey: TC25719	
2. Originating Site:		
Val Verde Plant – Train 7 – Amine Spill		
3. Location of Material (Street Address, City, State or ULSTR):	/	
Unit B Sec 14 T 29N R 11W; 36.731125, -107.956736	JAM/F26 2020	
4. Source and Description of Waste:		
Source: Amine Spill Cleanup activities.		
Description: Hydrocarbon Amine impacted soil associated with an amine leak. Estimated Volume $50 \text{ (vd}^3)$ bbls Known Volume (to be entered by the operator at the end of the haul) $296 \text{ (vd}^3)$ bbls		
5. GENERATOR CERTIFICATION STATEMENT OF WASTE	STATUS	
I, Thomas Long Jury, representative or authorized agent for Enterprise Products Operating do Generator Signature	hereby	
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environ regulatory determination, the above described waste is: (Check the appropriate classification)	nmental Protection Agency's July 1988	
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production of exempt waste. Operator Use Only: Waste Acceptance Frequency [] Monthly [] Week		
RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the min characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous w subpart D, as amended. The following documentation is attached to demonstrate the above-de the appropriate items)	vaste as defined in 40 CFR, part 261,	
□ MSDS Information □ RCRA Hazardous Waste Analysis □ Process Knowledge □ Oth	her (Provide description in Box 4)	
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS		
I, Thomas Long June 1-30-2020, representative for Enterprise Products Operating authorize En		
	nvirotech, Inc. to complete	
Generator Signature the required testing/sign the Generator Waste Testing Certification.		
	-	
I, Envirotech, Inc	do hereby certify that	
representative samples of the oil field waste have been subjected to the paint filter test and tested for		
have been found to conform to the specific requirements applicable to landfarms pursuant to Section of the representative samples are attached to demonstrate the above-described waste conform to the		
19.15.36 NMAC.	requirements of Section 15 of	
5. Transporter: West States Energy Contractors		
OCD Permitted Surface Waste Management Facility		
Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM01-0011 Address of Facility: Hill Top, NM Method of Treatment and/or Disposal: Evaporation Injection Treating Plant Z Landfarm Land	Ifill 🗖 Other	
Evaporation Injection Treating Plant Landfarm Land Waste Acceptance Status:		
	st Be Maintained As Permanent Record)	
PRINT NAME: Greg Crubbree TITLE: Enviro Man.	Agen DATE: 1/31/2020	
SIGNATURE:	32-0615	

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APPENDIX D

Photographic Documentation

SITE PHOTOGRAPHS

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Site Characterization Report and Remediation Plan Enterprise Field Services, LLC Val Verde Plant Train 7 Amine Release (Oct 2019) Ensolum Project No. 05A1226081



Photograph 1 Photograph Description: View of the initial scraped/excavated area underneath A7304B Amine Cooler (first sampling event). Photograph 2 Photograph Description: View of the initial scraped/excavated area underneath 47304A Amine Cooler (first sampling event). Photograph 3 Photograph Description: View of the initial scraped/excavated area underneath 47304A Amine Cooler (first sampling event).

SITE PHOTOGRAPHS

Site Characterization Report and Remediation Plan Enterprise Field Services, LLC Val Verde Plant Train 7 Amine Release (Oct 2019) Ensolum Project No. 05A1226081



Photograph 4 Photograph Description: View of the initial release area outside of the Amine Coolers (first sampling event). Photograph 5 Photograph Description: View of the scraped/excavated area underneath A7304B Amine Cooler (second sampling event). Photograph 6 Photograph Description: View of the scraped/excavated area underneath A7304A Amine Cooler (second sampling event).
Site Characterization Report and Remediation Plan Enterprise Field Services, LLC Val Verde Plant Train 7 Amine Release (Oct 2019) Ensolum Project No. 05A1226081





Site Characterization Report and Remediation Plan Enterprise Field Services, LLC Val Verde Plant Train 7 Amine Release (Oct 2019) Ensolum Project No. 05A1226081



Photograph 10 Photograph Description: View of the scraped/excavated area outside of the Amine Coolers (third sampling event). Photograph 11 Photograph Description: View of the scraped/excavated area underneath A7304A Amine Cooler (third sampling event). Photograph 12 Photograph Description: View of the scraped/excavated area underneath A7304A Amine Cooler (third sampling event).

Site Characterization Report and Remediation Plan Enterprise Field Services, LLC Val Verde Plant Train 7 Amine Release (Oct 2019) Ensolum Project No. 05A1226081





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Site Characterization Report and Remediation Plan Enterprise Field Services, LLC Val Verde Plant Train 7 Amine Release (Oct 2019) Ensolum Project No. 05A1226081



Photograph 16 Photograph Description: View of the scraped/excavated area outside of the Amine Coolers (fourth sampling event).	<image/>
Photograph 17 Photograph Description: View of a soil boring location underneath A7304B Amine Cooler.	
Photograph 18 Photograph Description: View of a soil boring location underneath A7304A Amine Cooler.	

Site Characterization Report and Remediation Plan Enterprise Field Services, LLC Val Verde Plant Train 7 Amine Release (Oct 2019) Ensolum Project No. 05A1226081



Photograph 19

Photograph Description: View of a soil boring location outside of the Amine Coolers.





APPENDIX E

Table 1 – Soil Analytical Summary

. Released to Imaging: 5/16/2022 12:29:26 PM

ENSOLUM

					Val Verde	TAB Plant Train 7 / SOIL ANALYT	Amine Relea						
Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO	TPH DRO	TPH MRO	Total Combined TPH	Chlorid (mg/kg
									(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
		& Natural Resources vision Closure Crite		10	NE	NE	NE	50				100	600
				Soil Sam	oles Removed by E	xcavation and Trans	sported to the Lar	dfarm for Disposal/	Remediation				
S-4	12.04.19	С	0.083	<0.024	<0.048	<0.048	<0.095	ND	<4.8	150	<470	150	<60
S-5	12.04.19	С	0.083	<0.024	<0.047	<0.047	<0.094	ND	<4.7	2,300	<450	2,300	<60
S-6	12.04.19	С	0.083	<0.024	<0.049	<0.049	<0.098	ND	<4.9	2,400	<490	2,400	<60
S-7	12.04.19	С	0.083	<0.023	<0.047	<0.047	<0.094	ND	<4.7	110	<49	110	76
S-8	12.04.19	С	0.083	<0.023	<0.046	<0.046	<0.093	ND	<4.6	1,400	<480	1,400	<60
S-9	12.04.19	С	0.083	<0.023	<0.047	<0.047	<0.094	ND	<4.7	1,400	<490	1,400	<60
S-10	12.04.19	С	0.083	<0.024	<0.049	<0.049	<0.097	ND	<4.9	1,100	<460	1,100	<60
S-11	12.04.19	С	0.083	<0.024	<0.049	<0.049	<0.098	ND	<4.9	2,100	<480	2,100	<60
S-12	12.04.19	С	0.083	<0.023	<0.047	<0.047	<0.093	ND	<4.7	490	<480	490	<60
S-13	12.04.19	С	0.083	<0.023	<0.046	<0.046	<0.092	ND	<4.6	1,600	<370	1,600	<60
S-14	12.04.19	С	0.083	<0.023	<0.046	<0.046	<0.093	ND	<4.6	2,100	<450	2,100	67
S-15	12.04.19	С	0.083 to 3.5	<0.024	<0.048	<0.048	<0.095	ND	<4.8	7,100	<480	7,100	<60
S-16	12.04.19	С	0.083	<0.024	<0.048	<0.048	<0.096	ND	<4.8	4,400	<430	4,400	<60
S-23	01.16.20	С	2 to 2.5	<0.024	<0.047	<0.047	<0.095	ND	<4.7	360	<47	360	<60
S-24	01.16.20	С	3	<0.024	<0.048	<0.048	<0.096	ND	<4.8	2,800	<460	2,800	<60
S-25	01.16.20	С	3	<0.024	<0.047	<0.047	<0.095	ND	<4.7	1,400	<480	1,400	<60
S-26	01.16.20	С	0.083 to 0.5	<0.024	<0.048	<0.048	<0.095	ND	<4.8	5,200	<440	5,200	<60
S-27	01.16.20	С	0.083 to 0.5	<0.024	<0.047	<0.047	<0.094	ND	<4.7	180	<490	180	<60
						Excavation Comp	osite Soil Sample	S					
S-1	12.04.19	С	0.083	<0.024	<0.048	<0.048	<0.097	ND	<4.8	81	<48	81	<60
S-2	12.04.19	С	0.083	<0.024	<0.047	<0.047	<0.094	ND	<4.7	77	<47	77	<60
S-3	12.04.19	С	0.083	<0.024	<0.049	<0.049	<0.097	ND	<4.9	23	<47	23	<60
S-17	01.08.20	С	3	<0.023	<0.046	<0.046	<0.093	ND	<4.6	12	<46	12	<60
S-18	01.08.20	С	3	<0.024	<0.048	<0.048	<0.097	ND	<4.8	<9.8	<49	ND	<60
S-19	01.08.20	С	3	<0.024	<0.047	<0.047	<0.094	ND	<4.7	<9.8	<49	ND	<60
S-20	01.08.20	С	3	<0.025	<0.049	<0.049	<0.098	ND	<4.9	<9.7	<49	ND	<59
S-21	01.08.20	С	2	<0.025	<0.050	<0.050	<0.099	ND	<5.0	<9.9	<49	ND	<60
S-22	01.08.20	С	2	<0.025	<0.049	<0.049	<0.099	ND	<4.9	<9.9	<50	ND	<60
S-28	02.13.20	С	2.5 to 5	<0.12	<0.24	<0.24	<0.48	ND	<24	1,200	<460	1,200	<60
S-29	02.13.20	С	3 to 6	<0.12	<0.24	<0.24	<0.49	ND	<24	3,800	<490	3,800	<59
S-30	02.13.20	С	3 to 5	<0.025	<0.050	<0.050	<0.099	ND	<5.0	23	<47	23	<60
S-31	02.13.20	С	0.5 to 2	<0.12	<0.24	<0.24	<0.49	ND	<24	4,300	<460	4,300	<60
S-32	02.13.20	С	0.5 to 2	<0.024	<0.049	<0.049	<0.097	ND	<4.9	<9.9	<49	ND	<61

ENSOLUM

	TABLE 1 Val Verde Plant Train 7 Amine Release (Oct 2019) SOIL ANALYTICAL SUMMARY												
Sample I.D.	Date	Sample Type	Sample Depth	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	TPH	TPH	TPH	Total Combined	Chloride
		C- Composite G - Grab	(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	GRO	DRO	MRO	TPH	(mg/kg)
		0 0142							(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
		Natural Resources ision Closure Crite		10	NE	NE	NE	50				100	600
						Delineation Hand	Auger Soil Sample	es					
HA -1	03.10.20	G	10	<0.018	<0.035	<0.035	<0.070	ND	<3.5	<9.3	<46	ND	<60
HA -1	03.10.20	G	17.5	<0.018	<0.035	<0.035	<0.070	ND	<3.5	<9.4	<47	ND	<60
HA-2	03.10.20	G	9	<0.017	<0.033	<0.033	<0.066	ND	<3.3	11	<44	11	<60
TIA-2	03.10.20	G	17	<0.019	<0.038	<0.038	<0.076	ND	<3.8	<9.6	<48	ND	<60
HA-3	03.10.20	G	10	<0.018	<0.035	<0.035	<0.071	ND	<3.5	<9.2	<46	ND	<60
TIA-5	03.10.20	G	17.5	<0.017	<0.035	<0.035	<0.069	ND	<3.5	<9.6	<48	ND	<60
HA-4	03.10.20	G	10.5	<0.019	<0.037	<0.037	<0.075	ND	<3.7	<9.7	<48	ND	<60
114-4	03.10.20	G	17.5	<0.019	<0.038	<0.038	<0.077	ND	<3.8	<9.6	<48	ND	<60
HA-6	06.22.20	G	12	<0.024	<0.048	<0.048	<0.096	ND	<4.8	<9.7	<49	ND	<60

ND = Not Detected above the Practical Quantitation Limits or Reporting Limits

NA = Not Analyzed

NE = Not Eestablished

mg/kg = milligram per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

TPH = Total Petroleum Hydrocarbon

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics



APPENDIX F

Laboratory Data Sheets & Chain of Custody Documentation



December 11, 2019

Kyle Summers ENSOLUM 606 S. Rio Grande Suite A Aztec, NM 87410 TEL: (903) 821-5603 FAX Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

RE: Val Verde Amine Release 2019

OrderNo.: 1912184

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 16 sample(s) on 12/5/2019 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

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1912184

Date Reported: 12/11/2019

CLIENT:	ENSOLUM		Cl	ient Sample II	D: S-	1	
Project:	Val Verde Amine Release 2019		(Collection Dat	e: 12	/4/2019 10:00:00 AM	
Lab ID:	1912184-001	Matrix: SOIL		Received Dat	e: 12	/5/2019 8:05:00 AM	
Analyses		Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA MET	HOD 300.0: ANIONS					Analyst:	MRA
Chloride		ND	60	mg/Kg	20	12/6/2019 8:35:49 PM	49205
EPA MET	HOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	BRM
Diesel Ra	ange Organics (DRO)	81	9.5	mg/Kg	1	12/10/2019 8:55:19 AM	49225
Motor Oil	Range Organics (MRO)	ND	48	mg/Kg	1	12/10/2019 8:55:19 AM	49225
Surr: E	DNOP	96.1	70-130	%Rec	1	12/10/2019 8:55:19 AM	49225
EPA MET	HOD 8015D: GASOLINE RANGE	E				Analyst	NSB
Gasoline	Range Organics (GRO)	ND	4.8	mg/Kg	1	12/6/2019 5:25:00 PM	49179
Surr: E	3FB	82.7	66.6-105	%Rec	1	12/6/2019 5:25:00 PM	49179
EPA MET	HOD 8021B: VOLATILES					Analyst	NSB
Benzene		ND	0.024	mg/Kg	1	12/6/2019 5:25:00 PM	49179
Toluene		ND	0.048	mg/Kg	1	12/6/2019 5:25:00 PM	49179
Ethylben	zene	ND	0.048	mg/Kg	1	12/6/2019 5:25:00 PM	49179
Xylenes,	Total	ND	0.097	mg/Kg	1	12/6/2019 5:25:00 PM	49179
Surr: 4	I-Bromofluorobenzene	100	80-120	%Rec	1	12/6/2019 5:25:00 PM	49179

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 range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 1 of 22

Hall Environmental Analysis Laboratory, Inc.

Lab Order **1912184** Date Reported: **12/11/2019**

CLIENT: ENSOLUM		Cl	ient Sample II	D: S-2	2	
Project: Val Verde Amine Release 2019		(Collection Dat	e: 12	/4/2019 10:05:00 AM	
Lab ID: 1912184-002	Matrix: SOIL		Received Dat	e: 12	/5/2019 8:05:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	60	mg/Kg	20	12/6/2019 8:48:10 PM	49205
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	BRM
Diesel Range Organics (DRO)	77	9.3	mg/Kg	1	12/10/2019 9:04:31 AM	49225
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	12/10/2019 9:04:31 AM	49225
Surr: DNOP	99.3	70-130	%Rec	1	12/10/2019 9:04:31 AM	49225
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	12/6/2019 6:33:45 PM	49179
Surr: BFB	79.0	66.6-105	%Rec	1	12/6/2019 6:33:45 PM	49179
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.024	mg/Kg	1	12/6/2019 6:33:45 PM	49179
Toluene	ND	0.047	mg/Kg	1	12/6/2019 6:33:45 PM	49179
Ethylbenzene	ND	0.047	mg/Kg	1	12/6/2019 6:33:45 PM	49179
Xylenes, Total	ND	0.094	mg/Kg	1	12/6/2019 6:33:45 PM	49179
Surr: 4-Bromofluorobenzene	96.5	80-120	%Rec	1	12/6/2019 6:33:45 PM	49179

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 22

Xylenes, Total

Surr: 4-Bromofluorobenzene

Analytical Report
Lab Order 1912184

12/6/2019 6:56:42 PM

12/6/2019 6:56:42 PM 49179

49179

Hall Environmental Analysis Laboratory, Inc.

Lab Order **1912184** Date Reported: **12/11/2019**

CLIENT: ENSOLUM			lient Sample I			
Project: Val Verde Amine Release 201	9		Collection Da	te: 12	/4/2019 10:10:00 AM	
Lab ID: 1912184-003	Matrix: SOIL		Received Da	te: 12	/5/2019 8:05:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	60	mg/Kg	20	12/6/2019 9:25:13 PM	49205
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS				Analyst	BRM
Diesel Range Organics (DRO)	23	9.4	mg/Kg	1	12/10/2019 9:13:40 AM	49225
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	12/10/2019 9:13:40 AM	49225
Surr: DNOP	91.9	70-130	%Rec	1	12/10/2019 9:13:40 AM	49225
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	12/6/2019 6:56:42 PM	49179
Surr: BFB	81.8	66.6-105	%Rec	1	12/6/2019 6:56:42 PM	49179
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	12/6/2019 6:56:42 PM	49179
Toluene	ND	0.049	mg/Kg	1	12/6/2019 6:56:42 PM	49179
Ethylbenzene	ND	0.049	mg/Kg	1	12/6/2019 6:56:42 PM	49179

ND

98.8

0.097

80-120

mg/Kg 1

1

%Rec

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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CLIENT: ENSOLUM

1912184-004

Project:

Lab ID:

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Val Verde Amine Release 2019

Lab Order 1912184 Date Reported: 12/11/2019 Client Sample ID: S-4

Collection Date: 12/4/2019 10:15:00 AM

Received Date: 12/5/2019 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	ND	60		mg/Kg	20	12/6/2019 9:37:34 PM	49205
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS					Analyst	BRM
Diesel Range Organics (DRO)	150	95		mg/Kg	10	12/10/2019 9:22:48 AM	49225
Motor Oil Range Organics (MRO)	ND	470		mg/Kg	10	12/10/2019 9:22:48 AM	49225
Surr: DNOP	0	70-130	S	%Rec	10	12/10/2019 9:22:48 AM	49225
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/9/2019 9:12:21 AM	49179
Surr: BFB	76.8	66.6-105		%Rec	1	12/9/2019 9:12:21 AM	49179
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	12/9/2019 9:12:21 AM	49179
Toluene	ND	0.048		mg/Kg	1	12/9/2019 9:12:21 AM	49179
Ethylbenzene	ND	0.048		mg/Kg	1	12/9/2019 9:12:21 AM	49179
Xylenes, Total	ND	0.095		mg/Kg	1	12/9/2019 9:12:21 AM	49179
Surr: 4-Bromofluorobenzene	92.6	80-120		%Rec	1	12/9/2019 9:12:21 AM	49179

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 range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1912184

Date Reported: 12/11/2019

CLIENT: ENSOLUM		Cl	ient Sa	ample Il	D: S-:	5	
Project: Val Verde Amine Release 2019		(Collect	tion Dat	e: 12	/4/2019 10:20:00 AM	
Lab ID: 1912184-005	Matrix: SOIL		Recei	ved Dat	e: 12	/5/2019 8:05:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	ND	60		mg/Kg	20	12/6/2019 9:49:55 PM	49205
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst:	BRM
Diesel Range Organics (DRO)	2300	90		mg/Kg	10	12/10/2019 9:31:56 AM	49225
Motor Oil Range Organics (MRO)	ND	450		mg/Kg	10	12/10/2019 9:31:56 AM	49225
Surr: DNOP	0	70-130	S	%Rec	10	12/10/2019 9:31:56 AM	49225
EPA METHOD 8015D: GASOLINE RANG	E					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/9/2019 9:35:12 AM	49179
Surr: BFB	80.2	66.6-105		%Rec	1	12/9/2019 9:35:12 AM	49179
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.024		mg/Kg	1	12/9/2019 9:35:12 AM	49179
Toluene	ND	0.047		mg/Kg	1	12/9/2019 9:35:12 AM	49179
Ethylbenzene	ND	0.047		mg/Kg	1	12/9/2019 9:35:12 AM	49179
Xylenes, Total	ND	0.094		mg/Kg	1	12/9/2019 9:35:12 AM	49179
Surr: 4-Bromofluorobenzene	95.2	80-120		%Rec	1	12/9/2019 9:35:12 AM	49179

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 range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1912184

