Received by OCD: 10/9/2019 10:09:09 AM



Site Characterization and Closure Report

Rattlesnake SWD Pump Station Produced Water Release Lea County, New Mexico

Lucid Energy Group





Table of Contents

1.	Introduction	1
2.	Project Information and Background	1
3.	NMOCD Closure Criteria for Soils	1
4.	Soil Assessment and Remediation	2
	4.1 Soil Sampling and Analytical Results	3
5.	Deferral and Site Closure Requests	.4

Figure Index

Figure 1	Topographic Site Location Map
Figure 2	Site Details and Analytical Results Map

Table Index

 Table 1
 Soil Analytical Results Summary

Appendix Index

Appendix A	NMOSE Water Well Survey
Appendix B	C-141 Final
Appendix C	Waste Disposal Manifests
Appendix D	Photographs
Appendix E	Soil Laboratory Analytical Reports



1. Introduction

GHD is pleased to present this Soil Characterization and Site Closure Report to Lucid Energy Group (Lucid) for the Rattlesnake SWD Pump Station release location (hereafter referred to as the "Site"). The Site is located in Unit P, Section 16, Township 26 South, Range 34 East, approximately 17 miles southwest of Jal, in southern Lea County, New Mexico (refer to Figure 1). The Site is on land administered by the United States Bureau of Land Management.

2. Project Information and Background

Lucid submitted an initial C-141 Form to the NMOCD dated August 15, 2019, describing a release of 15 to 20 barrels (bbls) produced water with zero volume being recovered; stating the cause of the release as, *"Flange on pumping station failed causing the release of water."* The C141 Release Notification is included in Appendix B. At this writing, NMOCD has not provided a Remediation Permit number for this release.

Following discovery of the release, Lucid immediately performed surface soil remediation activities. Initial assessment included a site visit, photograph collection, and a preliminary inspection of impacts to the surrounding environment. Photographs of the site are included in Appendix C. GHD conducted follow-up site characterization activities on August 16, 2019.

3. NMOCD Closure Criteria for Soils

Subsurface investigation activities were completed in accordance with the 19.15.29 New Mexico Administrative Code (NMAC) from the New Mexico Oil Conservation Division (NMOCD) dated August 14, 2018.

The following criteria from Table 1 (below) within NMAC 19.15.29.12 was utilized to determine sitespecific screening limits.

Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l TDS	Constituent	Limit*
51 feet-100 feet	Chloride*	10,000 mg/kg
	TPH (GRO+DRO+M	2,500 mg/kg
	GRO+DRO	1,000 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

* This applies to releases of produced water or other fluids, which may contain chloride.

Based on the most current data listed within the New Mexico Office of the State Engineer (NMOSE) and U.S. Geological Survey's (USGS) groundwater databases, the nearest wells with a recorded depth to groundwater indicate a depth of over 100 feet (ft.) below ground surface (bgs). The NMOSE and USGS wells are over 1 mile from the site. A depth to groundwater of over 100 feet bgs is also



interpreted from Chevron Texaco groundwater trend maps. Groundwater is therefore interpreted to be greater than 100 ft. bgs, however, a Site-specific depth is not known. Therefore, a conservative 51 to 100 feet screening criteria was utilized for this assessment. Additionally, information available from the USGS National Map concludes:

- a) the depth to groundwater at the Site is believed greater than 100-feet bgs;
- b) the site is not within 300 feet of any continuously flowing watercourse;
- c) the site is not within 200 feet of any lakebed, sinkhole or playa lake;
- d) the site is not within 300 feet of an occupied permanent residence, school, etc.;
- e) the site is not within 500 feet of a spring or private, domestic fresh water well;
- f) the site is not within 1,000 feet of a fresh water well or spring;
- g) the site is not within incorporated municipal boundaries or within a defined municipal fresh water well field;
- h) the site is not within 300 feet of a wetland;
- i) the site is not within an area overlying a subsurface mine;
- j) the site is not within an unstable area; and
- k) the site is not within a 100-year floodplain.

Consequently, the anticipated site-specific screening limits to be applied to this location by the NMOCD based on the NMAC 19.15.29.12 are <u>10 mg/kg for benzene</u>, <u>50 mg/kg for total BTEX</u>, <u>2,500</u> <u>mg/kg for total TPH</u>, <u>and 10,000 mg/kg for chloride</u>. A list of surrounding wells with reported depth to groundwater, obtained from the NMOSE New Mexico Water Rights Reporting System database and USGS National Water Information System Mapper is included in Appendix A.

Per 19.15.29.13, Restoration, Reclamation, and Re-vegetation, the impacted area must be remediated a minimum of 4-feet bgs with non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg. Soil cover must consist of topsoil at a thickness comparable to background topsoil thicknesses, or one foot of suitable earthen material capable of establishing and maintaining vegetation at the site. Reclamation is considered complete when all disturbed areas have established vegetative cover with a life-form ratio of plus or minus 50 percent of pre-remedial levels, and plant cover of a minimum of 70 percent of previous levels, excluding noxious weeds.

4. Soil Assessment and Remediation

The initial Site assessment sampling was conducted by Lucid on August 14, 2019. Lucid hand augured and collected samples in the center, and four cardinal directions of the spill footprint. The center sample (HA-C-12) was collected at a depth of 12-inches below ground surface (bgs) and the remaining samples at 6-inches bgs. Samples were submitted to Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico. All samples were analyzed for chloride concentrations by EPA Method 300. Sample HA-C-12 was also analyzed for total petroleum hydrocarbons (TPH) by EPA method 8015 and for benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA method 8021.



GHD conducted additional field assessment activities at the Site on August 16, 2019. Backhoe test pits were excavated on the north and south ends of the visibly stained release area. A third test pit, TP-3 was also dug to the west of the release area and west of Lucid's gas and water lines. Background sample BG-1 was collected in pasture east of the release are, between the Targa gas line east of the release area and the access road. Samples were collected at depths of 1 and 3 feet (ft.) bgs (except BG-1, collected at 1 ft. only) and field screened using HACH test kits. Test pit locations are depicted on Figure 2.

GHD returned on August 23, 2019 to oversee the Lucid contractor during a surface scraping of impacted soils. The contractor scraped an area of approximate dimensions of 70 ft. by 70 feet to a depth of 6 to 8 inches. The impacted soils were hauled away for off Site disposal. An attempt was also made to dig additional test pits, however, the equipment on Site could not dig beyond 3.5 feet through the caliche.

On August 26, the Lucid contractor dug test pits TP-4 and TP-5. Samples were collected at depths of 6 ft. and 10 ft. bgs and field screened for chlorides. Samples were also submitted to Hall for chloride analysis. All samples were below the LRL. It is therefore evident from these results that impacts from the small release did not penetrate below 3 to 4 ft. bgs across the Site.

Lucid ultimately excavated an area depicted in Figure 2 representing approximately 360 cubic yards (cy) of impacted soils. The remediated area was excavated generally to a depth of 4 ft. bgs. Five point composite confirmation soil samples were collected from each of the four sidewalls of the excavation and submitted for chloride laboratory analysis. The red shaded area in the figure was not excavated due to production equipment including the pump, generator and electrical panel. A deferral from remediation for this area will be requested. Disposal manifests for removed soils are included in Appendix C. Photographs of the Site equipment/deferral area and excavation are included in Appendix D.

Because the Site equipment is not housed in a fenced, secure facility, the excavated area has been backfilled with clean imported fill material.

4.1 Soil Sampling Analytical Results

Soil analytical summary results from the Site assessment are presented in Table 1. A Release Assessment map is presented as Figure 2.

- Chloride concentrations from hand augured samples (8/14/2019) ranged from 3,800 milligrams per kilogram (mg/kg) at HA-S-6 to 6,800 mg/kg (HA-C-12). Results for TPH and BTEX were at concentrations below the laboratory reporting limit (LRL), or, non-detect.
- Field screening results from TP-1 and TP-2 at 1 to 3 ft. bgs were generally over range so samples were not submitted for laboratory analysis. The TP-3 and BG-1 samples were submitted to Hall for chloride analysis. These results were all less that the LRL.
- Laboratory results for samples collected from TP-4 and TP-5 and 6 ft. and 10 ft. bgs were at concentrations below the LRL.



• Excavation sidewall confirmation sample results were all below the LRL.

Soils laboratory analytical reports are included in Appendix E.

5. Deferral and Site Closure Requests

Evaluation of the analytical data obtained from soil assessment and delineation activities performed in August and September 2019 indicate horizontal and vertical delineation of chloride, BTEX, and TPH impacts has been achieved at the Site in accordance with 19.15.29 NMAC. Though none of the soil samples submitted for laboratory analyses were above the NMAC Table 1 closure criteria for the Site, as a precaution, Lucid excavated approximately 360 cy of soil for off Site disposal. The excavation has been backfilled with clean, imported fill material as a safety precaution because the site is not fenced. Lucid requests to postpone additional remediation efforts in the deferral area until any future Site alteration or final abandonment activities. GHD and Lucid do not believe deferment will result in imminent risk to human health, the environment or the groundwater. The majority of the impacted soil material has been excavated and transported off-site for disposal.

GHD and Lucid therefore request no further action for this release described herein.

Submitted by:

GHD Services, Inc.

1 Walter

Jeff Walker, Project Manager

Thomas Clayon

Tom Larson, P.G., Operations Manager

Figures





11201757

32.0388N 103.4665W Sep 25, 2019

FIGURE 1

GIS File: C:\Users\plorang\Documents\Projects\Rattlesnake SWD\Maps\Rattlesnake_SWD_Fig1.mxd



32.0387°N 103.4665°W Coordinate System: WGS 1984 UTM Zone 13N



LUCID ENERGY GROUP RATTLESNAKE SWD LEA COUNTY, NM

RELEASE ASSESSMENT

GIS File: N:\US\Midland\Legacy\Projects_In_Progress\Artesia-Phil\Rattlesnake SWD\Maps\Rattlesnake_SWD_Fig2.mxd

 \mathbf{N}

FIGURE 2

11201757 Oct 8, 2019

Table

Table 1													
Samala ID	Depth	Data	Bonzono	Toluono	Ethyl bonzono	Yulonos	BTEY	ТРН	ТРН	ТРН	Total	Chlorida	Chloride Field
	(feet)	Date	Delizene	Toldene	Etityi-benzene	Aylenes	DILX	(GRO)	(DRO)	(MRO)	TPH	onionae	Screen (mg/L)
HA-S-6"	0.5	8/14/2019	NA	NA	NA	NA		NA	NA	NA		3800	NA
HA-C-12"	1	8/14/2019	<0.025	<0.050	<0.050	<0.10	<0.225	<5.0	<9.3	<46	<60.3	6800	NA
HA-E-6"	0.5	8/14/2019	NA	NA	NA	NA		NA	NA	NA		5500	NA
HA-N-6"	0.5	8/14/2019	NA	NA	NA	NA		NA	NA	NA		5400	NA
HA-W-6"	0.5	8/14/2019	NA	NA	NA	NA		NA	NA	NA		6500	NA
TP-1-1	1	8/16/2019	NA	NA	NA	NA		NA	NA	NA		NA	<2428
TP-1-3	2	8/16/2019	NA	NA	NA	NA		NA	NA	NA		NA	<2428
TP-2-1	1	8/16/2019	NA	NA	NA	NA		NA	NA	NA		NA	<2428
TP-2-3	3	8/16/2019	NA	NA	NA	NA		NA	NA	NA		NA	740
TP-3-1	1	8/16/2019	NA	NA	NA	NA		NA	NA	NA		<60	<114
TP-3-3	3	8/16/2019	NA	NA	NA	NA		NA	NA	NA		<60	<114
B-G-1	1	8/16/2019	NA	NA	NA	NA		NA	NA	NA		<60	<108
TP-4-6	6	8/26/2019	NA	NA	NA	NA		NA	NA	NA		<60	<114
TP-4-10	10	8/26/2019	NA	NA	NA	NA		NA	NA	NA		<60	<298
TP-5-6	6	8/26/2019	NA	NA	NA	NA		NA	NA	NA		<60	<298
TP-5-10	10	8/26/2019	NA	NA	NA	NA		NA	NA	NA		<60	<298
SW-1-C	1-4	9/10/2019	NA	NA	NA	NA		NA	NA	NA		<60	<108
SW-2-C	1-4	9/9/2019	NA	NA	NA	NA		NA	NA	NA		2500	<2428
SW-3-C	1-4	9/10/2019	NA	NA	NA	NA		NA	NA	NA		1900	NA
SW-4-C	1-4	9/9/2019	NA	NA	NA	NA		NA	NA	NA		63	<108
SW-5-C	1-4	9/9/2019	NA	NA	NA	NA		NA	NA	NA		830	556
NMOCD Table 1 Closure	Limits		10		Total B	TEX: 50			Total T	PH: 2,500		20,000	

Notes:

All sample results are in milligrams per kilogram

NMOCD = New Mexico Oil Conservation Division

Table 1 Closure Limits = In accordance with 19.15.29 Release Rule NA = Not Analyzed

BTEX =Benzene, Toluene, Ethylbenzene, Xylenes

TPH = Total Petroleum Hydrocarbons

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil Range Organics

Appendices

GHD | Lucid Energy Group - Soil Assessment Report | 11201757 (01)

Appendix A NMOSE Water Well Survey



New Mexico Office of the State Engineer **Point of Diversion Summary**

		(quarters are 1=NW 2=N	IE 3=SW 4=SE)		
		(quarters are smallest to	largest)	(NAD83 UTM in meters)	
Well Tag	POD Number	Q64 Q16 Q4 Sec	Tws Rng	X Y	
	C 02295	2 2 4 12	268 33E	639850 3547710* 🥌	
x Driller Lice	ense: 122	Driller Company:	UNKNOWN		
Driller Nar	ne: UNKNOWN				
Drill Start	Date:	Drill Finish Date:	12/31/1949	Plug Date:	
Log File Da	ate:	PCW Rcv Date:		Source:	
Pump Type	2:	Pipe Discharge Size:		Estimated Yield:	12 GPM
Casing Size	e: 8.00	Depth Well:	250 feet	Depth Water:	200 feet

*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.

9/10/19 2:38 PM

POINT OF DIVERSION SUMMARY



USGS Home Contact USGS Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater Geographic Area: United States

GO

V

▼

GO

Click to hideNews Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News 🔊

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

• 320419103302201

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 320419103302201 26S.34E.06.21414

Available data for this site Groundwater: Field measurements **v**

Lea County, New Mexico Hydrologic Unit Code 13070007 Latitude 32°04'37.9", Longitude 103°30'20.5" NAD83 Land-surface elevation 3,319.00 feet above NGVD29 The depth of the well is 360 feet below land surface. This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

Table of data

Tab-separated data

Graph of data

Reselect period



Breaks in the plot represent a gap of at least one year between field measurements. <u>Download a presentation-quality graph</u>

Questions about sites/data? Feedback on this web site Automated retrievals Help Data Tips Explanation of terms Subscribe for system changes News

Accessibility Plug-Ins FOIA Privacy

Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey Title: Groundwater for USA: Water Levels URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team Page Last Modified: 2019-09-10 17:12:27 EDT 1.04 0.93 nadww01







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District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources Department

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

)

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Lucid Energy Delaware, LLC	OGRID 372422			
Contact Name Michael Gant	Contact Telephone 575.748.4555			
Contact email Mgant@lucid-energy.com	Incident # (assigned by OCD)			
Contact mailing address 201 South 4th Street, Artesia, NM 88210				

Location of Release Source

Latitude 32.038807°

Longitude -103.466545°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Rattlesnake SWD Pump Station	Site Type Produced water pump station
Date Release Discovered 8-7-2019	API# (if applicable)

Unit Letter	Section	Township	Range	County
Р	16	26S	34E	Lea

Surface Owner: State Z Federal Tribal Private (Name: Bureau of Land Management

Nature and Volume of Release

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

Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
Produced Water	Volume Released (bbls) 15-20 bbls	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS)	🗌 Yes 🖉 No
	in the produced water >10,000 mg/l?	
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Flange on pumping station failed causing the release of water.