Date Reported: 12/11/2019

CLIENT: ENSOLUM		Cl	ient Sa	ample II	D: S-(6	
Project: Val Verde Amine Release 201	19			-		/4/2019 10:25:00 AM	
Lab ID: 1912184-006	Matrix: SOIL					/5/2019 8:05:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	ND	60		mg/Kg	20	12/6/2019 10:02:16 PM	49205
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS					Analyst	BRM
Diesel Range Organics (DRO)	2400	98		mg/Kg	10	12/10/2019 9:41:05 AM	49225
Motor Oil Range Organics (MRO)	ND	490		mg/Kg	10	12/10/2019 9:41:05 AM	49225
Surr: DNOP	0	70-130	S	%Rec	10	12/10/2019 9:41:05 AM	49225
EPA METHOD 8015D: GASOLINE RAN	IGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/9/2019 9:58:07 AM	49179
Surr: BFB	82.0	66.6-105		%Rec	1	12/9/2019 9:58:07 AM	49179
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.024		mg/Kg	1	12/9/2019 9:58:07 AM	49179
Toluene	ND	0.049		mg/Kg	1	12/9/2019 9:58:07 AM	49179
Ethylbenzene	ND	0.049		mg/Kg	1	12/9/2019 9:58:07 AM	49179
Xylenes, Total	ND	0.098		mg/Kg	1	12/9/2019 9:58:07 AM	49179
Surr: 4-Bromofluorobenzene	96.0	80-120		%Rec	1	12/9/2019 9:58:07 AM	49179

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Lab Order 1912184 Date Reported: 12/11/2019

CLIENT: ENSOLUM		Cl	ient Sample II	D: S-	7	
Project: Val Verde Amine Release 2019		(Collection Dat	e: 12	/4/2019 10:30:00 AM	
Lab ID: 1912184-007	Matrix: SOIL		Received Dat	e: 12	/5/2019 8:05:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed B	Batch
EPA METHOD 300.0: ANIONS					Analyst: N	MRA
Chloride	76	59	mg/Kg	20	12/9/2019 2:44:02 PM 4	49220
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst: E	BRM
Diesel Range Organics (DRO)	110	9.8	mg/Kg	1	12/10/2019 9:50:15 AM 4	49225
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/10/2019 9:50:15 AM 4	49225
Surr: DNOP	70.7	70-130	%Rec	1	12/10/2019 9:50:15 AM 4	49225
EPA METHOD 8015D: GASOLINE RANGE					Analyst: N	NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	12/9/2019 10:21:06 AM 4	49179
Surr: BFB	82.2	66.6-105	%Rec	1	12/9/2019 10:21:06 AM 4	49179
EPA METHOD 8021B: VOLATILES					Analyst: N	NSB
Benzene	ND	0.023	mg/Kg	1	12/9/2019 10:21:06 AM 4	49179
Toluene	ND	0.047	mg/Kg	1	12/9/2019 10:21:06 AM 4	49179
Ethylbenzene	ND	0.047	mg/Kg	1	12/9/2019 10:21:06 AM 4	49179
Xylenes, Total	ND	0.094	mg/Kg	1	12/9/2019 10:21:06 AM 4	49179
Surr: 4-Bromofluorobenzene	96.4	80-120	%Rec	1	12/9/2019 10:21:06 AM 4	49179

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1912184

Date Reported: 12/11/2019

CLIENT: ENSOLUM		Cl	ient Sa	ample II	D: S-	8	
Project: Val Verde Amine Release 2019	9	(Collect	tion Dat	e: 12	/4/2019 10:35:00 AM	
Lab ID: 1912184-008	Matrix: SOIL		Recei	ved Dat	e: 12	/5/2019 8:05:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	ND	60		mg/Kg	20	12/9/2019 3:21:04 PM	49220
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS					Analyst	BRM
Diesel Range Organics (DRO)	1400	96		mg/Kg	10	12/10/2019 9:59:19 AM	49225
Motor Oil Range Organics (MRO)	ND	480		mg/Kg	10	12/10/2019 9:59:19 AM	49225
Surr: DNOP	0	70-130	S	%Rec	10	12/10/2019 9:59:19 AM	49225
EPA METHOD 8015D: GASOLINE RANG	GE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	12/9/2019 10:44:04 AM	49179
Surr: BFB	77.6	66.6-105		%Rec	1	12/9/2019 10:44:04 AM	49179
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.023		mg/Kg	1	12/9/2019 10:44:04 AM	49179
Toluene	ND	0.046		mg/Kg	1	12/9/2019 10:44:04 AM	49179
Ethylbenzene	ND	0.046		mg/Kg	1	12/9/2019 10:44:04 AM	49179
Xylenes, Total	ND	0.093		mg/Kg	1	12/9/2019 10:44:04 AM	49179
Surr: 4-Bromofluorobenzene	90.8	80-120		%Rec	1	12/9/2019 10:44:04 AM	49179

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order **1912184** Date Reported: **12/11/2019**

CLIENT: ENSOLUM		Cl	ient Sa	ample II	D: S-9	9	
Project: Val Verde Amine Release 201	9	(Collect	ion Dat	e: 12	/4/2019 10:40:00 AM	
Lab ID: 1912184-009	Matrix: SOIL		Recei	ved Dat	e: 12	/5/2019 8:05:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	t: MRA
Chloride	ND	60		mg/Kg	20	12/9/2019 4:22:48 PM	49220
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS					Analys	t: BRM
Diesel Range Organics (DRO)	1400	98		mg/Kg	10	12/10/2019 10:08:28 A	M 49225
Motor Oil Range Organics (MRO)	ND	490		mg/Kg	10	12/10/2019 10:08:28 A	M 49225
Surr: DNOP	0	70-130	S	%Rec	10	12/10/2019 10:08:28 A	M 49225
EPA METHOD 8015D: GASOLINE RAN	GE					Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/9/2019 11:07:05 AM	49179
Surr: BFB	81.6	66.6-105		%Rec	1	12/9/2019 11:07:05 AN	49179
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.023		mg/Kg	1	12/9/2019 11:07:05 AM	49179
Toluene	ND	0.047		mg/Kg	1	12/9/2019 11:07:05 AN	49179
Ethylbenzene	ND	0.047		mg/Kg	1	12/9/2019 11:07:05 AN	49179
Xylenes, Total	ND	0.094		mg/Kg	1	12/9/2019 11:07:05 AN	49179
Surr: 4-Bromofluorobenzene	95.4	80-120		%Rec	1	12/9/2019 11:07:05 AN	49179

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range

RL Reporting Limit

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CLIENT: ENSOLUM

Project:

Analytical Report
Lab Order 1912184

Hall Environmental Analysis Laboratory, Inc.

Val Verde Amine Release 2019

Date Reported: 12/11/2019

Client Sample ID: S-10 Collection Date: 12/4/2019 10:45:00 AM Pageived Date: 12/5/2010 8:05:00 AM

Lab ID: 1912184-010	Matrix: SOIL	Received Date: 12/5/2019 8:05:00 AM					
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	ND	60		mg/Kg	20	12/9/2019 4:35:08 PM	49220
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS					Analyst	BRM
Diesel Range Organics (DRO)	1100	93		mg/Kg	10	12/10/2019 10:17:36 A	M 49225
Motor Oil Range Organics (MRO)	ND	460		mg/Kg	10	12/10/2019 10:17:36 A	M 49225
Surr: DNOP	0	70-130	S	%Rec	10	12/10/2019 10:17:36 A	M 49225
EPA METHOD 8015D: GASOLINE RANG	GE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/9/2019 11:30:03 AM	49179
Surr: BFB	80.3	66.6-105		%Rec	1	12/9/2019 11:30:03 AM	49179
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	12/9/2019 11:30:03 AM	49179
Toluene	ND	0.049		mg/Kg	1	12/9/2019 11:30:03 AM	49179
Ethylbenzene	ND	0.049		mg/Kg	1	12/9/2019 11:30:03 AM	49179
Xylenes, Total	ND	0.097		mg/Kg	1	12/9/2019 11:30:03 AM	49179
Surr: 4-Bromofluorobenzene	93.4	80-120		%Rec	1	12/9/2019 11:30:03 AM	49179

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Hall Environmental Analysis Laboratory, Inc.Date Reported: 12/11/2019							
CLIENT: ENSOLUM		C	ient Sa	ample II	D: S-1	11	
Project: Val Verde Amine Release 201	9	(Collect	tion Dat	e: 12	/4/2019 10:50:00 AM	
Lab ID: 1912184-011	Matrix: SOIL		Recei	ved Dat	e: 12	/5/2019 8:05:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	ND	60		mg/Kg	20	12/9/2019 4:47:29 PM	49220
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS					Analyst	BRM
Diesel Range Organics (DRO)	2100	96		mg/Kg	10	12/10/2019 10:26:49 AM	M 49225
Motor Oil Range Organics (MRO)	ND	480		mg/Kg	10	12/10/2019 10:26:49 AM	M 49225
Surr: DNOP	0	70-130	S	%Rec	10	12/10/2019 10:26:49 AM	M 49225
EPA METHOD 8015D: GASOLINE RAN	GE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/9/2019 11:53:03 AM	49179
Surr: BFB	79.9	66.6-105		%Rec	1	12/9/2019 11:53:03 AM	49179
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	12/9/2019 11:53:03 AM	49179
Toluene	ND	0.049		mg/Kg	1	12/9/2019 11:53:03 AM	49179
Ethylbenzene	ND	0.049		mg/Kg	1	12/9/2019 11:53:03 AM	49179
Xylenes, Total	ND	0.098		mg/Kg	1	12/9/2019 11:53:03 AM	49179
Surr: 4-Bromofluorobenzene	92.3	80-120		%Rec	1	12/9/2019 11:53:03 AM	49179

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range

RL Reporting Limit Page 11 of 22

Surr: 4-Bromofluorobenzene

Analytical Report Lab Order 1912184

12/9/2019 12:15:57 PM 49179

Hall Environmental Analysis Laboratory, Inc.

Hall Environmental Analysis Laboratory, Inc.Date Reported: 12/11/2019								
CLIENT: ENSOLUM Project: Val Verde Amine Release 2019			Collec		e: 12	/4/2019 10:55:00 AM		
Lab ID: 1912184-012 Analyses	Matrix: SOIL Result	RL		Units		/5/2019 8:05:00 AM Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS						Analyst	MRA	
Chloride	ND	60		mg/Kg	20	12/9/2019 4:59:50 PM	49220	
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS					Analyst	BRM	
Diesel Range Organics (DRO)	490	95		mg/Kg	10	12/10/2019 10:54:03 AI	M 49225	
Motor Oil Range Organics (MRO)	ND	480		mg/Kg	10	12/10/2019 10:54:03 AI	M 49225	
Surr: DNOP	0	70-130	S	%Rec	10	12/10/2019 10:54:03 AI	M 49225	
EPA METHOD 8015D: GASOLINE RANG	E					Analyst	: NSB	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/9/2019 12:15:57 PM	49179	
Surr: BFB	80.1	66.6-105		%Rec	1	12/9/2019 12:15:57 PM	49179	
EPA METHOD 8021B: VOLATILES						Analyst	: NSB	
Benzene	ND	0.023		mg/Kg	1	12/9/2019 12:15:57 PM	49179	
Toluene	ND	0.047		mg/Kg	1	12/9/2019 12:15:57 PM	49179	
Ethylbenzene	ND	0.047		mg/Kg	1	12/9/2019 12:15:57 PM	49179	
Xylenes, Total	ND	0.093		mg/Kg	1	12/9/2019 12:15:57 PM	49179	

93.1

80-120

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

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range

%Rec 1

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

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Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1912184

Date Reported: 12/11/2019

CLIENT:	ENSOLUM	Client Sample ID: S-13								
Project:	Val Verde Amine Release 2019		Collection Date: 12/4/2019 11:00:00 AM							
Lab ID:	1912184-013	Matrix: SOIL	/5/2019 8:05:00 AM							
Analyses		Result	RL	Qual	Units	DF	Date Analyzed	Batch		
EPA MET	HOD 300.0: ANIONS						Analyst:	MRA		
Chloride		ND	60		mg/Kg	20	12/9/2019 5:12:11 PM	49220		
EPA MET	HOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst:	BRM		
Diesel Ra	ange Organics (DRO)	1600	73		mg/Kg	10	12/9/2019 1:51:53 PM	49194		
Motor Oil Range Organics (MRO)		ND	370	D	mg/Kg	10	12/9/2019 1:51:53 PM	49194		
Surr: D	DNOP	0	70-130	S	%Rec	10	12/9/2019 1:51:53 PM	49194		
EPA MET	HOD 8015D: GASOLINE RANGE	E					Analyst:	NSB		
Gasoline	Range Organics (GRO)	ND	4.6		mg/Kg	1	12/9/2019 10:48:59 AM	49179		
Surr: E	3FB	80.5	66.6-105		%Rec	1	12/9/2019 10:48:59 AM	49179		
EPA MET	HOD 8021B: VOLATILES						Analyst:	NSB		
Benzene		ND	0.023		mg/Kg	1	12/9/2019 10:48:59 AM	49179		
Toluene		ND	0.046		mg/Kg	1	12/9/2019 10:48:59 AM	49179		
Ethylben	zene	ND	0.046		mg/Kg	1	12/9/2019 10:48:59 AM	49179		
Xylenes,	Total	ND	0.092		mg/Kg	1	12/9/2019 10:48:59 AM	49179		
Surr: 4	1-Bromofluorobenzene	92.2	80-120		%Rec	1	12/9/2019 10:48:59 AM	49179		

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/11/2019

CLIENT:	ENSOLUM	Client Sample ID: S-14							
Project:	Val Verde Amine Release 2019			Collect	tion Dat	e: 12	/4/2019 11:05:00 AM		
Lab ID:	1912184-014	Matrix: SOIL Received Date: 12/5/2019 8:05:00 AM							
Analyses	3	Result	RL	Qual	Units	DF	Date Analyzed	Batch	
EPA ME	THOD 300.0: ANIONS						Analyst	MRA	
Chloride	•	67	60		mg/Kg	20	12/9/2019 5:24:32 PM	49220	
EPA ME	THOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst	BRM	
Diesel R	ange Organics (DRO)	2100	90		mg/Kg	10	12/9/2019 2:01:11 PM	49194	
Motor Oil Range Organics (MRO)		ND	450	D	mg/Kg	10	12/9/2019 2:01:11 PM	49194	
Surr:	DNOP	0	70-130	S	%Rec	10	12/9/2019 2:01:11 PM	49194	
EPA ME	THOD 8015D: GASOLINE RANGE	E					Analyst	: NSB	
Gasoline	e Range Organics (GRO)	ND	4.6		mg/Kg	1	12/9/2019 11:12:20 AM	49179	
Surr:	BFB	80.4	66.6-105		%Rec	1	12/9/2019 11:12:20 AM	49179	
EPA ME	THOD 8021B: VOLATILES						Analyst	: NSB	
Benzene	e	ND	0.023		mg/Kg	1	12/9/2019 11:12:20 AM	49179	
Toluene		ND	0.046		mg/Kg	1	12/9/2019 11:12:20 AM	49179	
Ethylber	nzene	ND	0.046		mg/Kg	1	12/9/2019 11:12:20 AM	49179	
Xylenes	, Total	ND	0.093		mg/Kg	1	12/9/2019 11:12:20 AM	49179	
Surr:	4-Bromofluorobenzene	93.4	80-120		%Rec	1	12/9/2019 11:12:20 AM	49179	

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/11/2019

CLIENT: ENSOLUM	Client Sample ID: S-15								
Project: Val Verde Amine Release 2019	9 Collection Date: 12/4/2019 11:10:00 AM								
Lab ID: 1912184-015	Matrix: SOIL Received Date: 12/5/2019 8:05:00 AM								
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS						Analyst:	MRA		
Chloride	ND	60		mg/Kg	20	12/9/2019 5:36:53 PM	49220		
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst:	BRM		
Diesel Range Organics (DRO)	7100	96		mg/Kg	10	12/9/2019 2:10:30 PM	49194		
Motor Oil Range Organics (MRO)	ND	480	D	mg/Kg	10	12/9/2019 2:10:30 PM	49194		
Surr: DNOP	0	70-130	S	%Rec	10	12/9/2019 2:10:30 PM	49194		
EPA METHOD 8015D: GASOLINE RANGE	E					Analyst:	NSB		
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/9/2019 11:35:53 AM	49179		
Surr: BFB	84.7	66.6-105		%Rec	1	12/9/2019 11:35:53 AM	49179		
EPA METHOD 8021B: VOLATILES						Analyst:	NSB		
Benzene	ND	0.024		mg/Kg	1	12/9/2019 11:35:53 AM	49179		
Toluene	ND	0.048		mg/Kg	1	12/9/2019 11:35:53 AM	49179		
Ethylbenzene	ND	0.048		mg/Kg	1	12/9/2019 11:35:53 AM	49179		
Xylenes, Total	ND	0.095		mg/Kg	1	12/9/2019 11:35:53 AM	49179		
Surr: 4-Bromofluorobenzene	97.1	80-120		%Rec	1	12/9/2019 11:35:53 AM	49179		

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Lab Order 1912184 Date Reported: 12/11/2019

CLIENT:	ENSOLUM		Cl	ient Sa	ample II	D: S-	16		
Project:	Val Verde Amine Release 2019	Collection Date: 12/4/2019 11:15:00 AM							
Lab ID:	1912184-016	Matrix: SOIL		Recei	ved Dat	e: 12	/5/2019 8:05:00 AM		
Analyses		Result	RL	Qual	Units	DF	Date Analyzed	Batch	
EPA MET	THOD 300.0: ANIONS						Analyst	MRA	
Chloride		ND	60		mg/Kg	20	12/9/2019 5:49:14 PM	49220	
EPA MET	THOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst	BRM	
Diesel R	ange Organics (DRO)	4400	86		mg/Kg	10	12/9/2019 2:19:51 PM	49194	
Motor Oil Range Organics (MRO)		ND	430	D	mg/Kg	10	12/9/2019 2:19:51 PM	49194	
Surr: I	DNOP	0	70-130	S	%Rec	10	12/9/2019 2:19:51 PM	49194	
EPA MET	THOD 8015D: GASOLINE RANGE	E					Analyst	NSB	
Gasoline	e Range Organics (GRO)	ND	4.8		mg/Kg	1	12/9/2019 11:59:32 AM	49179	
Surr: I	BFB	83.9	66.6-105		%Rec	1	12/9/2019 11:59:32 AM	49179	
EPA MET	THOD 8021B: VOLATILES						Analyst	NSB	
Benzene	9	ND	0.024		mg/Kg	1	12/9/2019 11:59:32 AM	49179	
Toluene		ND	0.048		mg/Kg	1	12/9/2019 11:59:32 AM	49179	
Ethylben	izene	ND	0.048		mg/Kg	1	12/9/2019 11:59:32 AM	49179	
Xylenes,	Total	ND	0.096		mg/Kg	1	12/9/2019 11:59:32 AM	49179	
Surr: 4	4-Bromofluorobenzene	97.0	80-120		%Rec	1	12/9/2019 11:59:32 AM	49179	

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- JAnalyte detected below quantitation limitsPSample pH Not In Range
- RL Reporting Limit

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OC SUMMARY REPORT H

Hall Envi	Hall Environmental Analysis Laboratory, Inc.							
Client: Project:		DLUM erde Amine Release 2019						
Sample ID: MB	-49205	SampType: mblk	TestCode: EPA Method 300.0: Anions					
Client ID: PBS	6	Batch ID: 49205	RunNo: 65000					
Prep Date: 12	/6/2019	Analysis Date: 12/6/2019	SeqNo: 2230295 Units: mg/Kg					
					. .			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								
Sample ID: LCS-49205	SampT	ype: Ics	6	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: LCSS	Batch	n ID: 49	205	F	RunNo: 6	5000				
Prep Date: 12/6/2019	Analysis D	ate: 1	2/6/2019	S	SeqNo: 2	230296	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			
Sample ID: MB-49220	SampT	SampType: mblk TestCode: EPA Method 30					300.0: Anion	s		
Client ID: PBS	Batch	n ID: 49	220	F	RunNo: 6	5035				
Prep Date: 12/9/2019	Analysis D	ate: 1	2/9/2019	S	SeqNo: 2	231723	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								
Sample ID: LCS-49220	SampT	ype: Ics	6	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: LCSS	Batch	n ID: 49	220	F	RunNo: 6	5035				
Prep Date: 12/9/2019	Analysis D	ate: 1	2/9/2019	S	SeqNo: 2	231724	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.8	90	110			

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 range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range

RL Reporting Limit Page 17 of 22

OC SUMMARY REPORT

Result

44

3.8

PQL

10

Hall Environmental Analysis Laboratory, Inc.						
Client: Project:	ENSO Val V	DLUM erde Amine Release 2019				
Sample ID: LC	S-49194	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics			
Client ID: LC	SS	Batch ID: 49194	RunNo: 64995			
Prep Date: 1	2/6/2019	Analysis Date: 12/6/2019	SeqNo: 2229278 Units: mg/Kg			