Page 2

State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19 15 29 7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?
\square Yes \square No	
If YES, was immediate no	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

Initial Response

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

 \checkmark The source of the release has been stopped.

 \checkmark The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

 \checkmark All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name: Michael Gant

Title: Environmental Coordinator

Signature: <u>MGant</u>

email: mgant@lucid-energy.com

Date: 8/15/19

Telephone: 314 330 7876

OCD Only

Received by:

Date:

State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	(ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🗹 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 📈 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🗹 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 📈 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 📈 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 📈 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🔽 No
Did the release impact areas not on an exploration, development, production, or storage site?	🗌 Yes 🔽 No

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
 Field data
- Data table of soil contaminant concentration data
- \checkmark 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
- **D** Topographic/Aerial maps
- Laboratory data including chain of custody

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

Form C-141	State of New Mexico	In	aidant ID	
Page 4	Oil Conservation Division		istrict RP	
-		Fa	cility ID	
		Ap	oplication ID	
I hereby certify that the in regulations all operators a public health or the enviro failed to adequately invest addition, OCD acceptance and/or regulations. Printed Name: Michae Signature: Mgant email: mgant@luci	formation given above is true and complete to the re required to report and/or file certain release not onment. The acceptance of a C-141 report by the tigate and remediate contamination that pose a thr e of a C-141 report does not relieve the operator of el Gant t d-energy.com	best of my knowledge and un ifications and perform correct OCD does not relieve the oper eat to groundwater, surface wa responsibility for compliance 	iderstand that pursu ive actions for relea rator of liability sho ater, human health e with any other fed Coordinator 7876	ant to OCD rules and ases which may endanger build their operations have or the environment. In leral, state, or local laws
OCD Only				
Received by:		Date:		

Form C-141 Page 5

State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
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 Estimated volume of material to be remediated Scaled sitemap with GPS coordinates showing delineation points

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 con	firmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around prodeconstruction.	oduction equipment where remediation could cause a major facility
Extents of contamination must be fully delineated.	
Contamination does not cause an imminent risk to human health	, the environment, or groundwater.
I harshy partify that the information given shows is true and complete	a to the best of my knowledge and understand that pursuant to OCD
rules and regulations all operators are required to report and/or file c which may endanger public health or the environment. The acceptar liability should their operations have failed to adequately investigate surface water, human health or the environment. In addition, OCD a responsibility for compliance with any other federal, state, or local la	ertain release notifications and perform corrective actions for releases nee of a C-141 report by the OCD does not relieve the operator of and remediate contamination that pose a threat to groundwater, acceptance of a C-141 report does not relieve the operator of two and/or regulations.
Printed Name: Michael Gant	Title: Environmental Coordinator
Signature: MGant	Date: 10.7.2019
_{email:} mgant@lucid-energy.com	Telephone: 314 330 7876
OCD Only	
Received by:	Date:
Approved Approved with Attached Conditions of A	Approval Denied Deferral Approved
Signature:	Date:

State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

<u>Closure Report Attachment Checklist</u>: Each of the following items must be included in the closure report.

A scaled site and sampling diagram as described in 19.15.29.11 NMAC

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

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

 \square Description of remediation activities

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

Printed Name: Michael Gant	Title: Environmental Coordinator
Signature:	Date: 10.7.2019
email: mgant@lucid-energy.com	Telephone: 314 330 7876
<u>OCD Only</u>	
Received by:	Date:
Closure approval by the OCD does not relieve the responsible party remediate contamination that poses a threat to groundwater, surface party of compliance with any other federal, state, or local laws and	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible /or regulations.
Closure Approved by:	Date:
Printed Name:	Title:

Appendix C Waste Disposal Manifests

ENVIRONMENT SOLUTION Permian Basir	B AL NS	3	Custom Custom Ordered AFE #: PO #: Manifes Manif. I Hauler: Driver Truck # Card # Job Ref	er: er #: d by: t #: Date:	LUCI CRI3 GLEI C138 8/28/ KYS JULI 15	ID ENERG 3795 N BLAKJE 2019 TRUCKIN AN	€¥ Ι Ξ	DELAV	VARE, L	Ticket #: Bid #: Date: Generator: Generator #: Well Ser. #: Well Ser. #: Well Name: Well #: Field: Field #: Rig: County	700-1047 Walk-in B 8/28/2019 LUCID ER 999908 RATTLE NON-DRI LEA (NM	391 id NERGY DE SNAKE SV SLLING	ELAWARE,I
Facility: CRI													
Product / Serv	lice	a shere		No.				Qu	antity U	Inits	12 Mar 12 Mar	and the second second	
Contaminated	l Soil (RC	RA Exemp	ot)						20.00	yards			
	Cell	pН	CI	Con	d.	%Solids		TDS	PCI/GN	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.0	0	0							
Generator Cen I hereby certify (1988 regulatory X RCRA Exer _ RCRA Non- characteristics en amended. The f _ MSDS Infor Driver/ Agent	rtification that accord determina mpt: Oil Fi -Exempt: (stablished following o rmation Signatur	h Statemen ling to the R tion, the abo leld wastes g Oil field was in RCRA re- documentation RCRA H	t of Was esource C ve describ enerated f te which is gulations, on is attach lazardous	te Sta onserv ed wa rom o s non- 40 CF ned to Waste	atus vation ste is: il and hazaro R 261 demos Anal	and Recov gas explor lous that de .21-261.24 nstrate the ysis H R360	ation oes f or li abo Proce	Act (R(n and pi not excu- isted ha ve-desc ess Kno presen	CRA) and roduction eed the m zardous v ribed was owledge tative Si	the US Enviro operations and inimum standar vaste as defined te is non-hazar Other (Pro	onmental Pr are not min ds for wast l in 40 CFR dous. (Cheo vide descrij	otection Ag ked with nor e hazardous , part 261, s k the appro ption above)	ency's July n-exempt wast- by ubpart D, as priate items):
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Customer App	proval		N.H.M. Marrie	See The	5.1.25		358			0			
			-	тні	s is	S NOT	' A	N IN	IVOIO	E!			
Approved By:								Da	ite:				