0

%REC LowLimit

63.9

70

87.4

75.2

HighLimit

124

130

%RPD

RPDLimit

Qual

SPK value SPK Ref Val

50.00

5.000

Sample ID: MB-49194	SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID: PBS	Batch ID: 49194	RunNo: 64995				
Prep Date: 12/6/2019	Analysis Date: 12/6/2019	SeqNo: 2229279 Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual				
Diesel Range Organics (DRO)	ND 10					
Motor Oil Range Organics (MRO)	ND 50					
Surr: DNOP	12 10.00	122 70 130				
Sample ID: LCS-49177	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics				
Client ID: LCSS	Batch ID: 49177	RunNo: 64995				
Prep Date: 12/5/2019	Analysis Date: 12/6/2019	SeqNo: 2229750 Units: %Rec				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual				
Surr: DNOP	5.8 5.000	115 70 130				
Sample ID: MB-49177	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics				
Client ID: PBS	Batch ID: 49177	RunNo: 64995				
Prep Date: 12/5/2019	Analysis Date: 12/6/2019	SeqNo: 2229751 Units: %Rec				
	-					
Analyte		SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual				
Surr: DNOP	9.7 10.00	96.7 70 130				
Sample ID: MB-49170	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics				
Client ID: PBS	Batch ID: 49170	RunNo: 65021				
Prep Date: 12/5/2019	Analysis Date: 12/9/2019	SeqNo: 2230412 Units: %Rec				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual				
Surr: DNOP	11 10.00	108 70 130				
Sample ID: LCS-49170	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics				
Client ID: LCSS	Batch ID: 49170	RunNo: 65021				
Prep Date: 12/5/2019	Analysis Date: 12/9/2019	SeqNo: 2230418 Units: %Rec				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual				
Surr: DNOP	4.3 5.000	85.9 70 130				

Qualifiers:

Analyte

Surr: DNOP

Diesel Range Organics (DRO)

- 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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc

	WO#:	1912184
vironmental Analysis Laboratory, Inc.		11-Dec-19

Client: ENSOL Project: Val Vero	UM de Amine R	elease 2	2019												
Sample ID: MB-49178	SampT	ype: ME	BLK	TestCode: EPA Method 8015M/D: Diesel Range Organics											
Client ID: PBS	Batch	n ID: 49	178	F	unNo: 65										
Prep Date: 12/5/2019	Analysis D	ate: 12	2/9/2019	S	eqNo: 22	230420	Units: %Re	•							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Surr: DNOP	14		10.00		136	70	130			S					
Sample ID: LCS-49178	SampT	ype: LC	S	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics						
Client ID: LCSS	Batch	n ID: 49	178	F	unNo: 65	5021									
Prep Date: 12/5/2019	Analysis D	ate: 12	2/9/2019	S	eqNo: 22	230877	Units: %Re	•							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Surr: DNOP	5.9		5.000		118	70	130								
Sample ID: LCS-49225	SampT	ype: LC	S	TestCode: EPA Method 8015M/D: Diesel Range Organics											
Client ID: LCSS	Batch	n ID: 49	225	F	lunNo: 65	5055									
Prep Date: 12/9/2019	Analysis D	ate: 12	2/10/2019	S	SeqNo: 22	232020	Units: mg/K	g							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Diesel Range Organics (DRO)	52	10	50.00	0	104	63.9	124								
Surr: DNOP	4.3		5.000		86.4	70	130								
Sample ID: MB-49225	SampT	ype: ME	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics						
Client ID: PBS	Batch	n ID: 49	225	F	unNo: 65	5055									
Prep Date: 12/9/2019	Analysis D	ate: 12	2/10/2019	S	eqNo: 22	232021	Units: mg/K	g							
	Analysis D Result	ate: 12 PQL		SPK Ref Val	•		Units: mg/K HighLimit	g %RPD	RPDLimit	Qual					
Analyte Diesel Range Organics (DRO)	Result ND	PQL 10			•		Ū.	•	RPDLimit	Qual					
Analyte Diesel Range Organics (DRO) Notor Oil Range Organics (MRO)	Result ND ND	PQL	SPK value		%REC	LowLimit	HighLimit	•	RPDLimit	Qual					
Analyte Diesel Range Organics (DRO)	Result ND	PQL 10			•		Ū.	•	RPDLimit	Qual					
Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	Result ND ND 9.0	PQL 10	SPK value 10.00	SPK Ref Val	%REC 89.7	LowLimit 70	HighLimit	%RPD		Qual					
Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)	Result ND ND 9.0	PQL 10 50	SPK value 10.00	SPK Ref Val	%REC 89.7	LowLimit 70 PA Method	HighLimit 130	%RPD		Qual					
Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID: 1912184-001AMS	Result ND ND 9.0	PQL 10 50 ype: MS 1D: 49	SPK value 10.00	SPK Ref Val Tes F	%REC 89.7	LowLimit 70 PA Method 5055	HighLimit 130	%RPD		Qual					
Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID: 1912184-001AMS Client ID: S-1 Prep Date: 12/9/2019 Analyte	Result ND 9.0 SampT Batch Analysis D Result	PQL 10 50 ype: MS 1D: 49 ate: 12 PQL	SPK value 10.00 225 2/10/2019 SPK value	SPK Ref Val Tes F SPK Ref Val	%REC 89.7 COde: EF RunNo: 65 SeqNo: 22 %REC	LowLimit 70 PA Method 5055 232399 LowLimit	HighLimit 130 8015M/D: Dia Units: mg/K HighLimit	%RPD		Qual					
Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID: 1912184-001AMS Client ID: S-1 Prep Date: 12/9/2019 Analyte Diesel Range Organics (DRO)	Result ND 9.0 SampT Batch Analysis D Result 130	PQL 10 50 ype: MS 1D: 49 ate: 12	SPK value 10.00 5 225 2/10/2019 SPK value 48.59	SPK Ref Val Tes F S	%REC 89.7 Code: EF CunNo: 65 SeqNo: 22 %REC 102	LowLimit 70 24 Method 5055 232399 LowLimit 57	HighLimit 130 8015M/D: Dia Units: mg/K HighLimit 142	%RPD	e Organics						
Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID: 1912184-001AMS Client ID: S-1 Prep Date: 12/9/2019 Analyte	Result ND 9.0 SampT Batch Analysis D Result	PQL 10 50 ype: MS 1D: 49 ate: 12 PQL	SPK value 10.00 225 2/10/2019 SPK value	SPK Ref Val Tes F SPK Ref Val	%REC 89.7 COde: EF RunNo: 65 SeqNo: 22 %REC	LowLimit 70 PA Method 5055 232399 LowLimit	HighLimit 130 8015M/D: Dia Units: mg/K HighLimit	%RPD	e Organics						
Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID: 1912184-001AMS Client ID: S-1 Prep Date: 12/9/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP	Result ND 9.0 SampT Batch Analysis D Result 130 5.1	PQL 10 50 ype: MS 1D: 49 ate: 12 PQL	SPK value 10.00 225 2/10/2019 SPK value 48.59 4.859	SPK Ref Val Tes F SPK Ref Val 80.60	%REC 89.7 tCode: EF cunNo: 65 SeqNo: 22 %REC 102 104	LowLimit 70 24 Method 5055 232399 LowLimit 57 70	HighLimit 130 8015M/D: Dia Units: mg/K HighLimit 142	esel Range	• Organics RPDLimit						
Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID: 1912184-001AMS Client ID: S-1 Prep Date: 12/9/2019 Analyte Diesel Range Organics (DRO)	Result ND 9.0 SampT Batch Analysis D Result 130 5.1	PQL 10 50 ype: MS 1D: 49: pate: 12 PQL 9.7	SPK value 10.00 225 2/10/2019 SPK value 48.59 4.859 5D	SPK Ref Val Tes SPK Ref Val 80.60 Tes	%REC 89.7 tCode: EF cunNo: 65 SeqNo: 22 %REC 102 104	LowLimit 70 PA Method 5055 232399 LowLimit 57 70 PA Method	HighLimit 130 8015M/D: Dia Units: mg/K HighLimit 142 130	esel Range	• Organics RPDLimit						
Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID: 1912184-001AMS Client ID: S-1 Prep Date: 12/9/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 1912184-001AMS	Result ND 9.0 SampT Batch Analysis D Result 130 5.1	PQL 10 50 ype: MS 1D: 49 yate: 12 9.7 ype: MS 1D: 49	SPK value 10.00 225 2/10/2019 SPK value 48.59 4.859 30 225	SPK Ref Val Tes SPK Ref Val 80.60 Tes F	%REC 89.7 tCode: EF tunNo: 65 seqNo: 22 %REC 102 104 tCode: EF	LowLimit 70 2A Method 5055 232399 LowLimit 57 70 2A Method 5055	HighLimit 130 8015M/D: Dia Units: mg/K HighLimit 142 130	esel Range %RPD %RPD	• Organics RPDLimit						
Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID: 1912184-001AMS Client ID: S-1 Prep Date: 12/9/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 1912184-001AMS Client ID: S-1	Result ND 9.0 SampT Batch Analysis D Result 130 5.1 SD SampT Batch	PQL 10 50 ype: MS 1D: 49 yate: 12 9.7 ype: MS 1D: 49	SPK value 10.00 225 2/10/2019 SPK value 48.59 4.859 6D 225 2/10/2019	SPK Ref Val Tes SPK Ref Val 80.60 Tes F	%REC 89.7 tCode: EF tunNo: 65 %REC 102 104 104 tCode: EF tunNo: 65	LowLimit 70 2A Method 5055 232399 LowLimit 57 70 2A Method 5055	HighLimit 130 8015M/D: Die Units: mg/K HighLimit 142 130 8015M/D: Die	esel Range %RPD %RPD	• Organics RPDLimit						

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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1912184 11-Dec-19

WO#:

QC SUMMARY REPORT	
Hall Environmental Analysis Laboratory, Inc.	

Client: Project:	ENSOLUM Val Verde Amine Release 2019														
Sample ID: 191	le ID: 1912184-001AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics														
Client ID: S-1	1	Batch	ID: 49	225	F	RunNo: 6	5055								
Prep Date: 12	2/9/2019	Analysis Da	ate: 12	2/10/2019	S	SeqNo: 2	232400	Units: mg/K	g						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Surr: DNOP		4.8		4.708		102	70	130	0	0					

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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	WO#:	1912184
Hall Environmental Analysis Laboratory, Inc.		11-Dec-19

	ENSOLUM Val Verde Amine Release 2019														
Sample ID: mb-49179	SampT	ype: ME	BLK	TestCode: EPA Method 8015D: Gasoline Range											
Client ID: PBS	Batch	n ID: 49 1	179	F	RunNo: 64	1998									
Prep Date: 12/5/2019	Analysis D	ate: 12	2/6/2019	5	SeqNo: 22	229658	Units: mg/#	g							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Gasoline Range Organics (GRO)	ND	5.0													
Surr: BFB	800		1000		79.6	66.6	105								
Sample ID: Ics-49179	SampT	ype: LC	S	TestCode: EPA Method 8015D: Gasoline Range											
Client ID: LCSS	Batch	n ID: 49 1	179	F	RunNo: 64	4998									
Prep Date: 12/5/2019	Analysis D	ate: 12	/6/2019	S	SeqNo: 2	229659	Units: mg/#	(g							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.4	80	120								
Surr: BFB	920		1000		92.4	66.6	105								

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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Client:

Project:

Analyte

Benzene

Toluene

Ethylbenzene

Sample ID: mb-49179

Prep Date: 12/5/2019

Client ID: PBS

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

1912184	WO#:
11-Dec-19	

Qual

ENSOL Val Vero	UM de Amine R	telease 2	2019						
179	•	ype: ME h ID: 49 ′			tCode: Ef		8021B: Volat	iles	
2019	Analysis D	Date: 12	2/6/2019	S	SeqNo: 2	229708	Units: mg/K	g	
	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit
	ND	0.025							
	ND	0.050							
	ND	0.050							

Xylenes, Total Surr: 4-Bromofluorobenzene	ND 0.97	0.10	1.000		96.9	80	120			
Sample ID: LCS-49179	SampT	ype: LC	S	Tes						
Client ID: LCSS	Batcl	h ID: 49	179	F	RunNo: 6	4998				
Prep Date: 12/5/2019	Analysis E	Date: 12	2/6/2019	S	SeqNo: 2	229709	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.3	80	120			
Toluene	0.93	0.050	1.000	0	93.2	80	120			
Ethylbenzene	0.95	0.050	1.000	0	94.5	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.3	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			
Sample ID: 1912184-001ams	SampT	Гуре: МS	5	Tes	tCode: El					
Client ID: S-1	Batcl	h ID: 49	179	F	RunNo: 6	4998				
Prep Date: 12/5/2019	Analysis D	Date: 12	2/6/2019	SeqNo: 2229726			Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.024	0.9643	0	101	76	123			

				-						
Toluene	0.99	0.048	0.9643	0.006973	102	80.3	127			
Ethylbenzene	1.0	0.048	0.9643	0.008317 105 80.2			131			
Xylenes, Total	3.1	0.096	2.893	0	107	78	133			
Surr: 4-Bromofluorobenzene	0.98		0.9643		102	80	120			
Sample ID: 1912184-001ams	sd Samp	Гуре: МS	SD	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: S-1	Batc	h ID: 49	179	F	RunNo: 6	4998				
Prep Date: 12/5/2019	Analysis [Date: 12	2/6/2019	S	SeqNo: 2	229727	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.024	0.9634	0	95.8	76	123	5.64	20	
Toluene	0.94	0.048	0.9634	0.006973	96.8	80.3	127	5.66	20	
Ethylbenzene	0.96	0.048	0.9634	0.008317	98.9	80.2	2 131 6.2		20	

0

Qualifiers:

Xylenes, Total

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit

Surr: 4-Bromofluorobenzene

% Recovery outside of range due to dilution or matrix S

в Analyte detected in the associated Method Blank

100

99.4

78

80

133

120

6.95

0

- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

20

0

2.9

0.96

0.096

2.890

0.9634

1 uge 07 0/ 150	Page	69	0	f 139
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ived by OCD: 11/5/2020 1:01:38 PM MALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Albı TEL: 505-345-3975 Website: www.ha	490. uquerqi FAX: :	l Hawkins NE ue, NM 87109 505-345-4107	Pa Sample Log-In Check List							
Client Name: ENSOLUM AZTEC	Work Order Number:	: 1912	184		RcptNo	p: 1					
Received By: Erin Melendrez	12/5/2019 8:05:00 AM		Vi	LUA	-						
Completed By: Desiree Dominguez	12/5/2019(8:40:43 AM			T							
Reviewed By: HB	12/5/19		~								
Chain of Custody											
1. Is Chain of Custody sufficiently complete?		Yes		No 🗌	Not Present 🗌						
2. How was the sample delivered?		<u>Couri</u>	ier								
Log In				_	_						
3. Was an attempt made to cool the samples?		Yes		No 🗌	NA 🗔						
4. Were all samples received at a temperature of	of >0° C to 6.0°C	Yes	✓	No 🗌	NA 🗌						
5. Sample(s) in proper container(s)?		Yes		No 🗌							
6. Sufficient sample volume for indicated test(s)	?	Yes		No 🗌							
7. Are samples (except VOA and ONG) properly	preserved?	Yes	\checkmark	No 🗌							
8. Was preservative added to bottles?		Yes		No 🗹	NA 🗆						
9. Received at least 1 vial with headspace <1/4"	for AQ VOA?	Yes		No 🗌	NA 🗹						
10. Were any sample containers received broken	?	Yes		No 🗹	# of preserved						
14					bottles checked						
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes		No 📖	for pH: (<2 c	r >12 unless noted)					
12. Are matrices correctly identified on Chain of C	ustody?	Yes	~	No 🗌	Adjusted?						
13. Is it clear what analyses were requested?	·	Yes	\checkmark	No 🗌		-					
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes	✓	No 🗌	Checked by:	NM 12/5					
Special Handling (if applicable)				Canal							
15. Was client notified of all discrepancies with th	is order?	Yes		No 🗌	NA 🗹						
Person Notified:	Date:				·						
By Whom:	Via:	eMa	il 🗌 Phone	e 🗌 Fax	In Person						
Regarding:											
Client Instructions:	· · · · · · · · · · · · · · · · · · ·	·····									
16. Additional remarks:						_					
17. <u>Cooler Information</u>											

Page 1 of 1

Receiv	ved by	y OC	D: 1	1/5/20	20	1:0	1:38	PM	[_	<u></u>													Γ	Pa	ge 70	of 13	9
UAL FUNCTONIMENTAL	ANAL ENVIRONMENTAL ANALYSTS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis Request		S Ԡ(Оd	ι.ese ') NO ^{5'}	0 0 0	31: 19: 19: 19: 19: 19: 19: 19: 19: 19: 1	(Meth by 8 A 8 M (VOA (VOA (Sem (VOA (Sem (VOA (Sem	PAHs RCR, 8260 8270 704al 704al	×	X		X		X	Т Х I I					×	pM-Tam Long (EPROD)	Ś		INTER VAN W. VALACE IV AND VALATION OF A CONTRACTED A CONTRACT A CONTRACT AND SUBJECT AND SUB-contracted data will be clearly notated on the analytical report.	
			01 Ha	əl. 505			s'a	ЪС				itee9														د مر	मू		Any sub-	
 25			49	Τe								19108	_	×	\succ	X	\checkmark	X	\mathbf{X}		\geq	$\mathbf{\times}$	X	X	X	Remarks:	12000	i	sibility. A	
[5			()	208	i) 64	- 1WE		<u>81</u>	₩-/>		×	\checkmark	<u> </u>	\prec	\preceq	X	\geq	X	거	X	\times	X	Re	2		this post	
140-			Amine release zoig	~	2	Kenmmert			3			1-0-1(E)=0.(1942184	100-	200-	-003	- DOY	- 005	-000	£90-	- 006	-009	-010-	110-	210-		12/4/19		TL/C/C/T ss. This serves as notice of	
60	d 🕅 Rush			Secretes					PDeechill	N Yes		(indecing cF). C	Preservative Type	ارديما	602C1	1002	cost	COD	ecril	coss	6001	0001	etál	c 001	con	Via:	t Wart	ViaCOUNIEC	iccredited laboratorie	
Turn-Around Time:	□ Standard	Project Name:	Val Verde	Project #: S		Project Manager:				Unice:			Container Type and #	1×402 Juc	1×402 Jur	1x Horson	1×4m Sal	1x Yor Sh	Jay an Son	1x UzJer	12 yound	la Yuz Ju	1x42 Jar	124050	1+412 200	Received by:	9	Received by:	ontracted to other a	
Chain-of-Custody Record	Ensolum,LC		Mailing Address: (OCLO S, Rio Grande Suite A	NM STUIU		email or Fax#: KSulMMerS & ensulum.com	ž	Level 4 (Full Validation)	□ Az Compliance				Matrix Sample Name	5 -2	5 S-2	S 5-3	s su	S 5-5	S S-6	5,25	5 5-8	5 S-9	S Sulà	S	S S-12	Relinquished by:		Relinquished by:	Y, samples submitted to Hall Environmental may be subc	>
Chain Chain . Releas	Client:					1	CA/QC Package:	□ Standard	Accreditation:				Date Time	0001 101110	12/4/19 1005	0101 61/10/21	124/14 1015	12/4/19 1020	12/4/19 1025	0201 61/h/21	12/4/19 LO35	12/4/19 10-00	shall bell here	0501 61/M21	12/4/10/1055	Time:	<u> </u>	Date: Time: Dulines V.C.I.I	If necessary	

Receiv	. >		D: 11	1/5/2	2020	1:01	:38 P)	1											-		- 1	Page 71 (of 139
		www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis	PAHs by 8310 or 8270SIMS RCRA 8 Metals CI, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄ 8260 (VOA) 8270 (Semi-VOA) Total Coliform (Present/Absent) Total Coliform (Present/Absent)						×		×					PM-Tom Lang (EPRON) PAY Key-TC 25719	6 HESE 21 - Kert 6	ed data will be clearly notated on the analytical report.		
			4901 Hawkins			(0)	PCB's O / MF	D(GRO / DR icides/8082 or 504.1)		Metho Pestic	98:H9T 8081 F 8081 (1		××	X	X		 				Remarks:	3 DAY	ibility. Any sub-contract
Turn-Around Time: るーひみく	Standard Kush	Val Verde Amine Release Icily)	Project #: See nisted)	Project Manager:	_	Sampler: POcecini Unice: R Yes		Cooler Tempinatuation crit5.(4-(),(4(CF)=5.0°	Container Preservative HEAL No.	1×4250 6001 -013 X	X HID - 170 X X		X 010- 100 me 2011						Cleared by: Via: Date Time Rer	/ ViaCUULTO Date Time	by www.www.www.www.www.www.www.www.www.ww
ody Record	Client: Ensolum/JLC		Mailing Address: 1000 Si Ci O Cararre Sùtz A			Ksummescerselum.com	Level 4 (Full Validation)	□ Az Compliance □ Other			Time Matrix Sample Name	1100 5 8-13 1	1105 S S-14	1110 S S-15	1/15 S S-16						Ime: Relinquished by: R	Relinquished by:	-
ЧĊ	Client:		Mailing Ac	Aztec	Phone #:	email or F	QA/QC Package: □ Standard	Accreditation:	🗆 EDD (Type)		Date	1 11 12	1 61 11/21	124111 1	12 4 14 1	-					Date: Date: Date: Date: C	Date: Time:	If ne



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

January 14, 2020

Kyle Summers ENSOLUM 606 S. Rio Grande Suite A Aztec, NM 87410 TEL: (903) 821-5603 FAX

RE: Val Verde Amine Release 2019

OrderNo.: 2001311

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 1/9/2020 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
Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2001311

Date Reported: 1/14/2020

CLIENT: ENSOLUM	Client Sample ID: S-17								
Project: Val Verde Amine Release 2019	Collection Date: 1/8/2020 1:45:00 PM								
Lab ID: 2001311-001	Matrix: SOIL		Received Dat	e: 1/9	9/2020 8:15:00 AM				
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS					Analys	t: CAS			
Chloride	ND	60	mg/Kg	20	1/13/2020 2:28:17 PM	49773			
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analys	t: TOM			
Diesel Range Organics (DRO)	12	9.2	mg/Kg	1	1/13/2020 12:18:28 PM	1 49747			
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	1/13/2020 12:18:28 PM	1 49747			
Surr: DNOP	109	55.1-146	%Rec	1	1/13/2020 12:18:28 PM	1 49747			
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: NSB			
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	1/10/2020 1:40:48 PM	49727			
Surr: BFB	81.5	66.6-105	%Rec	1	1/10/2020 1:40:48 PM	49727			
EPA METHOD 8021B: VOLATILES					Analys	t: NSB			
Benzene	ND	0.023	mg/Kg	1	1/10/2020 1:40:48 PM	49727			
Toluene	ND	0.046	mg/Kg	1	1/10/2020 1:40:48 PM	49727			
Ethylbenzene	ND	0.046	mg/Kg	1	1/10/2020 1:40:48 PM	49727			
Xylenes, Total	ND	0.093	mg/Kg	1	1/10/2020 1:40:48 PM	49727			
Surr: 4-Bromofluorobenzene	92.1	80-120	%Rec	1	1/10/2020 1:40:48 PM	49727			

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range

RL Reporting Limit Page 1 of 10

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2001311

Date Reported: 1/14/2020

CLIENT: Project:	ENSOLUM Val Verde Amine Release 2019			ient Sample II			
Lab ID:	2001311-002	Collection Date: 1/8/2020 1:50:00 PM Matrix: SOIL Received Date: 1/9/2020 8:15:00 AM					
Analyses		Result	RL	Qual Units	DF	Date Analyzed	Batch
ΕΡΑ ΜΕΊ	THOD 300.0: ANIONS					Analyst	CAS
Chloride		ND	60	mg/Kg	20	1/13/2020 2:40:39 PM	49773
EPA MET	HOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	том
Diesel R	ange Organics (DRO)	ND	9.8	mg/Kg	1	1/13/2020 12:40:27 PM	49747
Motor Oi	Range Organics (MRO)	ND	49	mg/Kg	1	1/13/2020 12:40:27 PM	49747
Surr: I	DNOP	102	55.1-146	%Rec	1	1/13/2020 12:40:27 PM	49747
EPA MET	HOD 8015D: GASOLINE RANGE	E				Analyst	NSB
Gasoline	Range Organics (GRO)	ND	4.8	mg/Kg	1	1/10/2020 5:19:53 PM	49727
Surr: I	BFB	85.6	66.6-105	%Rec	1	1/10/2020 5:19:53 PM	49727
EPA MET	THOD 8021B: VOLATILES					Analyst	NSB
Benzene		ND	0.024	mg/Kg	1	1/10/2020 5:19:53 PM	49727
Toluene		ND	0.048	mg/Kg	1	1/10/2020 5:19:53 PM	49727
Ethylben	izene	ND	0.048	mg/Kg	1	1/10/2020 5:19:53 PM	49727
Xylenes,	Total	ND	0.097	mg/Kg	1	1/10/2020 5:19:53 PM	49727
Surr: 4	4-Bromofluorobenzene	89.0	80-120	%Rec	1	1/10/2020 5:19:53 PM	49727

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 2 of 10

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2001311

Date Reported: 1/14/2020

CLIENT: ENSOLUM		Cl	ient Sample II	D: S-	19	
Project: Val Verde Amine Release 2019)	(Collection Dat	e: 1/8	3/2020 1:55:00 PM	
Lab ID: 2001311-003	Matrix: SOIL		Received Dat	e: 1/9	9/2020 8:15:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	CAS
Chloride	ND	60	mg/Kg	20	1/13/2020 2:52:59 PM	49773
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS				Analyst	: ТОМ
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	1/13/2020 1:02:34 PM	49747
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	1/13/2020 1:02:34 PM	49747
Surr: DNOP	106	55.1-146	%Rec	1	1/13/2020 1:02:34 PM	49747
EPA METHOD 8015D: GASOLINE RANG	GE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	1/10/2020 5:42:46 PM	49727
Surr: BFB	86.4	66.6-105	%Rec	1	1/10/2020 5:42:46 PM	49727
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	1/10/2020 5:42:46 PM	49727
Toluene	ND	0.047	mg/Kg	1	1/10/2020 5:42:46 PM	49727
Ethylbenzene	ND	0.047	mg/Kg	1	1/10/2020 5:42:46 PM	49727
Xylenes, Total	ND	0.094	mg/Kg	1	1/10/2020 5:42:46 PM	49727
Surr: 4-Bromofluorobenzene	88.6	80-120	%Rec	1	1/10/2020 5:42:46 PM	49727

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 range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Lab Order 2001311

Date Reported: 1/14/2020

CLIENT: ENSOLUM			ient Sample II						
Project: Val Verde Amine Release 2019	Collection Date: 1/8/2020 2:00:00 PM								
Lab ID: 2001311-004	Matrix: SOIL		Received Dat	e: 1/9	9/2020 8:15:00 AM				
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS					Analyst	CAS			
Chloride	ND	59	mg/Kg	20	1/13/2020 3:05:20 PM	49773			
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	: ТОМ			
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	1/13/2020 1:24:32 PM	49747			
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	1/13/2020 1:24:32 PM	49747			
Surr: DNOP	115	55.1-146	%Rec	1	1/13/2020 1:24:32 PM	49747			
EPA METHOD 8015D: GASOLINE RANGE	E				Analyst	: NSB			
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	1/10/2020 6:05:37 PM	49727			
Surr: BFB	88.1	66.6-105	%Rec	1	1/10/2020 6:05:37 PM	49727			
EPA METHOD 8021B: VOLATILES					Analyst	: NSB			
Benzene	ND	0.025	mg/Kg	1	1/10/2020 6:05:37 PM	49727			
Toluene	ND	0.049	mg/Kg	1	1/10/2020 6:05:37 PM	49727			
Ethylbenzene	ND	0.049	mg/Kg	1	1/10/2020 6:05:37 PM	49727			
Xylenes, Total	ND	0.098	mg/Kg	1	1/10/2020 6:05:37 PM	49727			
Surr: 4-Bromofluorobenzene	91.7	80-120	%Rec	1	1/10/2020 6:05:37 PM	49727			

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Surr: 4-Bromofluorobenzene

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2001311

Date Reported: 1/14/2020

1/10/2020 6:28:29 PM 49727

CLIENT:	: ENSOLUM	Client Sample ID: S-21							
Project:	Val Verde Amine Release 2019	Collection Date: 1/8/2020 2:05:00 PM							
Lab ID:	2001311-005	Matrix: SOIL		Received Da	te: 1/9	9/2020 8:15:00 AM			
Analyses		Result	RL	Qual Units	DF	Date Analyzed	Batch		
EPA ME	THOD 300.0: ANIONS					Analyst	CAS		
Chloride	•	ND	60	mg/Kg	20	1/13/2020 3:42:24 PM	49773		
EPA ME	THOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	TOM		
Diesel R	ange Organics (DRO)	ND	9.9	mg/Kg	1	1/13/2020 10:23:06 AN	49747		
Motor O	il Range Organics (MRO)	ND	49	mg/Kg	1	1/13/2020 10:23:06 AN	49747		
Surr:	DNOP	103	55.1-146	%Rec	1	1/13/2020 10:23:06 AN	49747		
EPA ME	THOD 8015D: GASOLINE RANGE	E				Analyst	: NSB		
Gasoline	e Range Organics (GRO)	ND	5.0	mg/Kg	1	1/10/2020 6:28:29 PM	49727		
Surr:	BFB	89.6	66.6-105	%Rec	1	1/10/2020 6:28:29 PM	49727		
EPA ME	THOD 8021B: VOLATILES					Analyst	: NSB		
Benzene	e	ND	0.025	mg/Kg	1	1/10/2020 6:28:29 PM	49727		
Toluene		ND	0.050	mg/Kg	1	1/10/2020 6:28:29 PM	49727		
Ethylber	nzene	ND	0.050	mg/Kg	1	1/10/2020 6:28:29 PM	49727		
Xylenes.	, Total	ND	0.099	mg/Kg	1	1/10/2020 6:28:29 PM	49727		

92.2

80-120

%Rec

1

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Lab Order 2001311

Date Reported: 1/14/2020

CLIENT: ENSOLUM Project: Val Verde Amine Release 2019			ient Sample II Collection Dat		22 3/2020 2:10:00 PM	
Lab ID: 2001311-006	Matrix: SOIL				9/2020 8:15:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: CAS
Chloride	ND	60	mg/Kg	20	1/13/2020 3:54:45 PM	49773
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analys	t: TOM
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	1/13/2020 10:47:33 AM	1 49747
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	1/13/2020 10:47:33 AN	1 49747
Surr: DNOP	108	55.1-146	%Rec	1	1/13/2020 10:47:33 AM	1 49747
EPA METHOD 8015D: GASOLINE RANGE	E				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	1/10/2020 6:51:21 PM	49727
Surr: BFB	86.1	66.6-105	%Rec	1	1/10/2020 6:51:21 PM	49727
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.025	mg/Kg	1	1/10/2020 6:51:21 PM	49727
Toluene	ND	0.049	mg/Kg	1	1/10/2020 6:51:21 PM	49727
Ethylbenzene	ND	0.049	mg/Kg	1	1/10/2020 6:51:21 PM	49727
Xylenes, Total	ND	0.099	mg/Kg	1	1/10/2020 6:51:21 PM	49727
Surr: 4-Bromofluorobenzene	88.5	80-120	%Rec	1	1/10/2020 6:51:21 PM	49727

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 6 of 10

Hall Envi	WO#: 2001311 14-Jan-20	
Client: Project:	ENSOLUM Val Verde Amine Release 2019	

Sample ID: MB-49773	SampType: mblk	TestCode: EPA Method	1 300.0: Anions	
Client ID: PBS	Batch ID: 49773	RunNo: 65754		
Prep Date: 1/13/2020	Analysis Date: 1/13/2020	SeqNo: 2258477	Units: mg/Kg	
Analyte	Result PQL SPK v	alue SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			
Sample ID: LCS-49773	SampType: Ics	TestCode: EPA Method	1 300.0: Anions	
Sample ID: LCS-49773 Client ID: LCSS	SampType: Ics Batch ID: 49773	TestCode: EPA Methoo RunNo: 65754	1 300.0: Anions	
• • • • •		RunNo: 65754	3 300.0: Anions Units: mg/Kg	
Client ID: LCSS	Batch ID: 49773 Analysis Date: 1/13/2020	RunNo: 65754	Units: mg/Kg	RPDLimit Qual

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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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OC SUMMARY REPORT 1

Page	80 0	of 139
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QC SUMMART REFORT	WO#:	2001311
Hall Environmental Analysis Laboratory, Inc.		14-Jan-20

Client:ENSOLProject:Val Ver	UM de Amine R	elease 2	2019							
Sample ID: LCS-49747	SampT	ype: LC	s	Tes	tCode: EF	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: LCSS	Batch	n ID: 49	747	F	RunNo: 6	5722				
Prep Date: 1/10/2020	Analysis D	0ate: 1/	13/2020	S	SeqNo: 22	257471	Units: mg/#	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	10	50.00	0	111	63.9	124			
Surr: DNOP	4.7		5.000		93.4	55.1	146			
Sample ID: MB-49747	SampT	ype: ME	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch	n ID: 49	747	F	RunNo: 6	5722				
Prep Date: 1/10/2020	Analysis D	0ate: 1/	13/2020	5	SeqNo: 22	257472	Units: mg/#	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		99.8	55.1	146			

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
- Practical Quanitative Limit PQL
- % Recovery outside of range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 8 of 10

OC SUMMARY REPORT ŀ _

Page	81	of	139

L	Hall Environmental Analysis Laboratory, Inc.		2001311	
Hall Env	all Environmental Analysis Laboratory, Inc.			
Client:	ENSOLUM			

Project: Val Ver	de Amine R	elease	2019							
Sample ID: mb-49727	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: PBS	•	n ID: 49		F	RunNo: 6	5694		U		
Prep Date: 1/9/2020	Analysis D	ate: 1/	10/2020	S	SeqNo: 2	257202	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	910		1000		91.0	66.6	105			
Sample ID: Ics-49727	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCSS	Batch	n ID: 49	727	F	RunNo: 6	5694				
Prep Date: 1/9/2020	Analysis D	ate: 1/	10/2020	S	SeqNo: 2	257203	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.5	80	120			
Surr: BFB	990		1000		98.9	66.6	105			

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Client:

Project:

Sample ID: mb-49727

Client ID: PBS

QC SUMMARY REPORT Hall Environmental Anal

onment	WO#:	2001311 14-Jan-20		
ENSOL Val Ver	.UM :de Amine Release 2019			
727	SampType: MBLK Batch ID: 49727	TestCode: EPA Method 8021B: Volatiles RunNo: 65694		
	Batch ID: 49727	RunNo: 65694		

Prep Date: 1/9/2020	Analysis E	Date: 1/	10/2020	S	eqNo: 2	257214	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.1	80	120			
Sample ID: LCS-49727	49727 SampType: LCS TestCode: EPA Method 8021B: Volatiles									
1	Batch ID: 49727 RunNo: 65694									
Client ID: LCSS	Batcl	h ID: 497	727	R	unNo: 6	5694				
Client ID: LCSS Prep Date: 1/9/2020	Batcl Analysis [-	727 10/2020		unNo: 6		Units: mg/K	g		
		-	10/2020		-		Units: mg/K HighLimit	g %RPD	RPDLimit	Qual
Prep Date: 1/9/2020	Analysis D	Date: 1/	10/2020	S	eqNo: 2	257215	•	•	RPDLimit	Qual
Prep Date: 1/9/2020 Analyte	Analysis I Result	Date: 1/ PQL	10/2020 SPK value	S SPK Ref Val	eqNo: 2	257215 LowLimit	HighLimit	•	RPDLimit	Qual
Prep Date: 1/9/2020 Analyte Benzene	Analysis E Result 0.94	Date: 1/ PQL 0.025	10/2020 SPK value 1.000	SPK Ref Val	eqNo: 23 %REC 93.8	257215 LowLimit 80	HighLimit 120	•	RPDLimit	Qual
Prep Date: 1/9/2020 Analyte Benzene Toluene	Analysis D Result 0.94 0.92	Date: 1/ PQL 0.025 0.050	10/2020 SPK value 1.000 1.000	SPK Ref Val 0 0	6eqNo: 2 %REC 93.8 92.4	257215 LowLimit 80 80	HighLimit 120 120	•	RPDLimit	Qual

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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environment Ai TEL: 505-345-39 Website: www.	490 Ibuquerq 75 FAX:	1 Hawkins ue, NM 87 505-345-4	NE 109 107	Sar	nple Log-In Check List
Client Name: ENSOLUM AZTEC	Work Order Numbe	er: 2001	1311			RcptNo: 1
Received By: Daniel Marquez	1/9/2020 8:15:00 AM			(iy	See.	
Completed By: Daniel Marquez	1/9/2020 11:53:07 AI	м		() y		
Reviewed By:	1/9/20			·		
Chain of Custody						
1. Is Chain of Custody sufficiently complete?		Yes	~	No		Not Present
2. How was the sample delivered?		<u>Cou</u>	rier			
<u>Log In</u>						
3. Was an attempt made to cool the samples?		Yes	\checkmark	No		
4. Were all samples received at a temperature of	f ≥0° C to 6.0°C	Yes		No		
5. Sample(s) in proper container(s)?		Yes	✓	No		
6. Sufficient sample volume for indicated test(s)	?	Yes	v	No		
7. Are samples (except VOA and ONG) properly	preserved?	Yes	v	No		
8. Was preservative added to bottles?		Yes		No	\checkmark	
9. Received at least 1 vial with headspace <1/4"	for AQ VOA?	Yes		No		NA 🗸
0. Were any sample containers received broker	?	Yes		No	✓	# of preserved
1. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes	✓	No		bottles checked for pH:
2. Are matrices correctly identified on Chain of C	sustody?	Yes	v	No		Adjusted?
3. Is it clear what analyses were requested?		Yes	\checkmark	No		
4. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes	✓	No		Checked by: DAD 1/9/20
Special Handling (if applicable)						
15. Was client notified of all discrepancies with the	is order?	Yes		No		NA 🔽
Person Notified:	Date:					
By Whom:	Via:	🗌 eMa	ail 🗌 Ph	ione 🗌	Fax	In Person
Regarding:						
Client Instructions:						
16. Additional remarks:						
17. <u>Cooler Information</u> Cooler No Temp ^o C Condition Se 1 3.9 Good	al Intact Seal No	Seal Da	ate S	Signed	Ву	

Page 1 of 1

 HALL ENVIRONMENTAL HALL ENVIRONMENTAL ANALYSIS LABORATORY ANALYSIS LABORATORY Www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Tel. 505-345-3975 Request 	الالحاد الحالية الحاد المحالية المحاد الحادي المحادي المحاي المحادي المحا	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Turn-Around Time: 3-DAY □ Standard & Rush Project Name: Val Verde Amine Release 2019 Project #: See notes	Project Manager: KS ummorg Sampler: Exceloit IL Sampler: Exceloit IL On Ice: Exfectivity # of Coolers: Ano Cooler Temp(including cr): 3,240 - 3.9 ⁶ Container Preservative HEAL No. Type and # Type 2013.1	1×402 Jur Chil 601 601 1×402 Jur Chol Chol 003 1×462 Jur Chol 001 003 1×462 Jur Chol 001 005 1×462 Jur Chol 001 000 1×462 Jur Chol 000 000 1×462 Jur Chol 000 000 1×462 Jur Chol 000 000 1×460 Jur Cho <td< td=""></td<>
Chain-of-Custody Record Client: Enselum, LLC Mailing Address: 100 6 cande SuiteA Brtec, NM Brulo CPhone #:	Cemail or Fax#: K\$MMMers@provembers Commers@provembers	18/20 1345 5 5-17 18/20 1350 5 5-18 18/20 1350 5 5-19 18/20 1400 5 5-20 18/20 1405 5 5-219 18/20 1405 5 5-22 18/20 1410 5 5-22 18/20 1410 5 5-22 18/20 1410 5 5-22 18/20 1410 5 5-22 18/20 1410 5 5-22 18/20 1410 5 5-22 18/20 1410 5 5-22 18/20 1410 5 5-22 18/20 1410 5 5-22 18/20 1410 5 5-22 18/20 1410 5 5-22 18/20 1400 5 5 18/20 1400 5 5 18/20 1400 5 5 18/20 18/10 1400 5 18/20 18/10 1400 1400



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

January 23, 2020

Kyle Summers ENSOLUM 606 S. Rio Grande Suite A Aztec, NM 87410 TEL: (903) 821-5603 FAX

RE: Val Verde Amine Release 2019

OrderNo.: 2001679

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 1/17/2020 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

Analytical Report Lab Order 2001679

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 1/23/2020

	THOD 300.0: ANIONS			·	st: CJS			
Analyses	1	Result	RL Qual Units	DF Date Analyzed	Batch			
Lab ID:	2001679-001	Matrix: SOIL	Received Date: 1/17/2020 9:30:00 AM					
Project:	Val Verde Amine Release 2019		Collection Dat	te: 1/16/2020 11:40:00 AN	I			
CLIENT:	ENSOLUM	Client Sample ID: S-23						