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A3 ENVIRONMENTAL SOLUTIONS Permian Basin	50	Custo Custo Order AFE # PO # Manife Manife Haule Driver Truck Card # Job R	emer: L mer # C ed by C # Date: 8 r. L . C # 1 # ef #	UCID ENERG CRI3795 GLEN BLAKE 02948 3/27/2019 ONE RANGEF GUILLERMO 103	Y DELAV	VARE, L	Ticket #: Bid #: Date: Generator: Generator #: Well Ser #: Well Name: Well #: Field: Field #: Rig: County	700-1046785 Walk-in Bid 8/27/2019 LUCID ENEI 999908 RATTLE SN NON-DRILLI LEA (NM)	5 RGY DELA IAKE SWE LING	WARE,I
Facility: CRI										
Product / Service	S Coller		ANT	The states	Q	uantity L	Jnits	1951 - 21 m		
Contaminated Soil (R	CRA Exer	npt)				20.00	yards			
Cell	рН	CI	Cond	%Solids	TDS	PCI/GI	MR/HR	H2S	% Oil	Weight
ab Analysis, 50/51	0.00	0.00	0.00	0						
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Customer: Customer #: Ordered by: AFE #: PO #: Manifest #: Manif. Date: Hauler: Driver Truck # Card # Job Ref #	LUCID ENER GY CRI3795 GLEN BLAKE 402300 8/27/2019 LONE RANGER GUILERMO 103	DEL AWARE, L TRUCKING LL(Ticket #: Bid #: Date: Generator: Generator #: Well Ser, #: Well Name: Well #: Field: Field #: Rig: County	700-104699 Walk-in Bid 8/27/2019 LUCID ENE 999908 RATTLE SM NON-DRILL LEA (NM)	2 RGY DELA VAKE SWD LING	WARE,I
11-1.12-21-0. W	- ne make us	Quantity L	Jnits			
		00.00	uarda			
Exempt)		20.00	yarus			
Exempt) Cl Col	nd. %Solids	TDS PCI/GI	M MR/HR	H2S	% Oll	Weight
	Customer: Customer #: Ordered by: AFE #: PO #: Manifest #: Manif. Date: Hauler: Driver Truck # Card # Job Ref #	Customer: Customer #: CRI3795 Ordered by: GLEN BLAKE AFE #: PO #: Manifest #: 402300 Manif. Date: 8/27/2019 Hauler: LONE RANGER Driver GUILERMO Truck # 103 Card # Job Ref #	Customer: LUCID ENER GY DEL AWARE, L Customer #: CRI3795 Ordered by: GLEN BLAKE AFE #: PO #: Manifest #: 402300 Manif, Date: 8/27/2019 Hauler: LONE RANGER TRUCKING LLC Driver GUILERMO Truck # 103 Card # Job Ref #	Customer:LUCID ENERGY DELAWARE, LTicket #:Customer #:CRI3795Bid #:Ordered by:GLEN BLAKEDate:AFE #:Generator:Generator:PO #:Kanifest #:402300Well Ser, #:Manif. Date:8/27/2019Well Ser, #:Hauler:LONE RANGER TRUCKING LLCWell #:DriverGUILERMOField:Truck #103Field #:Card #Job Ref #County	Customer: LUCID ENERGY DELAWARE, L Customer #: CRI3795 Ordered by: GLEN BLAKE AFE #: PO #: Manifest #: 402300 Manif. Date: 8/27/2019 Hauler: LONE RANGER TRUCKING LLC Driver GUILERMO Truck # 103 Card # Job Ref # Manifest #: 103 Card # Card # County Card # Card # County Card # Card # County Card # Card C	Rustomer: LUCID ENERSY DELAWARE, L Ticket #: 700-1046992 Customer #: CRI3795 Bid #: Walk-in Bid Ordered by: GLEN BLAKE Date: 8/27/2019 AFE #: Date: 8/27/2019 LUCID ENERGY DELA Manifest #: 402300 Generator: LUCID ENERGY DELA Manif. Date: 8/27/2019 Generator: LUCID ENERGY DELA Manif. Date: 8/27/2019 Well Ser. # 99908 Manif. Date: B/27/2019 Well Name: RATTLE SNAKE SWD Manif. Date: B/27/2019 Well Name: RATTLE SNAKE SWD Mailer: LONE RANGER TRUCKING LLC Well Name: RATTLE SNAKE SWD Driver: GUILERMO Field: Field #: Card # Big: NON-DRILLING County LEA (NM) Job Ref # Ob Ref # County LEA (NM)

Generator Certification Statement of Waste Status

I hereby 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:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast _ 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 26121-26124 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 above)

Driver/ Agent Signature

Customer Approval

THIS IS NOT AN INVOICE!

Approved By:

Date:

R350 Representative Signature

ABGO ANNENTAL SOLUTIONS Permian Basin	Custome Custome Ordered AFE # PO # Manifest Manif Di Hauler Driver Truck # Card # Job Ref	r LUCI r # CRI3 by GLE # 402: ate 8/27 LON OSC 107 #	ID ENERGY. 3795 N BLAKE 293 2/2019 NE RANGER CAR	DELAWAR TRUCKING	G LL	Ticket # Bid # Date Generator Generator # Well Ser # Well Name: Well # Field Field # Rig County	700-1046982 Walk-in Bid 8/27/2019 LUCID ENER 999908 RATTLE SN NON-DRILL LEA (NM)	RGY DELA	WARE,I
acility: CRI				Qua	ntity	Units	TO ALL THE	112001	
Product / Service					20.00	0 yards			10 Play
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Cell pH	CI	Cond.	%50ilds	103		1990			
			A DESCRIPTION OF	Allowers	8.00	California al anti-	A COLOR DA	THE REAL PROPERTY AND	geney's hily
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X RCRA Exempt: Oil Field waste RCRA Non-Exempt: Oil field vaste aracteristics established in RCRA nended. The following document MSDS Information RCR. river/ Agent Signature ustomer Approval	above designmented in ess generated in waste which in A regulations, tation is attace A Hazardous	THIS	nd gas explor zardous that d 261.21-261.24 monstrate the nalysis	ation and process not excellent above-desc Process Known Represent	ntative Date:	e minimum sta is waste as de waste is non-lige Other a Signatum DICEI	andards for wa fined in 40 CP hazardous. (Ch r (Provide desc	ste hazardor R, part 261, ieck the app rription abo	us by , subpart D, ropriate iter ve)
X RCRA Exempt: Oil Field waste RCRA Non-Exempt: Oil field waste haracteristics established in RCRA mended. The following document MSDS Information RCR. Iniver/ Agent Signature	above desarrated waste which is aregulations, tation is attace A Hazardous	the to det waste A to CFR 2 the to det waste A THIS	nd gas explor zardous that d 261.21-261.24 monstrate the nalysis	ation and process not except or listed has above-desc Process Known Represented to the second state of the	ntativ Date:	e minimum sta is waste as de waste is non-lige Other a Signature OICE!	andards for wa fined in 40 CP hazardous. (Ch r (Provide desc	ste hazardoo R, part 261, ieck the app ription abo	us by , subpart D, ropriate iten ve)

ASGO ENVIRONMENTAL SOLUTIONS Permian Basin	Customer: Customer #: Ordered by: AFE #: PO #: Manifest #: Manif. Date: Hauler: Driver Truck # Card # Job Ref #	LUCID ENERGY DELAWARE, L CRI3795 GLEN BLAKE 402949 8/27/2019 LONE RANGER TRUCKING LLC OSCAR 107	Ticket #: Bid #: Date: Generator: Generator #: Well Ser. #: Well Name: Well #: Field: Field #: Rig: County	700-1046783 Walk-in Bid 8/27/2019 LUCID ENERGY DELAWARE,I 999908 RATTLE SNAKE SWD PUMP { NON-DRILLING LEA (NM)
Facility: CRI				
Product / Service				and the second

Cantant				1.1.2.2.2.1.2.0.2	1	Q	uantity Unit	S			
Contaminated Soil (RCRA Exempt)							20.00 ya	rds			
	Cell	pН	CI	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis.	50/51	0.00	0.00	0.00	0	10000			1500	T BUY	

Generator Certification Statement of Waste Status

I hereby 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:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast 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 above)

Driver/ Agent Signature

R360 Representative Signatur

Customer Approval

THIS IS NOT AN INVOICE!

Approved By:

Date:

R3600 ENVIRONMENTAL SOLUTIONS Permian Basin	Customer: Customer #: Ordered by: AFE #: PO #: Manifest #: Manif. Date: Hauler: Driver Truck # Card # Job Ref #	LUCID ENERGY CRI3795 GLEN BLAKE NA 8/27/2019 KYS TRUCKING JULIAN 15	DELAWAR	E, L Ticket #: Bid #: Date: Generator: Generator # Well Ser. #: Well Name: Well Name: Vell #: Field: Field #: Rig: County	700-10469 Walk-in Bid 8/27/2019 LUCID ENI 999908 RATTLE S NON-DRIL LEA (NM)	58 ERGY DE NAKE SV LING	LAWARE,I
Facility: CRI							
Product / Service	AND STA		Quant	ity Units		WHORE ST	all a state of the second
Contaminated Soil (RCRA Exemp	t)		2	0.00 yards			
Cell pH Lab Analysis: 50/51 0.00	Cl Con 0.00 0.0	d. %Solids 0 0	TDS PC	I/GM MR/HR	H2S	% Oil	Weight
Generator Certification Statemen I hereby certify that according to the Re 1988 regulatory determination, the abov X RCRA Exempt: Oil Field wastes ge RCRA Non-Exempt: Oil field wastes characteristics established in RCRA reg amended. The following documentation MSDS Information _ RCRA H	t of Waste St esource Conserve described was enerated from o te which is non- gulations, 40 CF n is attached to azardous Waste	atus vation and Recover iste is: il and gas explorati hazardous that doe FR 261.21-261.24 or demonstrate the ab e Analysis Pro	y Act (RCRA on and produ s not exceed to listed hazard ove-describe ocess Knowle) and the US Envir ction operations an the minimum stands ous waste as define d waste is non-haza dge Other (Pr	onmental Pro d are not mixe ards for waste od in 40 CFR, rdous. (Check ovide descript	tection Ag ad with nor hazardous part 261, su the appro- ion above)	ency's July n-exempt wast- by ubpart D, as priate items):
Driver/ Agent Signature		R360 R	epresentati	ve Signature			
Customer Approval	TU						
	141						
Approved By:			Date:			6	