Chloride	ND	60	mg/Kg	20	1/21/2020 5:40:12 PM	49955
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst:	BRM
Diesel Range Organics (DRO)	360	9.4	mg/Kg	1	1/21/2020 3:13:15 PM	49915
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	1/21/2020 3:13:15 PM	49915
Surr: DNOP	88.2	55.1-146	%Rec	1	1/21/2020 3:13:15 PM	49915
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	1/21/2020 3:45:38 PM	49896
Surr: BFB	84.6	66.6-105	%Rec	1	1/21/2020 3:45:38 PM	49896
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.024	mg/Kg	1	1/21/2020 3:45:38 PM	49896
Toluene	ND	0.047	mg/Kg	1	1/21/2020 3:45:38 PM	49896
Ethylbenzene	ND	0.047	mg/Kg	1	1/21/2020 3:45:38 PM	49896
Xylenes, Total	ND	0.095	mg/Kg	1	1/21/2020 3:45:38 PM	49896
Surr: 4-Bromofluorobenzene	96.9	80-120	%Rec	1	1/21/2020 3:45:38 PM	49896

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Lab Order 2001679

Date Reported: 1/23/2020

CLIENT: ENSOLUM		Cl	ient Sa	ample II	D: S-2	24	
Project: Val Verde Amine Release 2019		(Collect	tion Dat	e: 1/1	16/2020 11:45:00 AM	
Lab ID: 2001679-002	Matrix: SOIL		Recei	ved Dat	e: 1/1	17/2020 9:30:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	CJS
Chloride	ND	60		mg/Kg	20	1/21/2020 5:52:33 PM	49955
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst:	BRM
Diesel Range Organics (DRO)	2800	91		mg/Kg	10	1/21/2020 10:44:31 AM	49915
Motor Oil Range Organics (MRO)	ND	460		mg/Kg	10	1/21/2020 10:44:31 AM	49915
Surr: DNOP	0	55.1-146	S	%Rec	10	1/21/2020 10:44:31 AM	49915
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/21/2020 4:09:02 PM	49896
Surr: BFB	80.1	66.6-105		%Rec	1	1/21/2020 4:09:02 PM	49896
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.024		mg/Kg	1	1/21/2020 4:09:02 PM	49896
Toluene	ND	0.048		mg/Kg	1	1/21/2020 4:09:02 PM	49896
Ethylbenzene	ND	0.048		mg/Kg	1	1/21/2020 4:09:02 PM	49896
Xylenes, Total	ND	0.096		mg/Kg	1	1/21/2020 4:09:02 PM	49896
Surr: 4-Bromofluorobenzene	90.9	80-120		%Rec	1	1/21/2020 4:09:02 PM	49896

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 range due to dilution or matrix S

в Analyte detected in the associated Method Blank

- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Analytical Report Lab Order 2001679

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2001679

Date Reported: 1/23/20	20
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CLIENT:	ENSOLUM		Cl	ient Sa	ample II	D: S-2	25	
Project:	Val Verde Amine Release 2019		(Collect	ion Dat	e: 1/1	6/2020 11:50:00 AM	
Lab ID:	2001679-003	Matrix: SOIL		Recei	ved Dat	e: 1/1	7/2020 9:30:00 AM	
Analyses		Result	RL	Qual	Units	DF	Date Analyzed	Batch
ΕΡΑ ΜΕΊ	THOD 300.0: ANIONS						Analyst	CJS
Chloride		ND	60		mg/Kg	20	1/21/2020 6:29:34 PM	49955
ΕΡΑ ΜΕΊ	HOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst	BRM
Diesel R	ange Organics (DRO)	1400	96		mg/Kg	10	1/21/2020 10:53:29 AM	49915
Motor Oi	l Range Organics (MRO)	ND	480		mg/Kg	10	1/21/2020 10:53:29 AM	49915
Surr: I	DNOP	0	55.1-146	S	%Rec	10	1/21/2020 10:53:29 AM	49915
EPA MET	THOD 8015D: GASOLINE RANGE	l .					Analyst	NSB
Gasoline	e Range Organics (GRO)	ND	4.7		mg/Kg	1	1/21/2020 4:32:29 PM	49896
Surr: I	BFB	79.9	66.6-105		%Rec	1	1/21/2020 4:32:29 PM	49896
EPA MET	THOD 8021B: VOLATILES						Analyst	NSB
Benzene)	ND	0.024		mg/Kg	1	1/21/2020 4:32:29 PM	49896
Toluene		ND	0.047		mg/Kg	1	1/21/2020 4:32:29 PM	49896
Ethylben	izene	ND	0.047		mg/Kg	1	1/21/2020 4:32:29 PM	49896
Xylenes,	Total	ND	0.095		mg/Kg	1	1/21/2020 4:32:29 PM	49896
Surr: 4	4-Bromofluorobenzene	90.6	80-120		%Rec	1	1/21/2020 4:32:29 PM	49896

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Surr: 4-Bromofluorobenzene

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2001679

Date Reported: 1/23/2020

1/21/2020 4:55:56 PM 49896

CLIENT: E	ENSOLUM		Cl	ient Sa	ample II	D: S-2	26	
Project: \	Al Verde Amine Release 2019		(Collect	tion Dat	e: 1/1	6/2020 11:55:00 AM	
Lab ID: 2	2001679-004	Matrix: SOIL		Recei	ved Dat	e: 1/1	7/2020 9:30:00 AM	
Analyses		Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METH	OD 300.0: ANIONS						Analyst	CJS
Chloride		ND	60		mg/Kg	20	1/21/2020 7:06:38 PM	49955
EPA METH	OD 8015M/D: DIESEL RANGE	ORGANICS					Analyst	BRM
Diesel Ran	ge Organics (DRO)	5200	88		mg/Kg	10	1/21/2020 11:02:37 AM	49915
Motor Oil R	ange Organics (MRO)	ND	440		mg/Kg	10	1/21/2020 11:02:37 AM	49915
Surr: DN	IOP	0	55.1-146	S	%Rec	10	1/21/2020 11:02:37 AM	49915
EPA METH	OD 8015D: GASOLINE RANGE	E					Analyst	: NSB
Gasoline R	ange Organics (GRO)	ND	4.8		mg/Kg	1	1/21/2020 4:55:56 PM	49896
Surr: BF	В	82.2	66.6-105		%Rec	1	1/21/2020 4:55:56 PM	49896
EPA METH	OD 8021B: VOLATILES						Analyst	: NSB
Benzene		ND	0.024		mg/Kg	1	1/21/2020 4:55:56 PM	49896
Toluene		ND	0.048		mg/Kg	1	1/21/2020 4:55:56 PM	49896
Ethylbenze	ne	ND	0.048		mg/Kg	1	1/21/2020 4:55:56 PM	49896
Xylenes, To	otal	ND	0.095		mg/Kg	1	1/21/2020 4:55:56 PM	49896

95.0

80-120

%Rec

1

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Lab Order 2001679

Date Reported: 1/23/2020

CLIENT: ENSOLUM		Cl	ient Sa	ample II	D: S-2	27		
Project: Val Verde Amine Release 2019	Collection Date: 1/16/2020 12:00:00 PM							
Lab ID: 2001679-005	Matrix: SOIL	Matrix: SOIL Received Date: 1/17/2020 9:30:00 AM						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS						Analyst	CJS	
Chloride	ND	60		mg/Kg	20	1/21/2020 7:18:58 PM	49955	
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst	BRM	
Diesel Range Organics (DRO)	180	98		mg/Kg	10	1/21/2020 11:16:08 AM	49915	
Motor Oil Range Organics (MRO)	ND	490		mg/Kg	10	1/21/2020 11:16:08 AM	49915	
Surr: DNOP	0	55.1-146	S	%Rec	10	1/21/2020 11:16:08 AM	49915	
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/21/2020 5:19:26 PM	49896	
Surr: BFB	82.9	66.6-105		%Rec	1	1/21/2020 5:19:26 PM	49896	
EPA METHOD 8021B: VOLATILES						Analyst	: NSB	
Benzene	ND	0.024		mg/Kg	1	1/21/2020 5:19:26 PM	49896	
Toluene	ND	0.047		mg/Kg	1	1/21/2020 5:19:26 PM	49896	
Ethylbenzene	ND	0.047		mg/Kg	1	1/21/2020 5:19:26 PM	49896	
Xylenes, Total	ND	0.094		mg/Kg	1	1/21/2020 5:19:26 PM	49896	
Surr: 4-Bromofluorobenzene	94.7	80-120		%Rec	1	1/21/2020 5:19:26 PM	49896	

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Ľ	INIARY REPORT ronmental Analysis Laboratory, Inc.	WO#:	2001679 23-Jan-20
Client: Project:	ENSOLUM Val Verde Amine Release 2019		

Sample ID: MB-49955	SampType: mblk	TestCode:	EPA Method	300.0: Anion	s		
Client ID: PBS	Batch ID: 49955	RunNo:	65961				
Prep Date: 1/21/2020	Analysis Date: 1/21/20	SeqNo:	2265356	Units: mg/K	g		
Analyte	Result PQL SPK	Value SPK Ref Val %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride							
Chionde	ND 1.5						
Sample ID: LCS-49955	SampType: Ics	TestCode:	EPA Method	300.0: Anion	s		
	-	TestCode: I RunNo:		300.0: Anion	s		
Sample ID: LCS-49955	SampType: Ics	RunNo:	65961	300.0: Anion Units: mg/K	-		
Sample ID: LCS-49955 Client ID: LCSS	SampType: Ics Batch ID: 49955 Analysis Date: 1/21/20	RunNo:	65961 2265357		-	RPDLimit	Qual

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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QC SUMMARY REPORT Ha

Page	92	of	<i>139</i>
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C SUMMANT NEI ONI	WO#:	2001679
all Environmental Analysis Laboratory, Inc.		23-Jan-20

Client: ENSOL	UM					
Project: Val Ver	de Amine Release 2019	9				
Sample ID: LCS-49915	SampType: LCS	Те	estCode: EPA Method	8015M/D: Diesel Ra	inge Organics	
Client ID: LCSS	Batch ID: 49915		RunNo: 65943			
Prep Date: 1/20/2020	Analysis Date: 1/21/2	2020	SeqNo: 2264722	Units: mg/Kg		
Analyte	Result PQL SP	PK value SPK Ref Va	al %REC LowLimit	HighLimit %RF	D RPDLimit	Qual
Diesel Range Organics (DRO)	54 10	50.00 0	107 63.9	124		
Surr: DNOP	4.8	5.000	96.0 55.1	146		
Sample ID: MB-49915	SampType: MBLK	Т	estCode: EPA Method	8015M/D: Diesel Ra	inge Organics	
Client ID: PBS	Batch ID: 49915		RunNo: 65943			
Prep Date: 1/20/2020	Analysis Date: 1/21/2	2020	SeqNo: 2264724	Units: mg/Kg		
Analyte	Result PQL SP	PK value SPK Ref Va	al %REC LowLimit	HighLimit %RF	D RPDLimit	Qual
Diesel Range Organics (DRO)	ND 10					
Motor Oil Range Organics (MRO)	ND 50					
Surr: DNOP	13	10.00	129 55.1	146		
Sample ID: LCS-49910	SampType: LCS	Te	estCode: EPA Method	8015M/D: Diesel Ra	inge Organics	
Client ID: LCSS	Batch ID: 49910		RunNo: 65943			
Prep Date: 1/20/2020	Analysis Date: 1/21/2	2020	SeqNo: 2266018	Units: %Rec		
Analyte	Result PQL SP	PK value SPK Ref Va	al %REC LowLimit	HighLimit %RF	D RPDLimit	Qual
Surr: DNOP	5.5	5.000	109 55.1	146		
Sample ID: MB-49910	SampType: MBLK	Te	estCode: EPA Method	8015M/D: Diesel Ra	inge Organics	
Client ID: PBS	Batch ID: 49910		RunNo: 65943			
Prep Date: 1/20/2020	Analysis Date: 1/21/2	2020	SeqNo: 2266020	Units: %Rec		
Analyte	Result PQL SP	PK value SPK Ref Va	al %REC LowLimit	HighLimit %RF	D RPDLimit	Qual
Surr: DNOP	9.2	10.00	91.8 55.1	146		

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
- Practical Quanitative Limit PQL
- % Recovery outside of range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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910

QC SUMMARY Hall Environment			ory, Inc.					WO#:	2001679 23-Jan-20
Client: ENSOL Project: Val Ver	.UM de Amine Release	2019							
Sample ID: mb-49896	SampType: M	BLK	Tes	tCode: EF	PA Method	8015D: Gaso	ine Rang	е	
Client ID: PBS	Batch ID: 49	896	F	RunNo: 6	5910				
Prep Date: 1/17/2020	Analysis Date: 1,	/20/2020	S	SeqNo: 22	263634	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 5.0 820	1000		82.0	66.6	105			
Sample ID: Ics-49896	SampType: LC	s	Tes	tCode: EF	PA Method	8015D: Gaso	ine Rang	e	
Client ID: LCSS	Batch ID: 49	896	F	RunNo: 6	5910				
Prep Date: 1/17/2020	Analysis Date: 1,	/20/2020	S	SeqNo: 2	263635	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	23 5.0 880	25.00 1000	0	90.7 87.9	80 66.6	120 105			
	000	1000		07.9	00.0	105			

Sample ID: mb-49912	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range
Client ID: PBS	Batch ID: 49912	RunNo: 65947
Prep Date: 1/20/2020	Analysis Date: 1/22/2020	SeqNo: 2265011 Units: %Rec
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: BFB	830 1000	83.1 66.6 105
Sample ID: Ics-49912	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range
Sample ID: Ics-49912 Client ID: LCSS	SampType: LCS Batch ID: 49912	TestCode: EPA Method 8015D: Gasoline Range RunNo: 65947
		C C

1000

Surr: BFB

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 range due to dilution or matrix S

В Analyte detected in the associated Method Blank

90.9

66.6

105

- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc

Page 9)4 of	<i>139</i>
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	WO#:	2001679	
onmental Analysis Laboratory, Inc.		23-Jan-20	

Client:ENSOLProject:Val Ver	.UM rde Amine Release 2019)						
Sample ID: mb-49896	SampType: MBLK		TestCode: EP	A Method	8021B: Volati	les		
Client ID: PBS	Batch ID: 49896		RunNo: 65	910				
Prep Date: 1/17/2020	Analysis Date: 1/20/20	020	SeqNo: 22	63654	Units: mg/Kg	3		
Analyte	Result PQL SPI	K value SPK Ref	Val %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND 0.025				3			
Toluene	ND 0.050							
Ethylbenzene	ND 0.050							
Xylenes, Total	ND 0.10							
Surr: 4-Bromofluorobenzene	0.95	1.000	94.7	80	120			
Sample ID: LCS-49896	SampType: LCS		TestCode: EP	A Method	8021B: Volati	les		
Client ID: LCSS	Batch ID: 49896		RunNo: 65	910				
Prep Date: 1/17/2020	Analysis Date: 1/20/20	020	SeqNo: 22	63655	Units: mg/Kg	9		
Analyte	Result PQL SPI	K value SPK Ref	Val %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89 0.025	1.000	0 89.2	80	120			
Toluene	0.92 0.050	1.000	0 91.8	80	120			
Ethylbenzene	0.91 0.050	1.000	0 91.5	80	120			
Xylenes, Total	2.8 0.10	3.000	0 92.6	80	120			
Surr: 4-Bromofluorobenzene	0.92	1.000	92.1	80	120			
Sample ID: mb-49912	SampType: MBLK		TestCode: EP	A Method	8021B: Volati	les		
Client ID: PBS	Batch ID: 49912		RunNo: 65	947				
Prep Date: 1/20/2020	Analysis Date: 1/22/20	020	SeqNo: 22	65042	Units: %Rec			
Analyte	Result PQL SPI	K value SPK Ref	Val %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.95	1.000	95.2	80	120			
Sample ID: LCS-49912	SampType: LCS		TestCode: EP	A Method	8021B: Volati	les		
Client ID: LCSS	Batch ID: 49912		RunNo: 65	947				
Prep Date: 1/20/2020	Analysis Date: 1/22/20	020	SeqNo: 22	65043	Units: %Rec			
Analyte	Result PQL SPI	K value SPK Ref	Val %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.94	1.000	94.3	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range

RL Reporting Limit

HALL	5/2020 1:01:38 PM	Hall Enviro	nmental Analys	s Laboratory	V		Page 95 of
ANALY	DNMENTAL SIS ATORY				, San	nple Log-In Ch	eck List
Client Name:	ENSOLUM AZTEC	Work Order N	lumber: 2001	679		RcptNo: 1	
Received By:	Desiree Dominguez	1/17/2020 9:30:	00 AM	-	EP2		
Completed By:	Isaiah Ortiz	1/17/2020 10:1:	2:49 AM		ILC	K	
Reviewed By:	DAD 1/17/20					·	
Chain of Cust	ody						
1. Is Chain of Cu	stody sufficiently complet	e?	Yes	\checkmark	No 🗌	Not Present	
2. How was the s	ample delivered?		Couri	er			
Log In							
3. Was an attemp	ot made to cool the samp	es?	Yes	✓	No	NA	
4. Were all sampl	es received at a tempera	ture of >0° C to 6.0°C	Yes	✓	No 🗌		
5. Sample(s) in p	roper container(s)?	2	Yes		No 🗌		
6. Sufficient samp	le volume for indicated te	est(s)?	Yes		No 🗌		
7. Are samples (e	xcept VOA and ONG) pro	operly preserved?	Yes	/	No 🗌		
8. Was preservati	ve added to bottles?		Yes		No 🗹	NA 🗌	
9. Received at lea	st 1 vial with headspace	<1/4" for AQ VOA?	Yes		No 🗌	NA 🔽	/
10. Were any sam	ple containers received b	roken?	Yes		No 🗹	# of preserved bottles checked	
	k match bottle labels? ncies on chain of custody)	Yes		No 🗌	for pH: (<2 of >	2 unless noted)
12. Are matrices co	prrectly identified on Chair	n of Custody?	Yes		No 🗌	Adjusted?	
	analyses were requested	?	Yes		No 🗌		Le La Lama (
	g times able to be met? stomer for authorization.)		Yes		No 🗌	Checked by:	JH 1/17/20
Special Handli	ng (if applicable)						
15. Was client not	fied of all discrepancies v	vith this order?	Yes		No 🗌	NA 🗹	
Person N	lotified:	D	ate:		ta analoga papa na na '		
By Whor	n:	v	′ia: 🗌 eMa	I 🗌 Phon	e 🗌 Fax	In Person	
Regardir	ig: J		antana di kalen yang dak utata da		to the period state of the second state of the		
Client In:	structions:				19 1.16 Y E 474 F.A. F. C. E.C. F.		
16. Additional rem	arks:						
17. Cooler Inform	nation						
Cooler No	Temp °C Condition	Seal Intact Seal N	lo Seal Da	e Sic	ned By		

Page 1 of 1

Received by OCD: 11/5/2020	1:01:38 PM				Page 96 of 139
L ENVIRONMENTAL LYSIS LABORATORY allenvironmental.com - Albuquerque, NM 87109 5 Fax 505-345-4107 Analysis Request	A) A) hova, NO ₂ , PO4, SO4 hi-VOA) orm (Present/Absent) أياري	NOV) 0328			Time: Relinquished by: Name Date Time Time: Relinquished by: Name Name Name Time: Relinquished by: Name Name Name Time: Relinquished by: Name Name Name Time: Relinquished by: Name Name Remarks: P.M Tom Time: Relinquished by: Name Name Name Remarks: Time: Relinquished by: Name Name Name Enclosed If SU Name Name Name Name Nam Incommental may be subcontra
HALL ANAL www.ha 4901 Hawkins NE Tel. 505-345-3975	3310 or 8270SIMS				racted di
Hawk 505-34	(1.405 bon				TUMARS:
4901 Tel. 4	icides/8082 PCB's D(GRO / DRO / MRO)		XX	××	Irks:
	(1508) 2'8MT / 381	the second s	XX	XX	Remarks: 3-DAH TUMU possibility. Any
e: Z-DAY Krush Amine Release 2019 notes	on D No	ative HEAL No1101	1007	, wí	Date Time Date Time Date Time ier 1/12/20 9:30
0	ger:	Preservative Type	cool	Coul	Via: Via: Via: COULIE
Turn-Around Tim □ Standard Project Name: V a\ V erde Project #: See	Project Manag Sampler: 2 On Ice: 2 # of Coolers:	Container Preservati Type and # Type	1×402 Jar	IxYez Jar	Received by: Received by:
Client: Ensolum, LLC Mailing Address: 6065, Elo Corcume Suite A Azter, NM Stulo Phone #:	email or Fax#: KS\Immersele 2000 Wm. (com QA/QC Package: Candard Cevel 4 (Full Validation) Accreditation: Compliance NELAC Other	Sample Name S-23	5-25 5-25	5-26 S-27	Relinquished by: Relinquished by: Relinquished by: MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
Ensolum, LLC Ensolum, LLC Address: 6065, E ec, NM Stulo	KSMmme = Az Co Dther	Matrix S	SS	nn	X. samples s
Client: Client: Ense Mailing Addres Azter/M	email or Fax#: QA/QC Package: Candard Accreditation: DELAC DEDD (Type)	Date Time		1/16/20 1200	Date: Time: Date: Time: Date: Time:



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

February 20, 2020

Kyle Summers ENSOLUM 606 S. Rio Grande Suite A Aztec, NM 87410 TEL: (903) 821-5603 FAX

RE: Val Verde Amine Release 2019

OrderNo.: 2002569

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 2/14/2020 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

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2002569

Date Reported: 2/20/2020

CLIENT: ENSOLUM		Cl	ient Sa	ample II	D: S-2	28				
Project: Val Verde Amine Release 2019	-									
Lab ID: 2002569-001	Matrix: SOIL									
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS						Analyst	: CJS			
Chloride	ND	60		mg/Kg	20	2/17/2020 7:53:13 PM	50487			
EPA METHOD 8015M/D: DIESEL RANGE	E ORGANICS					Analyst	BRM			
Diesel Range Organics (DRO)	1200	91		mg/Kg	10	2/19/2020 9:57:31 AM	50473			
Motor Oil Range Organics (MRO)	ND	460	D	mg/Kg	10	2/19/2020 9:57:31 AM	50473			
Surr: DNOP	0	55.1-146	S	%Rec	10	2/19/2020 9:57:31 AM	50473			
EPA METHOD 8015D: GASOLINE RANG	Ε					Analyst	: NSB			
Gasoline Range Organics (GRO)	ND	24		mg/Kg	5	2/18/2020 9:20:25 AM	50461			
Surr: BFB	82.1	66.6-105		%Rec	5	2/18/2020 9:20:25 AM	50461			
EPA METHOD 8021B: VOLATILES						Analyst	: NSB			
Benzene	ND	0.12		mg/Kg	5	2/18/2020 9:20:25 AM	50461			
Toluene	ND	0.24		mg/Kg	5	2/18/2020 9:20:25 AM	50461			
Ethylbenzene	ND	0.24		mg/Kg	5	2/18/2020 9:20:25 AM	50461			
Xylenes, Total	ND	0.48		mg/Kg	5	2/18/2020 9:20:25 AM	50461			
Surr: 4-Bromofluorobenzene	90.8	80-120		%Rec	5	2/18/2020 9:20:25 AM	50461			

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 1 of 10

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2002569

Date Reported: 2/20/2020

CLIENT: ENSOLUM	Client Sample ID: S-29							
Project: Val Verde Amine Release 2019		(Collect	tion Dat	e: 2/1	13/2020 10:15:00 AM		
Lab ID: 2002569-002	Matrix: SOIL		Recei	ved Dat	e: 2/1	14/2020 7:50:00 AM		
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS						Analyst	CJS	
Chloride	ND	59		mg/Kg	20	2/17/2020 8:54:56 PM	50487	
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst	CLP	
Diesel Range Organics (DRO)	3800	98		mg/Kg	10	2/18/2020 3:49:13 PM	50473	
Motor Oil Range Organics (MRO)	ND	490		mg/Kg	10	2/18/2020 3:49:13 PM	50473	
Surr: DNOP	0	55.1-146	S	%Rec	10	2/18/2020 3:49:13 PM	50473	
EPA METHOD 8015D: GASOLINE RANGE	E					Analyst	NSB	
Gasoline Range Organics (GRO)	ND	24		mg/Kg	5	2/18/2020 9:43:51 AM	50461	
Surr: BFB	81.6	66.6-105		%Rec	5	2/18/2020 9:43:51 AM	50461	
EPA METHOD 8021B: VOLATILES						Analyst	NSB	
Benzene	ND	0.12		mg/Kg	5	2/18/2020 9:43:51 AM	50461	
Toluene	ND	0.24		mg/Kg	5	2/18/2020 9:43:51 AM	50461	
Ethylbenzene	ND	0.24		mg/Kg	5	2/18/2020 9:43:51 AM	50461	
Xylenes, Total	ND	0.49		mg/Kg	5	2/18/2020 9:43:51 AM	50461	
Surr: 4-Bromofluorobenzene	89.8	80-120		%Rec	5	2/18/2020 9:43:51 AM	50461	

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Surr: 4-Bromofluorobenzene

Analytical Report Lab Order 2002569

2/18/2020 10:07:25 AM 50461

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2002569 Date Reported: 2/20/2020

CLIENT: ENSOLUM	CLIENT: ENSOLUM				Client Sample ID: S-30					
Project: Val Verde Amine Release 2019)	Collection Date: 2/13/2020 10:20:00 AM								
Lab ID: 2002569-003	Matrix: SOIL		Received Dat	e: 2/1	14/2020 7:50:00 AM					
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS					Analyst	t: CJS				
Chloride	ND	60	mg/Kg	20	2/17/2020 9:07:18 PM	50487				
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS				Analyst	t: CLP				
Diesel Range Organics (DRO)	23	9.5	mg/Kg	1	2/18/2020 3:58:38 PM	50473				
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	2/18/2020 3:58:38 PM	50473				
Surr: DNOP	112	55.1-146	%Rec	1	2/18/2020 3:58:38 PM	50473				
EPA METHOD 8015D: GASOLINE RANG	ЭЕ				Analyst	t: NSB				
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	2/18/2020 10:07:25 AN	1 50461				
Surr: BFB	82.1	66.6-105	%Rec	1	2/18/2020 10:07:25 AN	1 50461				
EPA METHOD 8021B: VOLATILES					Analyst	t: NSB				
Benzene	ND	0.025	mg/Kg	1	2/18/2020 10:07:25 AN	1 50461				
Toluene	ND	0.050	mg/Kg	1	2/18/2020 10:07:25 AN	1 50461				
Ethylbenzene	ND	0.050	mg/Kg	1	2/18/2020 10:07:25 AN	1 50461				
Xylenes, Total	ND	0.099	mg/Kg	1	2/18/2020 10:07:25 AN	1 50461				

90.7

80-120

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range

%Rec 1

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

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.

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2002569

Date Reported: 2/20/2020

CLIENT: ENSOLUM		Cl	ient S	ample II	D: S-3	31		
Project: Val Verde Amine Release 2019	9 Collection Date: 2/13/2020 10:25:00 Al							
Lab ID: 2002569-004	Matrix: SOIL	Matrix: SOIL Received Date: 2/14/2020 7:50:00 AM						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS						Analys	t: CJS	
Chloride	ND	60		mg/Kg	20	2/17/2020 9:19:40 PM	50487	
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analys	t: CLP	
Diesel Range Organics (DRO)	4300	91		mg/Kg	10	2/18/2020 4:08:04 PM	50473	
Motor Oil Range Organics (MRO)	ND	460		mg/Kg	10	2/18/2020 4:08:04 PM	50473	
Surr: DNOP	0	55.1-146	S	%Rec	10	2/18/2020 4:08:04 PM	50473	
EPA METHOD 8015D: GASOLINE RANG	E					Analys	t: NSB	
Gasoline Range Organics (GRO)	ND	24		mg/Kg	5	2/18/2020 10:30:54 AM	/ 50461	
Surr: BFB	82.4	66.6-105		%Rec	5	2/18/2020 10:30:54 AN	/ 50461	
EPA METHOD 8021B: VOLATILES						Analys	t: NSB	
Benzene	ND	0.12		mg/Kg	5	2/18/2020 10:30:54 AM	/ 50461	
Toluene	ND	0.24		mg/Kg	5	2/18/2020 10:30:54 AN	/ 50461	
Ethylbenzene	ND	0.24		mg/Kg	5	2/18/2020 10:30:54 AM	1 50461	
Xylenes, Total	ND	0.49		mg/Kg	5	2/18/2020 10:30:54 AN	1 50461	
Surr: 4-Bromofluorobenzene	90.4	80-120		%Rec	5	2/18/2020 10:30:54 AM	/ 50461	

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 4 of 10

Xylenes, Total

Surr: 4-Bromofluorobenzene

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2002569

Date Reported: 2/20/2020

2/18/2020 10:54:14 AM 50461

2/18/2020 10:54:14 AM 50461

CLIENT: ENSOLUM		Client Sample ID: S-32						
Project: Val Verde Amine Release 2019	Collection Date: 2/13/2020 10:30:00 AM							
Lab ID: 2002569-005	Matrix: SOIL		Received Date	e: 2/1	4/2020 7:50:00 AM			
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst:	CJS		
Chloride	ND	61	mg/Kg	20	2/17/2020 9:32:01 PM	50487		
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst:	BRM		
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	2/19/2020 10:21:31 AM	50473		
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/19/2020 10:21:31 AM	50473		
Surr: DNOP	110	55.1-146	%Rec	1	2/19/2020 10:21:31 AM	50473		
EPA METHOD 8015D: GASOLINE RANGE	E				Analyst:	NSB		
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	2/18/2020 10:54:14 AM	50461		
Surr: BFB	90.4	66.6-105	%Rec	1	2/18/2020 10:54:14 AM	50461		
EPA METHOD 8021B: VOLATILES					Analyst	NSB		
Benzene	ND	0.024	mg/Kg	1	2/18/2020 10:54:14 AM	50461		
Toluene	ND	0.049	mg/Kg	1	2/18/2020 10:54:14 AM	50461		
Ethylbenzene	ND	0.049	mg/Kg	1	2/18/2020 10:54:14 AM	50461		

ND

99.8

0.097

80-120

mg/Kg

%Rec

1

1

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Enviro	#: 2002569 20-Feb-20	
Client: Project:	ENSOLUM Val Verde Amine Release 2019	
Sample ID: MB-50	0487 SampType: mblk TestCode: EPA Method 300.0: Anions	
Client ID: PBS	Batch ID: 50487 RunNo: 66591	
Prep Date: 2/17/2	/2020 Analysis Date: 2/17/2020 SeqNo: 2288952 Units: mg/Kg	
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimi	it Qual

Chloride	ND	1.5								
Sample ID: LCS-50487	SampTy	/pe: Ics	5	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: LCSS	Batch	ID: 504	487	F	RunNo: 6	6591				
Prep Date: 2/17/2020	Analysis Da	ate: 2/	17/2020	S	SeqNo: 2	288953	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.2	90	110			

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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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	WO#:	2002569
Hall Environmental Analysis Laboratory, Inc.		20-Feb-20

Client: ENSOL Project: Val Ver	UM de Amine Release 2019			
Sample ID: MB-50473	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Orga	inics
Client ID: PBS	Batch ID: 50473	RunNo: 66605		
Prep Date: 2/17/2020	Analysis Date: 2/18/2020	SeqNo: 2288974	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPD	Limit Qual
Diesel Range Organics (DRO)	ND 10			
Motor Oil Range Organics (MRO) Surr: DNOP	ND 50 11 10.00	107 55.1	146	
	11 10.00	107 55.1	140	
Sample ID: LCS-50473	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Orga	inics
Client ID: LCSS	Batch ID: 50473	RunNo: 66605		
Prep Date: 2/17/2020	Analysis Date: 2/18/2020	SeqNo: 2288987	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPD	Limit Qual
Diesel Range Organics (DRO)	60 10 50.00	0 120 70	130	
Surr: DNOP	5.3 5.000	107 55.1	146	
Sample ID: MB-50496	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Orga	inics
Client ID: PBS	Batch ID: 50496	RunNo: 66605		
Prep Date: 2/18/2020	Analysis Date: 2/18/2020	SeqNo: 2289090	Units: %Rec	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPD	Limit Qual
Surr: DNOP	8.9 10.00	88.8 55.1	146	
Sample ID: LCS-50496	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Orga	inics
Client ID: LCSS	Batch ID: 50496	RunNo: 66605	0 0	
Prep Date: 2/18/2020	Analysis Date: 2/18/2020	SeqNo: 2289092	Units: %Rec	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPD	Limit Qual
Surr: DNOP	4.2 5.000	84.7 55.1	146	
Sample ID: MB-50486	SampType: MBLK	TestCode: EDA Mothod	8015M/D: Diesel Range Orga	nice
Client ID: PBS	Batch ID: 50486	RunNo: 66605	oursmile. Dieser Kange Orga	lines
Prep Date: 2/17/2020	Analysis Date: 2/18/2020	SegNo: 2289790	Units: %Rec	
		•		
Analyte Surr: DNOP	Result PQL SPK value 11 10.00	SPK Ref Val %REC LowLimit 111 55.1	HighLimit %RPD RPD 146	Limit Qual
Sample ID: LCS-50486	SampType: LCS		8015M/D: Diesel Range Orga	inics
Client ID: LCSS	Batch ID: 50486	RunNo: 66605		
Prep Date: 2/17/2020	Analysis Date: 2/18/2020	SeqNo: 2289791	Units: %Rec	
Analyte		SPK Ref Val %REC LowLimit	0	Limit Qual
Surr: DNOP	5.1 5.000	102 55.1	146	

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
- Practical Quanitative Limit PQL
- % Recovery outside of range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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ENSOLUM

Client:

OC SUMMARY REPORT Η

Page	105	of 139

	WO#:	2002569
Hall Environmental Analysis Laboratory, Inc.		20-Feb-20

Project: Val Verd	le Amine Release 2019							
Sample ID: mb-50461	SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 50461	RunNo: 66590						
Prep Date: 2/14/2020	Analysis Date: 2/18/2020	SeqNo: 2288648	Units: mg/Kg					
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual				
Gasoline Range Organics (GRO) Surr: BFB	ND 5.0 820 1000	82.0 66.6	105					
Sample ID: Ics-50461	1 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 50461	RunNo: 66590						
Prep Date: 2/14/2020	Analysis Date: 2/18/2020	SeqNo: 2288649	Units: mg/Kg					
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual				
Gasoline Range Organics (GRO)	21 5.0 25.00	0 83.4 80	120					
Surr: BFB	910 1000	91.0 66.6	105					
Sample ID: mb-50481	SampType: MBLK	TestCode: EPA Method	8015D: Gasoline Range	•				
Client ID: PBS	Batch ID: 50481	RunNo: 66629						
Prep Date: 2/17/2020	Analysis Date: 2/18/2020	SeqNo: 2289517 Units: %Rec						
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual				
Surr: BFB	810 1000	80.7 66.6	105					
Sample ID: Ics-50481	SampType: LCS	TestCode: EPA Method	8015D: Gasoline Range	•				
Client ID: LCSS	Batch ID: 50481	RunNo: 66629						
Prep Date: 2/17/2020	Analysis Date: 2/18/2020	SeqNo: 2289518	Units: %Rec					
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual				
Surr: BFB	920 1000	92.0 66.6	105					

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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 8 of 10

QC SUMMARY REPORT Hall E

	WO#:	2002569
Environmental Analysis Laboratory, Inc.		20-Feb-20

Client: ENSOL Project: Val Ver	LUM rde Amine R	elease 2	2019							
Sample ID: mb-50435	SampType: MBLK TestCode: EPA Method 8021B: Volatiles									
Client ID: PBS	Batch	h ID: 504	435	F	RunNo: 66	6590				
Prep Date: 2/13/2020	Analysis D)ate: 2/	17/2020	5	SeqNo: 22	288662	Units: %Rec	;		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.94		1.000		93.8	80	120			
Sample ID: Ics-50435	SampT	ype: LC	s	Tes	tCode: EF	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batch	h ID: 504	435	F	RunNo: 66	6590				
Prep Date: 2/13/2020	Analysis D)ate: 2/	17/2020	S	SeqNo: 22	288663	Units: %Rec	;		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.90		1.000		89.9	80	120			
Sample ID: mb-50461	SampT	Гуре: МЕ	3LK	Tes	tCode: EF	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch	h ID: 504	461	F	RunNo: 66	6590				
Prep Date: 2/14/2020	Analysis D)ate: 2/	18/2020	S	SeqNo: 22	288684	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		89.8	80	120			
Sample ID: LCS-50461	SampT	ype: LC	s	Tes	tCode: EF	A Method	8021B: Volat	iles		
Client ID: LCSS	Batch	h ID: 504	461	F	RunNo: 66	590				
Prep Date: 2/14/2020	Analysis D)ate: 2/	18/2020	S	SeqNo: 22	288685	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	86.6	80	120			
Toluene	0.89	0.050	1.000	0	88.8	80	120			
Ethylbenzene	0.90	0.050	1.000	0	90.5	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.2	80	120			
Surr: 4-Bromofluorobenzene	0.95		1.000		94.8	80	120			
Sample ID: mb-50481	SampT	ype: ME	3LK	Tes	tCode: EF	A Method	8021B: Volat	iles		
Client ID: PBS	Batch	h ID: 504	481	RunNo: 66629						
Prep Date: 2/17/2020	Analysis D)ate: 2/	18/2020	S	SeqNo: 22	289564	Units: %Rec	;		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.89		1.000		89.3		120			

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

Practical Quanitative Limit PQL

% Recovery outside of range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range

RL Reporting Limit Page 9 of 10

Result

0.94

Analysis Date: 2/18/2020

PQL

2002569

Qual

WO#:

RPDLimit

Hall Env	ironmen	tal Analysis Laborato	ory, Inc.	20-Feb-20
Client: Project:	ENSOI Val Ve	UM rde Amine Release 2019		
Sample ID: LC	CS-50481	SampType: LCS	TestCode: EPA Method 8021B: Volatiles	
Client ID: LO	CSS	Batch ID: 50481	RunNo: 66629	

SPK value SPK Ref Val

1.000

SeqNo: 2289565

LowLimit

80

%REC

93.9

Units: %Rec

HighLimit

120

%RPD

Analyte Surr: 4-Bromofluorobenzene

Prep Date: 2/17/2020

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com				Sample Log-In Check List			
Client Name: ENSOLUM AZTEC	Work Order Numb	r Number: 2002569			RcptNo: 1			
Received By: Juan Rojas	2/14/2020 7:50:00 A	M						
Completed By: Isaiah Ortiz	2/14/2020 8:42:02 AM			I-	C	24		
Reviewed By: YG 211420								
Chain of Custody								
1. Is Chain of Custody sufficiently complete?		Yes		No [Not Present		
2. How was the sample delivered?								
<u>Log In</u>								
3. Was an attempt made to cool the samples?		Yes	~	No [
4. Were all samples received at a temperature	of >0° C to 6.0°C	Yes	\checkmark	No				
5. Sample(s) in proper container(s)?		Yes		No [
6. Sufficient sample volume for indicated test(s)?	Yes	\checkmark	No 🗌				
7. Are samples (except VOA and ONG) properly	y preserved?	Yes	\checkmark	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		Yes		No 🖸				
						# of preserved bottles checked		
11. Does paperwork match bottle labels?		Yes	\checkmark	No 🗌		for pH:		
(Note discrepancies on chain of custody)		v		No [7	(<2 or >12 unless noted) Adjusted?		
12. Are matrices correctly identified on Chain of	Custody?			No L				
13. Is it clear what analyses were requested?		Yes Yes		22		Checked by: 18 2/14/20		
14. Were all holding times able to be met? (If no, notify customer for authorization.)			V	No		Shound by JE CHIII		
Special Handling (if applicable)								
15. Was client notified of all discrepancies with	his order?	Yes		No [NA 🗹		
Person Notified:	Date:		NATER OF A STREET OF A STREET	leve (konstantische	anner			
By Whom:	Via:	eMa	ail 🗌 Phon	e 🗌 F	av	In Person		
Regarding:	vid.			- Ш г	ax			
Client Instructions:	DIE CONTRACTOR CONTRACTOR AND AND AND			uncertaine.				
16. Additional remarks:								
17. <u>Cooler Information</u> Cooler No Temp °C Condition Se	eal Intact Seal No	Seal D	rate course I for second sec	ned By				