RBSECONTAL SOLUTIONS	Customer: Customer #: Ordered by: AFE #: PO #: Manifest #: Manif. Date: Hauler: Driver Truck # Card # Job Ref #	LUCID ENERGY DELAWARE CRI3795 GLE BLAKE 402946 8/27/2019 RJO TRUCKING LLC RAUL 04	, L Ticket #: Bid #: Date: Generator: Generator #: Well Ser. #: Well Name: Well Name: Well #: Field: Field #: Rig: County	700-104697 Walk-in Bid 8/27/2019 LUCID ENE 999908 RATTLE SI NON-DRILI LEA (NM)	77 ERGY DE NAKE SV LING	LAWARE,I
Facility: CRI						
Product / Service		Quantity	y Units		Sector Start	No. of Street,
Contaminated Soil (RCRA Exemp	t)	20.	00 yards			
Cell pH Lab Analysis: 50/51 0.00	Cl Cond 0.00 0.0	d. %Solids TDS PCI/ 0 0	GM MR/HR	H2S	% Oil	Weight
Generator Certification Statement I hereby certify that according to the Ref 1988 regulatory determination, the above X RCRA Exempt: Oil Field wastes ge RCRA Non-Exempt: Oil field wastes characteristics established in RCRA reg amended. The following documentation MSDS Information _ RCRA Here	t of Waste Sta source Conserv ve described wa enerated from of e which is non-l gulations, 40 CF n is attached to azardous Waste	atus vation and Recovery Act (RCRA) a iste is: il and gas exploration and product hazardous that does not exceed the rR 261.21-261.24 or listed hazardou demonstrate the above-described v e Analysis Process Knowledg	and the US Enviro ion operations and e minimum standar is waste as defined waste is non-hazard e Other (Pro	onmental Proto are not mixed ds for waste h in 40 CFR, p dous. (Check vide descripti	ection Age l with non nazardous part 261, su the approp on above)	ency's July -exempt wast- by ibpart D, as oriate items):
Driver/ Agent Signature		R360 Representative	Signature		(保护学	
Customer Approval			D			
	тні	S IS NOT AN INVO	ICE!			
Approved By:		Date:				

R3600 ENVIRONMENTAL SOLUTIONS	Customer: Customer #: Ordered by: AFE #: PO #: Manifest #: Manif. Date: Hauler: Driver Truck # Card # Job Ref #	LUCID ENERG CRI3795 GLEN BLAKE 402945 8/27/2019 RJO TRUCKIN RAUL 04	Y DELAW	VARE, L	Ticket #: Bid #: Date: Generator: Generator #: Well Ser. #: Well Name: Well #: Field: Field #: Rig: County	700-1046784 Walk-in Bid 8/27/2019 LUCID ENERGY DELAWARE,I 999908 RATTLE SNAKE SWD PUMP \$ NON-DRILLING LEA (NM)			
Facility: CRI									
Product / Service	a standart for	NU ARE CAL	Qu	antity U	nits			Martin Caller	
Contaminated Soil (RCRA Exemp	t)			20.00	yards				
Cell pH	CI Con	d. %Solids	TDS	PCI/GN	I MR/HR	H2S	% Oil	Weight	
Lab Analysis: 50/51 0.00 0.00 0 0 Generator Certification Statement of Waste Status I hereby 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: X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wa 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 above) Driver/ Agent Signature R360 Representative Signature									
Customer Approval			Contraction of the	ALL MARTIN	()	~	e stane		
	THI	S IS NOT	AN IN	voic	E!				
Approved By:		· · · · · · · · ·	Da	te:					

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Facility: CRI													
Product / Serv	lice	291 20 221		1223		a a a a		Qu	antity U	nits			S. S. L. Sall
Contaminated	l Soil (RC	RA Exemp	ot)						20.00	yards			
	Cell	pН	CI	Con	d. G	%Solids	Т	DS	PCI/GN	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.0	0	0							
Generator Certification Statement of Waste Status I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's I 988 regulatory determination, the above described waste is: X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exemp 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 I amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate i _ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)							ency's July b-exempt wasta by ubpart D, as priate items):						
Driver/ Agent	Signatur	e		WS R	11 100 11 1000	R360	Rep	resent	tative Si	gnature	The state	The second	
Customer App Approved By:	proval			 FHI:	s Is	5 NOT	Γ AI	N IN Da	VOIC te:	E!			

RBGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	Customer: Customer #: Ordered by: AFE #: PO #: Manifest #: Manif. Date: Hauler: Driver Truck # Card # Job Ref #	LUCID E CRI3795 GLEN BLA C138 8/27/2019 KYS TRUCK JULIAN 15	ົ Y DELAV	VARE, L	Ticket #: Bid #: Date: Generator: Generator #: Well Ser. #: Well Name: Well #: Field: Field #: Rig: County	700-10467 Walk-in Bi 8/27/2019 LUCID EN 999908 RATTLE S NON-DRIL LEA (NM)	79 d ERGY DE NAKE SV LLING	LAWARE,I VD PUMP {
Facility: CRI								
Product / Service			QL	antity U	nits		11.4.2.2.2	常规定的方法。
Contaminated Soil (RCRA Exemp	t)			20.00	yards			
Cell pH	CI Con	d. %Solids	TDS	PCI/GN	MR/HR	H2S	% Oil	Weight
Lab Analysis: 50/51 0.00	0.00 0.0	0 0						
Generator Certification Statemen I hereby certify that according to the Re 1988 regulatory determination, the abov X RCRA Exempt: Oil Field wastes ge RCRA Non-Exempt: Oil field wast characteristics established in RCRA reg amended. The following documentatio MSDS Information _ RCRA H Driver/ Agent Signature	t of Waste Sta esource Conservive described was enerated from o the which is non- gulations, 40 CF n is attached to azardous Waste	atus vation and Reco iste is: il and gas explo hazardous that TR 261.21-261.2 demonstrate the Analysis	overy Act (R) pration and p does not exc 4 or listed ha e above-desc Process Kno 0 Represen	CRA) and roduction eed the mi izardous w ribed was owledge itative Si	the US Enviro operations and inimum standar vaste as defined te is non-hazar Other (Pro gnature	onmental Pro are not mixe ds for waste l in 40 CFR, dous. (Check vide descrip	tection Age ed with non hazardous part 261, su the approp tion above)	ency's July e-exempt wast by ubpart D, as priate items):
			Trepresen		P		1992 (CARAGE VIEW)	
Customer Approval			5.000	913933			214:28	
	тні	S IS NO			E!			
Approved By:			Da	ate:				