Page 1 of 1
Chain-of-C	Chain-of-Custody Record	Turn-Around Time:	ime:												Recei
Client: Fose Mm. /	1.0	□ Standard	又 Rush	3-017			- 4	HALL		NN	IL I	ONN	HALL ENVIRONMENTAL ANAI YSTS I ABORATOR		ved by
		Project Name:						www.	haller	vironr	www.hallenvironmental.com	com			OCI
Mailing Address: (006 5, 200 6 ande	S. Rio Grande Suite A	Val Verde	le Amine Kelease	Lelease 2019		4901	Hawk	4901 Hawkins NE	I	nbnq	erque,	Albuquerque, NM 87109	109		D: 11
Aztec, NM S.		Project #: See notes	enotes			Tel. 5	505-3	505-345-3975	5	Fax	505-3	505-345-4107	2		/5/20
Phone #:									Ana	lysis	Analysis Request	est			20 1
email or Fax#: KSumn	email or Fax#: KSummerso, ensolum.com	Project Manag	er: KSummers	ners	_				VOS			(Jue			1:01:
QA/QC Package:	Level 4 (Full Validation)		in contra	abort all				SMIS0	PO4, 9			əsdA\tr			38 PM
Accreditation:	□ Az Compliance □ Other	Sampler: ZD On Ice:	Pres 1	No								Prese			
EDD (Type)		olers:									THE REAL	<i>רו</i> אנש (
		5-	ncluding CF): 3.	1+0+1-3.2 (°C)				1.5	-	-		iotilo	121		
Date Time Matrix	Sample Name	Container F Type and # 7	Preservative Type	2002569	X TEX /	08:H9T 9 1808	EDB (N	a eHAq	CI, F, I	/) 0928	6) 0728	D letoT AD	ng g A		
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1615	S-29	1x402Jar	6001	-002	X	×		and the second		1000		X	100 m		(
213/20 1620 5	S-30	1×402 Jar	1000	- 003	X	×						×			11/20
2 12/20 1025 S	S-31	1x Yuz Jar	6001	-004	X	×						×			1
2/2/20 1030 S	S-32	1+462301	1000	-005	×	×						×			
	Rolling and the first first of the second						-	and the second se			1. 19	N. Salar			à
				1 States and the second second						6					
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	And the optimization of the second		111 (Free & S. 1981)												
Date: Time: Relinquished by	hed by:	Received by:	Via:	2/12/hr 14/7	Remarks:	DA (-		Wdd	-1	Toy	Tom Long	d (EPROD	(10	Pa
	thed by:	Received by:	Via:	-Iñ	n)		E -	tay key	1	5	1532719		ge 10
1. 22 1814 / Justan 1	the Walter	Yen!	rounar	251E 02/11/2											9 of
If necessary samples s	2	ontracted to other acc	credited laboratories	s. This serves as notice of this	s possibil	ity. Any	sub-coi	itracted (lata will	be clear	ly notate	d on the ar	alytical repor		139



March 13, 2020

Kyle Summers ENSOLUM 606 S. Rio Grande Suite A Aztec, NM 87410 TEL: (903) 821-5603 FAX

RE: Val Verde Amine Release 2019

OrderNo.: 2003447

Hall Environmental Analysis Laboratory

TEL: 505-345-3975 FAX: 505-345-4107

Website: www.hallenvironmental.com

4901 Hawkins NE

Albuquerque, NM 87109

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 8 sample(s) on 3/11/2020 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

Surr: 4-Bromofluorobenzene

Project:

Analytical Report

3/11/2020 11:07:59 AM B67183

Hall Environmental Analysis Laboratory, Inc.

Val Verde Amine Release 2019

Lab Order 2003447

Date Reported: 3/13/2020

Client Sample ID: HA-1@10' Collection Date: 3/10/2020 1:00:00 PM Received Date: 3/11/2020 8:05:00 AM

Lab ID:	2003447-001	Matrix: SOIL		Received Dat	e: 3/1	11/2020 8:05:00 AM	
Analyses		Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA MET	HOD 300.0: ANIONS					Analyst	JMT
Chloride		ND	60	mg/Kg	20	3/11/2020 11:48:14 AM	51019
EPA MET	HOD 8015M/D: DIESEL RA	NGE ORGANICS				Analyst	BRM
Diesel R	ange Organics (DRO)	ND	9.3	mg/Kg	1	3/11/2020 10:33:52 AM	51016
Motor Oi	I Range Organics (MRO)	ND	46	mg/Kg	1	3/11/2020 10:33:52 AM	51016
Surr: [DNOP	102	55.1-146	%Rec	1	3/11/2020 10:33:52 AM	51016
EPA MET	HOD 8015D: GASOLINE R	ANGE				Analyst	RAA
Gasoline	Range Organics (GRO)	ND	3.5	mg/Kg	1	3/11/2020 11:07:59 AM	G67183
Surr: E	BFB	80.7	66.6-105	%Rec	1	3/11/2020 11:07:59 AM	G67183
EPA MET	HOD 8021B: VOLATILES					Analyst	RAA
Benzene		ND	0.018	mg/Kg	1	3/11/2020 11:07:59 AM	B67183
Toluene		ND	0.035	mg/Kg	1	3/11/2020 11:07:59 AM	B67183
Ethylben	zene	ND	0.035	mg/Kg	1	3/11/2020 11:07:59 AM	B67183
Xylenes,	Total	ND	0.070	mg/Kg	1	3/11/2020 11:07:59 AM	B67183

88.9

80-120

%Rec

1

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 13

2003447-002

Project:

Lab ID:

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Val Verde Amine Release 2019

Lab Order 2003447

Date Reported: 3/13/2020

Client Sample ID: HA-1@17.5' Collection Date: 3/10/2020 1:15:00 PM

Received Date: 3/11/2020 8:05:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JMT
Chloride	ND	60	mg/Kg	20	3/11/2020 12:00:35 PM	51019
EPA METHOD 8015M/D: DIESEL RANGE O	RGANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	3/11/2020 10:43:04 AM	51016
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	3/11/2020 10:43:04 AM	51016
Surr: DNOP	98.5	55.1-146	%Rec	1	3/11/2020 10:43:04 AM	51016
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	3/11/2020 11:31:37 AM	G67183
Surr: BFB	81.1	66.6-105	%Rec	1	3/11/2020 11:31:37 AM	G67183
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.018	mg/Kg	1	3/11/2020 11:31:37 AM	B67183
Toluene	ND	0.035	mg/Kg	1	3/11/2020 11:31:37 AM	B67183
Ethylbenzene	ND	0.035	mg/Kg	1	3/11/2020 11:31:37 AM	B67183
Xylenes, Total	ND	0.070	mg/Kg	1	3/11/2020 11:31:37 AM	B67183
Surr: 4-Bromofluorobenzene	87.2	80-120	%Rec	1	3/11/2020 11:31:37 AM	B67183

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 2 of 13

Project:

Analytical Report Lab Order 2003447

Hall Environmental Analysis Laboratory, Inc.

Val Verde Amine Release 2019

Date Reported: 3/13/2020

Client Sample ID: HA-2@9' Collection Date: 3/10/2020 1:30:00 PM Received Date: 3/11/2020 8:05:00 AM

Lab ID: 2003447-003	Matrix: SOIL		Received Dat	e: 3/1	11/2020 8:05:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	ЈМТ
Chloride	ND	60	mg/Kg	20	3/11/2020 12:12:57 PM	51019
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS				Analyst	BRM
Diesel Range Organics (DRO)	11	8.8	mg/Kg	1	3/11/2020 10:52:15 AM	51016
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	3/11/2020 10:52:15 AM	51016
Surr: DNOP	104	55.1-146	%Rec	1	3/11/2020 10:52:15 AM	51016
EPA METHOD 8015D: GASOLINE RANG	GE				Analyst	RAA
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	3/11/2020 11:55:14 AM	G67183
Surr: BFB	79.7	66.6-105	%Rec	1	3/11/2020 11:55:14 AM	G67183
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.017	mg/Kg	1	3/11/2020 11:55:14 AM	B67183
Toluene	ND	0.033	mg/Kg	1	3/11/2020 11:55:14 AM	B67183
Ethylbenzene	ND	0.033	mg/Kg	1	3/11/2020 11:55:14 AM	B67183
Xylenes, Total	ND	0.066	mg/Kg	1	3/11/2020 11:55:14 AM	B67183
Surr: 4-Bromofluorobenzene	85.8	80-120	%Rec	1	3/11/2020 11:55:14 AM	B67183

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Project:

Analytical Report Lab Order 2003447

Date Reported: 3/13/2020

Hall Environmental Analysis Laboratory, Inc.

Val Verde Amine Release 2019

Client Sample ID: HA-2@17' Collection Date: 3/10/2020 1:45:00 PM Received Date: 3/11/2020 8:05:00 AM

Lab ID: 2003447-004	Matrix: SOIL		Received Dat	e: 3/	11/2020 8:05:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JMT
Chloride	ND	60	mg/Kg	20	3/11/2020 12:25:17 PM	51019
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	3/11/2020 11:15:11 AM	51016
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/11/2020 11:15:11 AM	51016
Surr: DNOP	102	55.1-146	%Rec	1	3/11/2020 11:15:11 AM	51016
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	RAA
Gasoline Range Organics (GRO)	ND	3.8	mg/Kg	1	3/11/2020 12:18:42 PM	G67183
Surr: BFB	80.4	66.6-105	%Rec	1	3/11/2020 12:18:42 PM	G67183
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.019	mg/Kg	1	3/11/2020 12:18:42 PM	B67183
Toluene	ND	0.038	mg/Kg	1	3/11/2020 12:18:42 PM	B67183
Ethylbenzene	ND	0.038	mg/Kg	1	3/11/2020 12:18:42 PM	B67183
Xylenes, Total	ND	0.076	mg/Kg	1	3/11/2020 12:18:42 PM	B67183
Surr: 4-Bromofluorobenzene	87.7	80-120	%Rec	1	3/11/2020 12:18:42 PM	B67183

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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2003447-005

Project:

Lab ID:

Analytical Report Lab Order 2003447

Hall Environmental Analysis Laboratory, Inc.

Val Verde Amine Release 2019

Date Reported: 3/13/2020

Client Sample ID: HA-3@10' Collection Date: 3/10/2020 2:15:00 PM Received Date: 3/11/2020 8:05:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: ЈМТ
Chloride	ND	60	mg/Kg	20	3/11/2020 12:37:38 PM	51019
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	3/11/2020 11:24:20 AM	51016
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	3/11/2020 11:24:20 AM	51016
Surr: DNOP	101	55.1-146	%Rec	1	3/11/2020 11:24:20 AM	51016
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	3/11/2020 12:42:01 PM	G67183
Surr: BFB	81.8	66.6-105	%Rec	1	3/11/2020 12:42:01 PM	G67183
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.018	mg/Kg	1	3/11/2020 12:42:01 PM	B67183
Toluene	ND	0.035	mg/Kg	1	3/11/2020 12:42:01 PM	B67183
Ethylbenzene	ND	0.035	mg/Kg	1	3/11/2020 12:42:01 PM	B67183
Xylenes, Total	ND	0.071	mg/Kg	1	3/11/2020 12:42:01 PM	B67183
Surr: 4-Bromofluorobenzene	89.4	80-120	%Rec	1	3/11/2020 12:42:01 PM	B67183

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 range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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2003447-006

Project:

Lab ID:

Analytical Report Lab Order 2003447

Hall Environmental Analysis Laboratory, Inc.

Val Verde Amine Release 2019

Date Reported: 3/13/2020

Client Sample ID: HA-3@17.5' Collection Date: 3/10/2020 2:30:00 PM Received Date: 3/11/2020 8:05:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JMT
Chloride	ND	60	mg/Kg	20	3/11/2020 12:49:58 PM	51019
EPA METHOD 8015M/D: DIESEL RANGE C	RGANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	3/11/2020 11:33:30 AM	51016
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/11/2020 11:33:30 AM	51016
Surr: DNOP	99.5	55.1-146	%Rec	1	3/11/2020 11:33:30 AM	51016
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	3/11/2020 1:05:17 PM	G67183
Surr: BFB	84.2	66.6-105	%Rec	1	3/11/2020 1:05:17 PM	G67183
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.017	mg/Kg	1	3/11/2020 1:05:17 PM	B67183
Toluene	ND	0.035	mg/Kg	1	3/11/2020 1:05:17 PM	B67183
Ethylbenzene	ND	0.035	mg/Kg	1	3/11/2020 1:05:17 PM	B67183
Xylenes, Total	ND	0.069	mg/Kg	1	3/11/2020 1:05:17 PM	B67183
Surr: 4-Bromofluorobenzene	90.3	80-120	%Rec	1	3/11/2020 1:05:17 PM	B67183

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 range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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2003447-007

Project:

Lab ID:

Analytical Report Lab Order 2003447

Hall Environmental Analysis Laboratory, Inc.

Val Verde Amine Release 2019

Date Reported: 3/13/2020

Client Sample ID: HA-4@10.5' Collection Date: 3/10/2020 2:45:00 PM Received Date: 3/11/2020 8:05:00 AM

	Junin Soll		necci cu Dui		11/2020 0.05.00 1101	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: ЈМТ
Chloride	ND	60	mg/Kg	20	3/11/2020 1:27:00 PM	51019
EPA METHOD 8015M/D: DIESEL RANGE O	RGANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/11/2020 11:42:42 AM	51016
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/11/2020 11:42:42 AM	51016
Surr: DNOP	100	55.1-146	%Rec	1	3/11/2020 11:42:42 AM	51016
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	3.7	mg/Kg	1	3/11/2020 1:28:35 PM	G67183
Surr: BFB	81.5	66.6-105	%Rec	1	3/11/2020 1:28:35 PM	G67183
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.019	mg/Kg	1	3/11/2020 1:28:35 PM	B67183
Toluene	ND	0.037	mg/Kg	1	3/11/2020 1:28:35 PM	B67183
Ethylbenzene	ND	0.037	mg/Kg	1	3/11/2020 1:28:35 PM	B67183
Xylenes, Total	ND	0.075	mg/Kg	1	3/11/2020 1:28:35 PM	B67183
Surr: 4-Bromofluorobenzene	89.5	80-120	%Rec	1	3/11/2020 1:28:35 PM	B67183

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 range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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2003447-008

Project:

Lab ID:

Analytical Report Lab Order 2003447

Hall Environmental Analysis Laboratory, Inc.

Val Verde Amine Release 2019

Date Reported: 3/13/2020

Client Sample ID: HA-4@17.5' Collection Date: 3/10/2020 3:00:00 PM Received Date: 3/11/2020 8:05:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: JMT
Chloride	ND	60	mg/Kg	20	3/11/2020 1:39:20 PM	51019
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analys	t: BRM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	3/11/2020 11:51:53 AM	1 51016
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/11/2020 11:51:53 AM	1 51016
Surr: DNOP	99.3	55.1-146	%Rec	1	3/11/2020 11:51:53 AM	1 51016
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: RAA
Gasoline Range Organics (GRO)	ND	3.8	mg/Kg	1	3/11/2020 1:51:56 PM	G67183
Surr: BFB	88.2	66.6-105	%Rec	1	3/11/2020 1:51:56 PM	G67183
EPA METHOD 8021B: VOLATILES					Analys	t: RAA
Benzene	ND	0.019	mg/Kg	1	3/11/2020 1:51:56 PM	B67183
Toluene	ND	0.038	mg/Kg	1	3/11/2020 1:51:56 PM	B67183
Ethylbenzene	ND	0.038	mg/Kg	1	3/11/2020 1:51:56 PM	B67183
Xylenes, Total	ND	0.077	mg/Kg	1	3/11/2020 1:51:56 PM	B67183
Surr: 4-Bromofluorobenzene	95.4	80-120	%Rec	1	3/11/2020 1:51:56 PM	B67183

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 range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Result

14

PQL

1.5

L		tal Analysis		ory, Inc.				WO#:	2003447 13-Mar-20
Client: Project:	ENSOI Val Ve	LUM rde Amine Release	e 2019						
Sample ID: MB-		SampType: r Batch ID: 5			Code: EPA Metho unNo: 67189	d 300.0: Anions	5		
	1/2020	Analysis Date:			eqNo: 2316257	Units: mg/K	g		
Analyte Chloride		Result PQL ND 1.		SPK Ref Val	%REC LowLim	it HighLimit	%RPD	RPDLimit	Qual
Sample ID: LCS	-51019	SampType: I	cs	Test	Code: EPA Metho	d 300.0: Anions	6		
Client ID: LCS	-	Batch ID: 5			unNo: 67189	lipito, ma W	_		
Prep Date: 3/1	1/2020	Analysis Date:	3/11/2020	S	eqNo: 2316258	Units: mg/K	g		

SPK value SPK Ref Val %REC

0

15.00

LowLimit

90

93.3

HighLimit

110

Qualifiers:

Analyte Chloride

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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RPDLimit

Qual

%RPD

QC SUMMART REFORT	WO#:	2003447
Hall Environmental Analysis Laboratory, Inc.		13-Mar-20

Client: ENS	OLUM									
Project: Val V	Verde Amine F	Release	2019							
Sample ID: LCS-51016	Samp⊺	Гуре: LC	s	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batc	h ID: 51	016	F	RunNo: 6	7179				
Prep Date: 3/11/2020	Analysis E	Date: 3/	/11/2020	S	SeqNo: 2	314621	Units: mg/k	٢g		
Analyte	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	10	50.00	0	102	70	130				
Surr: DNOP	4.5		5.000		90.8	55.1	146			
Sample ID: MB-51016	Samp	Гуре: МІ	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: PBS	Batc	h ID: 51	016	F	RunNo: 6	7179				
Prep Date: 3/11/2020	Analysis E	Date: 3/	/11/2020	S	SeqNo: 2	314623	Units: mg/ł	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO) ND	50								
Surr: DNOP	10		10.00		104	55.1	146			

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
- Practical Quanitative Limit PQL
- % Recovery outside of range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc

Page	<i>121</i>	of 139	
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	WO#:	2003447
atory, Inc.		13-Mar-20

Client: EN	SOLUM			
Project: Val	Verde Amine Release 2019			
Sample ID: 2.5ug gro lo	s SampType: LCS	TestCode: EPA Method 8	8015D: Gasoline Range	9
Client ID: LCSS	Batch ID: G67183	RunNo: 67183		
Prep Date:	Analysis Date: 3/11/2020	SeqNo: 2314718	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Gasoline Range Organics (GR	0) 24 5.0 25.00	0 96.6 80	120	
Surr: BFB	930 1000	93.2 66.6	105	
Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8	8015D: Gasoline Range	9
Client ID: PBS	Batch ID: G67183	RunNo: 67183		
Prep Date:	Analysis Date: 3/11/2020	SeqNo: 2314721	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Gasoline Range Organics (GR	O) ND 5.0			
Surr: BFB	900 1000	89.6 66.6	105	
Sample ID: mb-51002	SampType: MBLK	TestCode: EPA Method 8	8015D: Gasoline Range	9
Client ID: PBS	Batch ID: 51002	RunNo: 67183		
Prep Date: 3/10/2020	Analysis Date: 3/11/2020	SeqNo: 2315344	Units: %Rec	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Surr: BFB	880 1000	87.8 66.6	105	
Sample ID: Ics-51002	SampType: LCS	TestCode: EPA Method 8	8015D: Gasoline Range	9
Client ID: LCSS	Batch ID: 51002	RunNo: 67183		
Prep Date: 3/10/2020	Analysis Date: 3/11/2020	SeqNo: 2315345	Units: %Rec	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Surr: BFB	930 1000	93.5 66.6	105	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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ENSOLUM

Client:

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#:	2003447
	13-Mar-20

Project: Val Vero	de Amine F	Release	2019								
Sample ID: 100ng btex lcs	Samp	Type: LC	s	TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batc	h ID: B6	7183	F							
Prep Date:	Analysis [Date: 3/	11/2020	:	SeqNo: 2	314724	Units: mg/ł	۲g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.91	0.025	1.000	0	90.7	80	120				
Toluene	0.93	0.050	1.000	0	93.3	80	120				
Ethylbenzene	0.95	0.050	1.000	0	95.2	80	120				
Xylenes, Total	2.9	0.10	3.000	0	96.6	80	120				
Surr: 4-Bromofluorobenzene	0.92		1.000		92.2	80	120				
Sample ID: mb	Samp	Туре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles			
Client ID: PBS	Batc	:h ID: B6	7183	F	RunNo: 6	7183					
Prep Date:	Analysis [Date: 3/	11/2020	Ş	SeqNo: 2	314727	Units: mg/H	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									
Xylenes, Total	ND	0.10									
Surr: 4-Bromofluorobenzene	0.98		1.000		97.9	80	120				
Sample ID: 2003447-001a ms	s Samp	Туре: М	6	Tes	tCode: El	PA Method	8021B: Vola	tiles			
Client ID: HA-1@10'	Batc	h ID: B6	7183	RunNo: 67183							
Prep Date:	Analysis [Date: 3/	11/2020	Ş	SeqNo: 2	315329	Units: mg/ł	٢g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.64	0.018	0.7032	0	91.5	78.5	119				
Toluene	0.67	0.035	0.7032	0	95.5	75.7	123				
Ethylbenzene	0.69	0.035	0.7032	0	97.7	74.3	126				
Xylenes, Total	2.1	0.070	2.110	0	98.8	72.9	130				
Surr: 4-Bromofluorobenzene	0.67		0.7032		95.1	80	120				
Sample ID: 2003447-001a ms	sd Samp	Туре: М	SD	Tes	stCode: El	PA Method	8021B: Vola	tiles			
Client ID: HA-1@10'	Batc	h ID: B6	7183	F	RunNo: 6	7183					
Prep Date:	Analysis [Date: 3/	11/2020	\$	SeqNo: 2	315330	Units: mg/k	٢g			
Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.64	0.018	0.7032	0	91.3	78.5	119	0.219	20		
Toluene	0.66	0.035	0.7032	0	93.9	75.7	123	1.74	20		
Ethylbenzene	0.67	0.035	0.7032	0	95.9	74.3	126	1.90	20		
V I Total	0.4	0 070	0.440	0	07.0	70.0	100	4.04	00		

Qualifiers:

Xylenes, Total

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit

Surr: 4-Bromofluorobenzene

% Recovery outside of range due to dilution or matrix S

2.1

0.67

0.070

2.110

0.7032

в Analyte detected in the associated Method Blank

97.6

95.7

72.9

80

130

120

1.21

0

- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

0

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20

0

ENSOLUM

Client:

	WO#:	2003447
Hall Environmental Analysis Laboratory, Inc.		13-Mar-20

Project: Val Ver	de Amine Release	2019									
Sample ID: mb-51002	SampType: M	BLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 5	1002	R	unNo: 6	7183						
Prep Date: 3/10/2020	Analysis Date: 3	/11/2020	S	eqNo: 2	315396	Units: %Red	;				
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Surr: 4-Bromofluorobenzene	0.96	1.000		96.0	80	120					
Sample ID: LCS-51002	SampType: L	cs	Test	tCode: El	PA Method	8021B: Volat	iles				
Client ID: LCSS	Batch ID: 5	1002	R	unNo: 6	7183						
Prep Date: 3/10/2020	Analysis Date: 3	/11/2020	S	eqNo: 2	315397	Units: %Red	;				
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Surr: 4-Bromofluorobenzene	1.0	1.000		100	80	120					

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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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HALL HALL ENVIRONMENTAL ANALYSIS LABORATORY	TEL: 505-345-	ental Analysis La 4901 Hav Albuquerque, N. 3975 FAX: 505-3 w.hallenvironme	vkins NE M 87109 Sar 245-4107	nple Log-In (Pag Check List
Client Name: ENSOLUM AZTEC	Work Order Nun	1ber: 2003447		RcptNo	: 1
Received By: Erin Melendrez	3/11/2020 8:05:00	AM	in	, 5	
Completed By: Leah Baca	3/11/2020 8:21:57	AM	Int Bre	_	
Reviewed By: DAD 3/11/20			Lat Jakes	<u>م</u>	
Chain of Custody					
1. Is Chain of Custody sufficiently complete?		Yes 🗹	No 🗌	Not Present	
2. How was the sample delivered?		Client			
Log In 3. Was an attempt made to cool the samples	?	Yes 🔽	No 🗌	NA 🗌	
4. Were all samples received at a temperatur	e of >0° C to 6.0°C	Yes 🗹	No 🗌		
5. Sample(s) in proper container(s)?		Yes ⊻	No 🗌		
6. Sufficient sample volume for indicated test	(s)?	Yes 🗹	No 🗀		
7. Are samples (except VOA and ONG) prope	rly 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 🗹	1
 Were any sample containers received brok 	en?	Yes	No 🗹	# of preserved	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🔽	No	bottles checked for pH: (<2 or	12 unless note
12. Are matrices correctly identified on Chain o	f Custody?	Yes 🗹	No 🗌	Adjusted?	/
13. Is it clear what analyses were requested?		Yes 🗹	No 🗌		E V.A
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	Νο	Checked by	16_3/11/20
Special Handling (if applicable)				/	
15. Was client notified of all discrepancies with	this order?	Yes 🛄	No 🗌	NA 🗹	7
Person Notified:	Date		· · · · · · · · · · · ·		
By Whom:	Via:	🗌 eMail 🗌] Phone 🔲 Fax	In Person	
Regarding:					
Client Instructions: 16. Additional remarks:	· · · · ·	· · · ·	·····]
17. <u>Cooler Information</u>					
Cooler No Temp C Condition	Seal Intact Seal No	Seal Date	Signed By		
1 3.7 Good Yr 2 1.9 Good Yr	es				

Page 1 of 1

Receiv	ed by	0C1	D: 11	/5/2	020	1:01	:38	РМ																	Pag	e 125 oj	f 139
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	ANALYSTS LABORATOR	7 4 1																							 1		This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report. EMH 3/1/20
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Ü	Client:		Mailing Address: 6065 Rio (crance Suit A	Aztec, NM	Phone #	email or Fax#: YSUMMOR @QMS&LUM, CG W	QA/QC Package:	Standard	Accreditation:		3[3/10/200	3/10/20/13/5	310 an	3/10/20		310001430	3/10/20/1445	3/16/20	_			3		_
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June 30, 2020

Kyle Summers ENSOLUM 606 S. Rio Grande Suite A Aztec, NM 87410 TEL: (903) 821-5603 FAX:

RE: Val Verde Amine Release 2019

OrderNo.: 2006B28

Hall Environmental Analysis Laboratory

TEL: 505-345-3975 FAX: 505-345-4107

Website: clients.hallenvironmental.com

4901 Hawkins NE

Albuquerque, NM 87109

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/23/2020 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

2006B28-001

Project:

Lab ID:

Analytical Report Lab Order 2006B28

Hall Environmental Analysis Laboratory, Inc.

Val Verde Amine Release 2019

Date Reported: 6/30/2020

Client Sample ID: HA-6 @ 12' Collection Date: 6/22/2020 9:45:00 AM Received Date: 6/23/2020 8:05:00 AM

	Julian Soll										
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch					
EPA METHOD 300.0: ANIONS					Analyst	: JMT					
Chloride	ND	60	mg/Kg	20	6/26/2020 8:25:41 PM	53340					
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst	: CLP					
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	6/24/2020 11:29:31 AM	53252					
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	6/24/2020 11:29:31 AM	53252					
Surr: DNOP	108	55.1-146	%Rec	1	6/24/2020 11:29:31 AM	53252					
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB					
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	6/24/2020 3:37:21 PM	53249					
Surr: BFB	101	66.6-105	%Rec	1	6/24/2020 3:37:21 PM	53249					
EPA METHOD 8021B: VOLATILES					Analyst	: NSB					
Benzene	ND	0.024	mg/Kg	1	6/24/2020 3:37:21 PM	53249					
Toluene	ND	0.048	mg/Kg	1	6/24/2020 3:37:21 PM	53249					
Ethylbenzene	ND	0.048	mg/Kg	1	6/24/2020 3:37:21 PM	53249					
Xylenes, Total	ND	0.096	mg/Kg	1	6/24/2020 3:37:21 PM	53249					
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	6/24/2020 3:37:21 PM	53249					

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 range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 5

Hall Environmental Analysis Laboratory, Inc.							
Client:	ENSOLUM						

Project: Val Ve	erde Amine Release 2019			
Sample ID: MB-53340	SampType: mblk	TestCode: EPA Method	300.0: Anions	
Client ID: PBS	Batch ID: 53340			
Prep Date: 6/26/2020	Analysis Date: 6/26/2020	SeqNo: 2429403	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			
Sample ID: LCS-53340	SampType: Ics	TestCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 53340	RunNo: 69932		
Prep Date: 6/26/2020	Analysis Date: 6/26/2020	SeqNo: 2429404	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	14 1.5 15.00	0 94.9 90	110	

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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 2 of 5

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Client ID: PBS

Analvte

Analyte

Surr: DNOP

Surr: DNOP

Prep Date: 6/23/2020

Diesel Range Organics (DRO)

Sample ID: LCS-53252

Prep Date: 6/23/2020

Diesel Range Organics (DRO)

Client ID: LCSS

Motor Oil Range Organics (MRO)

Result

ND

ND

13

Result

48

5.3

Batch ID: 53252

Analysis Date: 6/24/2020

SampType: LCS

Batch ID: 53252

Analysis Date: 6/24/2020

PQL

10

PQL

10

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Hall Env	wo#:	2006B28 30-Jun-20		
Client:	ENSOL	UM		
Project:	Val Vei	de Amine Release 2019		
Sample ID: M	B-53252	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics	

SPK value SPK Ref Val

SPK value SPK Ref Val

10.00

50.00

5.000

RunNo: 69847

126

RunNo: 69847

%REC

96.5

105

0

SeqNo: 2425699

SeqNo: 2425698

%REC LowLimit

55.1

LowLimit

70

55.1

Units: mg/Kg

146

Units: mg/Kg

130

146

HighLimit

%RPD

%RPD

RPDLimit

RPDLimit

Qual

Qual

HighLimit

TestCode: EPA Method 8015M/D: Diesel Range Organics

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Sample pH Not In Range Р
- RL Reporting Limit

Page 3 of 5

Client:

QC SUMMARY REPORT Hall Env

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Daga	120		C 1 2 0
Page	150	01	130

vinonmentel Analysis Laboratory Inc	WO#: 2006]	B28
vironmental Analysis Laboratory, Inc.	30-Jun	-20
ENSOLUM		

Project: Val Ver	de Amine R	lelease 2	2019							
Sample ID: mb-53249	SampT	ype: ME	BLK	TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch	n ID: 53	249	F	RunNo: 6 9	9855				
Prep Date: 6/23/2020 Analysis Date: 6/24/2020				S	SeqNo: 2426470 Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		102	66.6	105			
Sample ID: Ics-53249	SampT	ype: LC	S	Tes	tCode: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCSS	Batch	n ID: 53	249	F	RunNo: 69	9855				
Prep Date: 6/23/2020	Analysis D)ate: 6/	24/2020	S	SeqNo: 24	426471	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.3	80	120			
Surr: BFB	1100		1000		112	66.6	105			S

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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 4 of 5

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc

Page	<i>131</i>	of 13	89
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1	WO#:	2006B28
Laboratory, Inc.		30-Jun-20

Client:ENSOProject:Val Ve	LUM erde Amine F	Release 2	2019								
Sample ID: mb-53249	Samp	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles			
Client ID: PBS	Batc	h ID: 532	2: 53249 RunNo: 69855								
Prep Date: 6/23/2020	Analysis [Date: 6/	24/2020	S	SeqNo: 24	426506	Units: mg/K	íg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	0.025									
Toluene	ND	0.050									
Ethylbenzene	ND	0.050									
Xylenes, Total	ND	0.10									
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120				
Sample ID: LCS-53249	Samp ⁻	Гуре: LC	S	Tes	tCode: El	PA Method	8021B: Volat	iles			
Client ID: LCSS	Batc	h ID: 532	249	RunNo: 69855							
Prep Date: 6/23/2020	Analysis [Date: 6/2	24/2020	S	SeqNo: 24	426507	Units: mg/K	ſg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.94	0.025	1.000	0	93.6	80	120				
Toluene	0.95	0.050	1.000	0	95.4	80	120				
Ethylbenzene	0.96	0.050	1.000	0	96.1	80	120				
Xylenes, Total	2.9	0.10	3.000	0	97.2	80	120				
Surr: 4-Bromofluorobenzene	1.0										

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 5

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HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Albı TEL: 505-345-3975 Website: www.ha	4901 1 iquerque FAX: 50	lawkins NE NM 87109 5-345-4107	Sa	mple Log-In Check List
Client Name: ENSOLUM	Work Order Number:	2006B	28		RcptNo: 1
Received By: Emily Mocho	6/23/2020 8:05:00 AM				
Completed By: Emily Mocho	6/23/2020 8:39:30 AM				
Reviewed By: DAD 6/23/20					
Chain of Custody					_
1. Is Chain of Custody complete?		Yes	•	No	Not Present
2. How was the sample delivered?		<u>Courie</u>			
Log In 3. Was an attempt made to cool the samples?		Yes ៴	•	No 🗌	NA 🗌
4. Were all samples received at a temperature of	of >0° C to 6.0°C	Yes 🔽	2	No 🗌	
5. Sample(s) in proper container(s)?		Yes ៴	•]	No 🗌	
6. Sufficient sample volume for indicated test(s)	?	Yes 🗹]	No 🗌	
7. Are samples (except VOA and ONG) properly	preserved?	Yes 🗸]	No 🗌	
8. Was preservative added to bottles?		Yes]	No 🗹	NA 🗌
9. Received at least 1 vial with headspace <1/4"	for AQ VOA?	Yes		No 🗌	NA 🗹
10. Were any sample containers received broker	1?	Yes 🗆]	No 🔽	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹]	No 🗌	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of C	Custody?	Yes 🖌]	No 🗌	Adjusted?
13. Is it clear what analyses were requested?		Yes 🗸		No 🗌	
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹]	No 🗌	Checked by: 5 PA 6-23-20
Special Handling (if applicable)					
15. Was client notified of all discrepancies with the	nis order?	Yes []	No 🗌	NA 🗹
Person Notified: By Whom: Regarding: Client Instructions:	Date: Date: Via:] eMail	Phone	• 🗌 Fa	x 🔲 In Person
16. Additional remarks:					
17. <u>Cooler Information</u> Cooler No Temp °C Condition Se	al Intact Seal No S Present	eal Date	Sign	ied By	

Page 1 of 1

Received by OCD: 11/5/2020 1:01:38 PM

ADI Hawkins NF - Alburnerula MM 87100	Fax 505-345-4107 Analysis Request	(AOV-ime) (fresedAtnesent) mrotilo ماناد مرکای	8081 Pd EDB (M PAHs b RCRA 5 CI, F, E 8260 (V 8270 (S Total C				Page 133 0 Page 133 0 Say 1447 - 7225 - 719 Pagy 1447 - 7225 - 719	
Turn-Around Time: Vel Ver de Amine Relearse 2019	Project #: See notes	Project Manager: $KSummers$ Sampler: $Elechi/ly$ On Ice: $\blacksquare Yes = No$ # of Coolers: I Cooler Temp(including cr): $3.0 \pm 0 = 3.0$ (°C)	Container Preservative HEAL No. ビロ Type and # Type 200 6 B 2 8 m	IXYUZJER COUI -001 X			Received by: Via: Date Time Remarks: Received by: Via: Date Time Remarks: Received by: Via: Date Time X05	いいい いい いっしょう いい いっしょう いい いい いっしょう nc いっしょう nc accredited laboratories. This serves as nc
Client: Enselum, LL C Mailing Address: 6065, Elo Grande	Suited Attec, NW STYIO Phone #:	email or Fax#: YSumm&rse Level 4 (Full Validation) QA/QC Package: Candard Cevel 4 (Full Validation) Accreditation: Compliance Accreditation: Az Compliance Conter	Date Time Matrix Sample Name	122/20 345 S 174-6@ 12)			Date: Time: Relinquished by: Graph Juys Relinquished by: Date: Time: Relinquished by: Charles Charles Charl	If necessary, samples submitted to Hall Environmental may be subc



APPENDIX G

Regulatory Correspondence

From:	Long, Thomas
То:	"Smith, Cory, EMNRD (Cory.Smith@state.nm.us)"
Cc:	Stone, Brian
Subject:	FW: Val Verde Amine Release - UL A Section 14 T29N R11;36.731125, -107.956736
Date:	Wednesday, February 12, 2020 7:31:00 AM

Cory,

This email is to notify you that Enterprise will be collecting soil samples for laboratory analysis at the Val Verde Train 7 excavations on Thursday, February 13, 2020 at 10:00 a.m. We did not get to sample it from the other day. If you have any questions, please all or email.

Thomas J. Long Senior Environmental Scientist Enterprise Products Company 614 Reilly Ave. Farmington, New Mexico 87401 505-599-2286 (office) 505-215-4727 (Cell) <u>tjlong@eprod.com</u>



From: Long, Thomas
Sent: Friday, January 10, 2020 8:45 AM
To: 'Smith, Cory, EMNRD' <Cory.Smith@state.nm.us>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: RE: Val Verde Amine Release - UL A Section 14 T29N R11;36.731125, -107.956736

Cory,

This email is to notify you that Enterprise will be collecting soil samples for laboratory analysis at the Val Verde Train 7 excavations on Tuesday, January 14, 2020 at 11:00 a.m. If you have any questions, please all or email.

Thomas J. Long Senior Environmental Scientist Enterprise Products Company 614 Reilly Ave. Farmington, New Mexico 87401 505-599-2286 (office) 505-215-4727 (Cell) <u>tjlong@eprod.com</u>



From: Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>>
Sent: Wednesday, January 8, 2020 3:19 PM
To: Long, Thomas <<u>tilong@eprod.com</u>>
Cc: Stone, Brian <<u>bmstone@eprod.com</u>>
Subject: RE: Val Verde Amine Release - UL A Section 14 T29N R11;36.731125, -107.956736

Tom,

OCD approves Enterprises Alternative sampling plan below. Please include this approval in your Final C-141.

Thank you,

Cory Smith Environmental Specialist Oil Conservation Division Energy, Minerals, & Natural Resources 1000 Rio Brazos, Aztec, NM 87410 (505)334-6178 ext 115 cory.smith@state.nm.us

From: Long, Thomas <<u>tilong@eprod.com</u>>
Sent: Wednesday, January 8, 2020 3:18 PM
To: Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>>
Cc: Stone, Brian <<u>bmstone@eprod.com</u>>
Subject: [EXT] FW: Val Verde Amine Release - UL A Section 14 T29N R11;36.731125, -107.956736

Cory,

This email is a follow up to our conversation earlier today at Val Verde Plant. Enterprise requests a variance from the 200 square foot sampling interval at the Val Verde Plant Train 7 Amine Release. Enterprise requests a 400 square foot sampling interval. In addition, Enterprise will excavate more soil where stains were observed and sample utilizing the requested 400 foot sampling interval. Please acknowledge acceptance of this request. If you have any questions, please call or email.

Thomas J. Long Senior Environmental Scientist Enterprise Products Company 614 Reilly Ave. Farmington, New Mexico 87401 505-599-2286 (office) 505-215-4727 (Cell) tjlong@eprod.com



From: Long, Thomas
Sent: Tuesday, January 7, 2020 9:31 AM
To: 'Smith, Cory, EMNRD (Cory.Smith@state.nm.us)' <Cory.Smith@state.nm.us>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: FW: Val Verde Amine Release - UL A Section 14 T29N R11;36.731125, -107.956736

Cory,

This email is a notification that Enterprise will collecting soil samples for laboratory analysis at the Val Verde Plant Train 7 release tomorrow, January 8, 2020 at 1:00 p.m. If you have any questions, please call or email.

Thomas J. Long Senior Environmental Scientist Enterprise Products Company 614 Reilly Ave. Farmington, New Mexico 87401 505-599-2286 (office) 505-215-4727 (Cell) tjlong@eprod.com



From: Long, Thomas
Sent: Thursday, October 10, 2019 7:49 AM
To: 'Smith, Cory, EMNRD (Cory.Smith@state.nm.us)' <Cory.Smith@state.nm.us>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: Val Verde Amine Release - UL A Section 14 T29N R11;36.731125, -107.956736

Cory,

This email is to notify you that Enterprise had a release or Amine (50% Water/50% Amine) at Val Verde Plant yesterday. The release was a result for a valve failing. An estimated volume between 5-10 barrels was released. Most of the release was inside a concrete containment under the cooling tower, however the containment has an earthen bottom. The release is located at UL A Section 14 T29N R11;36.731125, -107.956736. We are removing the standing liquids as much as practicable. I will keep you informed as to the remediation efforts. The release is located at UL A Section 14 T29N R11;36.731125, -107.956736. If you have any questions, please call or email.

Sincerely,

Thomas J. Long Senior Environmental Scientist Enterprise Products Company 614 Reilly Ave. Farmington, New Mexico 87401 505-599-2286 (office) 505-215-4727 (Cell) tjlong@eprod.com



This message (including any attachments) is confidential and intended for a specific individual and purpose. If you are not the intended recipient, please notify the sender immediately and delete this message.

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:
Enterprise Field Services, LLC	241602
PO Box 4324	Action Number:
Houston, TX 77210	11088
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Deferral approved. Required to remediate & reclaim after decommissioning per 19.15.29.12C (2) & 19.15.29.13D (1).	5/16/2022

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Action 11088