RG ENVIRONMENT SOLUTIO Permian Basin	B TAL NS	3	Custome Custome Ordered AFE #: PO #: Manifest Manif. Da Hauler: Driver Truck # Card # Job Ref ;	Customer: LUCID Excercipi DELAWARE, L Customer #: CRI3795 Ordered by: GLEN BAKE AFE #: PO #: Manifest #: 402943 Manif. Date: 8/26/2019 Hauler: RJO TRUCKING LLC Driver RAUL Truck # 4 Card # Job Ref #				Ticket #: Bid #: Date: Generator: Generator #: Well Ser. #: Well Ser. #: Well Name: Well #: Field: Field #: Rig: County	700-1046431 Walk-in Bid 8/26/2019 LUCID ENERGY DELAWARE,I 999908 RATTLE SNAKE SWD PUMP § NON-DRILLING LEA (NM)			
Facility: CRI												
Product / Serv	/ice					Qu	antity U	nits		1250 2216		
Contaminated	Soil (RC	RA Exemp	ot)				20.00	yards				
	Cell	рН	CI	Cond	. %Solids	TDS	PCI/GN	1 MR/HR	H2S	% Oil	Weight	
Lab Analysis:	50/51	0.00	0.00	0.00	0							
Generator Certification Statement of Waste Status I hereby 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: X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast _ 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 above)										ency's July ency's July e-exempt waste by ubpart D, as priate items):		
Driver/ Agent Signature R360 Representative Signature												
Customer App	proval	ALL STREET		87.392	「「「「「「「」」」	1. Star (*)	捕獲業の		A SARAGE S			
			Т	HIS	S IS NOT	AN IN	IVOIC	E!				
Approved By: Date:												
ENVIRONMENT SOLUTIO	B C AL NS	2	Custom Custom Ordered AFE #: PO #: Manifes Manif. D Hauler: Driver Truck # Card # Job Ref	er: L(er #: C l by: G t #: 4()ate: 8/ J(J(1) 1) #	UCID ENERGY RI3795 LEN BLAKE 02944 (26/2019 YS TRUCKINC JLIAN 5	C DFLAN	WARE, L	Ticket #: Bid #: Date: Generator: Generator #: Well Ser. #: Well Name: Well #: Field: Field #: Rig: County	700-10464 Walk-in Bid 8/26/2019 LUCID EN 999908 RATTLE S NON-DRIL LEA (NM)	34 ERGY DE NAKE SV LING	ELAWARE,I VD PUMP {	
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Facility: CRI												
Product / Serv	/ice	1919	and the second	100mg		Q	uantity U	Inits		1 The New		
Contaminated	Soil (RC	RA Exem	pt)				20.00	yards				
	Cell	рH	Cl	Cond	%Solids	TDS	PCI/GN	MR/HR	H2S	% Oil	Weight	
Lab Analysis:	50/51	0.00	0.00	0.00	0				.,	75 011		
Generator Ce	rtification	n Stateme	nt of Wast	te Statu	IS						1015) 1015)	
I hereby certify	that accord	ling to the H	Resource Co	onservat	ion and Recover	y Act (R	CRA) and	the US Enviro	onmental Pro	tection Ag	ency's July	
1988 regulatory	determina	tion, the abo	ove describ	ed waste	is:							
<u>A</u> RCRA Exer	npt: Oil Fi -Exempt: (oil field wa	generated fr	om oll a	and gas explorated	ion and p	roduction	operations and	are not mixe	a with nor	by	
characteristics e	stablished	in RCRA re	egulations.	40 CFR	261.21-261.24 or	r listed ha	azardous v	vaste as defined	l in 40 CFR.	part 261. s	ubpart D. as	
amended. The f	ollowing of	locumentati	on is attach	ed to de	monstrate the at	ove-desc	ribed was	te is non-hazar	dous. (Check	the appro	priate items):	
_ MSDS Info	rmation	_ RCRA I	Hazardous	Waste A	nalysis _ Pro	ocess Kn	owledge	_ Other (Pro	vide descript	ion above)		
Driver/ Agent	Signatur	e		Aug 1994	R360 R	epreser	itative Si	gnature			tes there are	
						N/-	7					
Customer Ap	oroval	N 33 9 8 2		1 Philes	1. T. S. F. A. S.	N SAME		()				

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Approved By:

Date: _____

ENVIRONMENT SOLUTION Permian Basir		3	Customer: Customer Ordered b AFE #: PO #: Manifest # Manif. Dat Hauler: Driver Truck # Card # Job Ref #	LU #: CI y: GI : N/ e: 8// R/ 04	JCID ENERGY RI3795 LEN BLAKE A 28/2019 JO TRUCKING AUL 4	Ϋ́ι	WARE, L	Ticket #: Bid #: Date: Generator: Generator #: Well Ser. #: Well Name: Well #: Field: Field #: Rig: County	700-10472 Walk-in Bid 8/28/2019 LUCID ENI 999908 RATTLE S NON-DRIL LEA (NM)	50 J ERGY DE NAKE SV LING	ELAWARE,I VD PUMP {
Facility: CRI											
Product / Serv	lce	with Suite		and and a		C	uantity U	nits		3.00	
Contaminated	Soil (RC	CRA Exemp	ot)				20.00	yards			
Lab Analysia	Cell	pH	CI C	ond.	%Solids	TDS	PCI/GN	MR/HR	H2S	% Oil	Weight
Lap Analysis:	50/51	0.00	0.00	0.00	0						
Generator Cer I hereby certify t 1988 regulatory X RCRA Exen RCRA Non- characteristics es amended. The fi MSDS Infor Driver/ Agent	tification that accord determinan npt: Oil F Exempt: stablished following or mation	n Statemen ding to the R ttion, the abo ield wastes g Oil field was in RCRA re documentatio RCRA H	it of Waste esource Cons ove described generated from the which is no gulations, 40 on is attached lazardous Wa	Statu ervati waste n oil a on-haz CFR 2 to den ste An	is ind gas explorati ardous that doe 261.21-261.24 or monstrate the ab nalysis _ Pro	y Act (I on and s not ex listed f ove-des ccess Ki	RCRA) and production acceed the m nazardous v scribed was nowledge	the US Enviro operations and inimum standar vaste as defined te is non-hazar Other (Pro gnature	are not mixe rds for waste l in 40 CFR, j dous. (Check vide descript	tection Ag d with nor hazardous part 261, s the appro ion above)	ency's July n-exempt wast by ubpart D, as priate items):
	- griata							gnature			Carden and Strand Strands
Customer App Approved By:	proval		Tŀ	lIS		AN I	NVOIC	E!	V		

RBGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	Customer: Customer #: Ordered by: AFE #: PO #: Manifest #: Manif. Date: Hauler: Driver Truck # Card # Job Ref #	LUCID ENERGY CRI3795 GLEN BLAKE NA 8/29/2019 KYS TRUCKING JULIAN 15	ĎE∟AWARE, L	Ticket #: Bid #: Date: Generator: Generator #: Well Ser. #: Well Name: Well Name: Well #: Field: Field #: Rig: County	700-104771 Walk-in Bid 8/29/2019 LUCID ENE 999908 RATTLE SN NON-DRILL LEA (NM)	5 RGY DE NAKE SM LING	ELAWARE,I		
Facility: CRI									
Product / Service			Quantity L	Jnits		S STATES	THE REAL PROPERTY OF		
Contaminated Soil (RCRA Exemp	ot)		20.00	yards					
Cell pH	Cl Con	d. %Solids	TDS PCI/GN	MR/HR	H2S	% Oil	Weight		
Lab Analysis: 50/51 0.00	0.00 0.0	0 0							
Lab Analysis: 50/51 0.00 0.00 0.00 0 Senerator Certification Statement of Waste Status hereby 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: X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast _ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by sharacteristics 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 above) Driver/ Agent Signature R360 Representative Signature									

THIS IS NOT AN INVOICE!

Approved By:

Date: _____

Permian Bas		50	Customer Customer Ordered b AFE #: PO #: Manifest # Manif. Da Hauler: Driver Truck # Card # Job Ref #	te:	LUCID ENERGY CRI3795 GLEN BLAKE NA 8/28/2019 LONE RANGER GUILLERMO 103	DELA	WARE, L	Ticket # Bid # Date Generator Generator # Well Ser, # Well Name: Well # Field Field # Rig: County	700-104739 Walk-in Bid 8/28/2019 LUCID ENE 999908 RATTLE S NON-DRIL LEA (NM)	93 ERGY DEI NAKE SW	AWARE,I
Facility: CRI											
Product / Sen	vice										
Contaminated	Soil (R	CRA Exen	(tot			Q	antity U	nits	S walk	THE S	1.1.1.1.1.1.1
Lab Analysis.	Cell 50/51	рН 0.00	CI Co	ond	%Solids	TDS	20.00 y PCI/GM	vards MR/HR	H2S	% Oil	Weight

Generator Certification Statement of Waste Status

I hereby 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:

Driver/ Agent Signature

R360 Representative Signature

Customer Approval

THIS IS NOT AN INVOICE!

Approved By:

Date:

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136 VIBONMENTAL SOLUTIONS Permian Basin	3	Custome Custome Ordered I AFE #: PO #: Manifest Manif. Da Hauler Driver Truck # Card # Job Ref a	r: LUC r #: CR by: GLI #: NA ate: 8/2 LO EU 10: #	CID ENERGY 13795 EN BLAKE 8/2019 NE RANGEF ILLERMO 3	TRUCK	ARE, L	Ticket #: Bid #: Date: Generator: Generator # Well Ser. #: Well Ser. #: Well Name: Well #: Field : Field #: Rig: County	700-1047252 Walk-in Bid 8/28/2019 LUCID ENER 999908 RATTLE SN NON-DRILL LEA (NM)	RGY DELAWAR IAKE SWD PUN LING	λΕ,Ι ΑΡ (
Facility: CRI		NE CONTEN	Taxe of the other		0	antity	Units		THE REAL PROPERTY AND	
Product / Service	Comparents.	EAR INCOMENTAL	10102.10	and the second second	- CI	20.0	0 vards	Ner and Street		
Contaminated Soil (RC	CRA Exem	pt)				20.0		R H2S	% Oil We	ight
Cell	pH	CI	Cond.	%Solids	TDS	PCI/G			and with the	
ab Analysis: 50/51	0.00	0.00	0.00	Ŷ					Channel and Constant	
 MSDS Information Driver/ Agent Signatu 	RCRA	Hazardous	waste A	R360	Represe	entative	Signature			
						The second	6	carting all and the		
Customer Approval	TO ANY STATE	N SHUDALS	A CONTRACTOR	Plathing of the		Sinest.				
			THIS	S IS NO	TAN	INVO	DICE!			
Assessed But						Date:			The second	
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RRS ENVIRONMENTA SOLUTION Permian Basin		3	Custor Custor Ordere AFE #: PO #: Manife Manif. Hauler Driver Truck : Card # Job Re	ner: ner #: ed by: st #: Date: : # ef #	LUCI CRI3 GLEN C138 8/29/2 RJO RAUI 04	D ENER 795 N BLAKE 2019 TRUCKI	GY DEL	AWAR	E, L	Ticket #: Bid #: Date: Generator: Generator #: Well Ser. #: Well Name: Well #: Field: Field #: Rig: County	700-10477 Walk-in Bi 8/29/2019 LUCID EN 999908 RATTLE S NON-DRIL LEA (NM)	29 d ERGY DE NAKE SV LLING	ELAWARE,I VD PUMP {
Facility: CRI													
Product / Servi	ice		A State	5184.52		MANEY		Quanti	ity U	nits	NO TON LODGING		State States
Contaminated	Soil (RC	RA Exem	pt)					2	0.00	yards			
	Cell	pН	CI	Con	d.	%Solids	TDS	PC	I/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.0	0	0							
Generator Cert I hereby certify th 1988 regulatory of X RCRA Exem RCRA Non characteristics est amended. The fo MSDS Inform Driver/ Agent \$	tification nat accord letermina opt: Oil Fi Exempt: 0 tablished ollowing c mation	n Statemen ling to the F tion, the abo eld wastes a Dil field wa in RCRA re locumentati RCRA I	nt of Was Resource C ove descri generated ste which egulations on is attac Hazardous	ste Sta Conserv bed wa from o is non- , 40 CF thed to a Waste	atus vation a ste is: il and g hazard R 261. demon Analy	and Reco gas exploi ous that o 21-261.24 nstrate the ^{/sis} R360	very Act (ration and loes not e or listed above-do Process k Repres	RCRA I production xceed thazard escribed for the scribed for t) and ction he mi ous w d was dge ve Si	the US Enviro operations and inimum standar vaste as defined te is non-hazar Other (Pro gnature	onmental Pro are not mixe rds for waste l in 40 CFR, dous. (Check vide descript	tection Ag ed with nor hazardous part 261, sa the appro- tion above)	ency's July n-exempt wast- by ubpart D, as priate items):
										(\mathcal{Y})	-		×
Customer App	roval	たわれ			3-11 				9.11-X				
				тнΪ	s is	NO1	AN	NV	DIC	E!			
Approved By:								Date:		ð			

							and the second se	A CONTRACTOR OF THE OWNER	
BOLUTIONS Permian Basin	Customer: Customer #: Ordered by: AFE #: PO #: Manifest #: Manif. Date Hauler: Driver Truck # Card # Job Ref #	LUCID CRI379 GLEN I c138 8/29/20 LONE OSCA 107	ENERGY 1 95 BLAKE 019 RANGER R	DELAWAF	RE, L Ticke Bid # Date Gen Wel Wel G LL(We Fiel Rig Co	et #: erator: erator #: I Ser. #: I Name: I Name: I #: d: Id #: i unty	700-104771 Walk-in Bid 8/29/2019 LUCID ENE 999908 RATTLE SI NON-DRIL LEA (NM)	7 RGY DELA NAKE SWE	WARE,I
Facility: CRI				Qua	ntity Unit	6 10 19	No. of Concession, Name	TWO INCOMES	and the second se
Product / Service				Card Card	20.00 yar	ds			
Contaminated Soil (RCRA Exem	pt)				PCUGM	MR/H	R H2S	% Oil	Weight
Celi pH	CI C	Cond.	%Solids	TDS	FCI/OW	Store Be			
ab Analysis. 50/51 0.00	0.00	0.00	0			11 3000	Att set in	Will Units	Contraction of the local division of the loc
			CTO CLE CLE	ocs not ene	ccu ure ma	ato on dat	med in 40 CI	Tel bane	and have been a
RCRA Non-Exempt: Oil field w characteristics established in RCRA amended. The following documenta MSDS InformationRCRA	regulations, 4 ition is attache A Hazardous V	0 CFR 26 ed to demo Vaste Ana	1.21-261.24 onstrate the lysis _ 1	or listed ha above-desc Process Kn	nzardous wa cribed waste owledge	ste as def is non-h Other	azardous. (Ch (Provide deso	eck the app cription above	ropriate items): ve)
RCRA Non-Exempt: Oil heid w characteristics established in RCRA amended. The following documenta MSDS Information RCRA	regulations, 4 ition is attache A Hazardous V	0 CFR 26 ed to demo Vaste Ana	1.21-261.24 onstrate the dysis R360	or listed ha above-desc Process Kn	nzardous wa cribed waste owledge	ste as def is non-h Other	azardous. (Ch (Provide desc	eck the app cription abov	ropriate items): ve)
RCRA Non-Exempt: Oil field w characteristics established in RCRA amended. The following documenta MSDS Information RCRA Driver/ Agent Signature	regulations, 4 ition is attache A Hazardous V	0 CFR 26 ed to demo Vaste Ana	1.21-261.24 onstrate the lysis R360	or listed ha above-desc Process Kn Represe	ntative Sig	ste as def is non-h Other	azardous. (Ch (Provide desc	eck the app cription abo	ropriate items): ve)
_ RCRA Non-Exempt: Oil field w characteristics established in RCRA amended. The following documenta _ MSDS Information _ RCRA Driver/ Agent Signature	regulations, 4 ition is attache A Hazardous V	0 CFR 26 ed to demo Vaste Ana	I.21-261.24 onstrate the lysisI R360	or listed ha above-desc Process Kn Represe	azardous wa cribed waste owledge	ste as det is non-h Other nature	ined in 40 cr azardous. (Ch (Provide deso	eck the app cription abov	ropriate items): ve)
_ RCRA Non-Exempt: Oil held w characteristics established in RCRA amended. The following documenta _ MSDS Information _ RCRA Driver/ Agent Signature Customer Approval	regulations, 4 ition is attache A Hazardous V	0 CFR 26 ed to demo Vaste Ana	R360	or listed ha above-desc Process Kn Represen	ntative Sig	ste as det is non-h Other nature	azardous. (Ch (Provide desc	eck the app ription abov	ropriate items): ve)
_ RCRA Non-Exempt: Oil held w characteristics established in RCRA amended. The following documenta _ MSDS Information _ RCRA Driver/ Agent Signature Customer Approval	regulations, 4 ition is attache A Hazardous V	0 CFR 26 ed to demo Vaste Ana	I,21-261.24 onstrate the lysis R360	or listed ha above-desc Process Kn Represen	ntative Sig	ste as def is non-h Other nature	azardous. (Ch (Provide desc	eck the app cription abov	ropriate items): ve)
RCRA Non-Exempt: Oil held w characteristics established in RCRA amended. The following documenta MSDS Information RCRA Driver/ Agent Signature Customer Approval	regulations, 4 ition is attache A Hazardous V	0 CFR 26 ed to demo Vaste Ana	I.21-261.24 constrate the lysis R360 IS NO	or listed ha above-desc Process Kn Represen	ntative Sig	ste as def is non-h Other nature	med in 40 er azardous. (Ch (Provide desc	eck the app cription abov	ropriate items); ve)
RCRA Non-Exempt: Oil held w characteristics established in RCRA amended. The following documenta MSDS Information RCRA Driver/ Agent Signature Customer Approval	aste vinten is regulations, 4 ition is attache A Hazardous V	0 CFR 26 ed to demo Vaste Ana	IS NO	rocess Kn Represei	ntative Sig	ste as def is non-h Other nature	med in 40 er azardous. (Ch (Provide desc	heck the app cription abov	ropriate items): /e)

8/29/2019 11:19:42AM





Photo 1 - View of pumping equipment looking northwest.







Site Photographs

GHD | Lucid Rattlesnake Pump Station| 11201757 | Page 1



Photo 3 - View of excavated area looking southeast.



Photo 4 - View of backfilled excavation looking southeast. Deferral/equipment area in background.



Site Photographs

Appendix E Soil Laboratory Analytical Reports



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

August 21, 2019

Michael Gant Lucid Energy Delaware 201 South 4th St. Artesia, NM 88210 TEL: (575) 513-8988 FAX:

RE: Rattlesnake Pump

OrderNo.: 1908854

Dear Michael Gant:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/15/2019 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

Hall Environmental Analy	sis Laboratory, Ind	2.	Date Reported: 8/21/2019					
CLIENT: Lucid Energy Delaware	Clie	Client Sample ID: HA-5-6"						
Project: Rattlesnake Pump	Co	Collection Date: 8/14/2019 11:00:00 AM						
Lab ID: 1908854-001	Matrix: SOIL	Received Date: 8/15/2019 8:30:00 AM						
Analyses	Result	RL Q	Qual Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analys	st: CAS		
Chloride	3800	150	mg/Kg	50	8/19/2019 6:41:13 PM	46834		

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

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

Page 1 of 9

Analytical Report Lah Order 1908854

Analytical Report
Lab Order 1908854

Date Reported: 8/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy Delaware		Cl	ient Sample II): HA	A-C-12"	
Project: Rattlesnake Pump		(Collection Dat	e: 8/1	4/2019 11:02:00 AM	
Lab ID: 1908854-002	Matrix: SOIL		Received Date	e: 8/1	5/2019 8:30:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	CAS
Chloride	6800	300	mg/Kg	100	8/20/2019 2:00:03 PM	46894
EPA METHOD 8015M/D: DIESEL RANGE	E ORGANICS				Analyst	JME
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	8/17/2019 9:30:36 PM	46852
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/17/2019 9:30:36 PM	46852
Surr: DNOP	92.9	70-130	%Rec	1	8/17/2019 9:30:36 PM	46852
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/16/2019 6:15:09 PM	46828
Surr: BFB	100	77.4-118	%Rec	1	8/16/2019 6:15:09 PM	46828
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	8/16/2019 6:15:09 PM	46828
Toluene	ND	0.050	mg/Kg	1	8/16/2019 6:15:09 PM	46828
Ethylbenzene	ND	0.050	mg/Kg	1	8/16/2019 6:15:09 PM	46828
Xylenes, Total	ND	0.10	mg/Kg	1	8/16/2019 6:15:09 PM	46828
Surr: 4-Bromofluorobenzene	93.6	80-120	%Rec	1	8/16/2019 6:15:09 PM	46828

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

- 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 9

S % Recovery outside of range due to dilution or matrix

Hall Environmental Analy	sis Laboratory, Inc	•	Lab Order 1908854 Date Reported: 8/21/2019					
CLIENT: Lucid Energy Delaware		Clie	ent Sample II	D: HA-E-6"				
Project:Rattlesnake PumpLab ID:1908854-003	Matrix: SOIL	Collection Date: 8/14/2019 11:10:00 AM Received Date: 8/15/2019 8:30:00 AM						
Analyses	Result	RL	Qual Units	DF Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS	5500		11.7	Analy	st: CAS			
Chloride	5500	300	mg/Kg	100 8/19/2019 6:53:38 PN	/ 46834			

Analytical Report

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 3 of 9

Hall Environmental Analy	sis Laboratory, Inc	2.	Date Reported: 8/21/2019					
CLIENT: Lucid Energy Delaware		Clien	Client Sample ID: HA-N-6"					
Project: Rattlesnake Pump		Col	Collection Date: 8/14/2019 11:15:00 AM					
Lab ID: 1908854-004	Matrix: SOIL	Re	Received Date: 8/15/2019 8:30:00 AM					
Analyses	Result	RL Q	ual Units	DF Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS				Analys	st: CAS			
Chloride	5400	300	mg/Kg	100 8/19/2019 7:30:52 PM	46834			

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 4 of 9

Analytical Report Lab Order 1908854

Hall Environmental Analy	sis Laboratory, Inc	•	Lab Order 1908854 Date Reported: 8/21/2019					
CLIENT: Lucid Energy Delaware		Cli	ent Sample II	D: HA-W-6"				
Project: Rattlesnake Pump		C	Collection Date: 8/14/2019 11:20:00 AM					
Lab ID: 1908854-005	Matrix: SOIL	Received Date: 8/15/2019 8:30:00 AM						
Analyses	Result	RL	Qual Units	DF Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS				Analys	st: CAS			
Chloride	6500	300	mg/Kg	100 8/19/2019 7:43:17 PM	46834			

Analytical Report

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 5 of 9

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

Qualifiers:

*

D

Н

Value exceeds Maximum Contaminant Level.

Holding times for preparation or analysis exceeded

Sample Diluted Due to Matrix

ND Not Detected at the Reporting Limit

Value above quantitation range

Е J

Analyte detected below quantitation limits Р Sample pH Not In Range

RL Reporting Limit

Page	6	of	G
rage	υ	01	9

Client: Project:	Lució Rattle	l Energy Delaware esnake Pump			
Sample ID:	MB-46834	SampType: mblk	TestCode: EPA Method	l 300.0: Anions	
Client ID:	PBS	Batch ID: 46834	RunNo: 62163		
Prep Date:	8/15/2019	Analysis Date: 8/16/2019	SeqNo: 2111451	Units: mg/Kg	
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride		ND 1.5			
Sample ID:	LCS-46834	SampType: Ics	TestCode: EPA Method	l 300.0: Anions	
Client ID:	LCSS	Batch ID: 46834	RunNo: 62163		
Prep Date:	8/15/2019	Analysis Date: 8/16/2019	SeqNo: 2111452	Units: mg/Kg	
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride		14 1.5 15.00	0 95.5 90	110	
Sample ID:	MB-46834	SampType: MBLK	TestCode: EPA Method	l 300.0: Anions	
Client ID:	PBS	Batch ID: 46834	RunNo: 62226		
Prep Date:	8/15/2019	Analysis Date: 8/16/2019	SeqNo: 2113641	Units: mg/Kg	
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride		ND 1.5			
Sample ID:	LCS-46834	SampType: LCS	TestCode: EPA Method	l 300.0: Anions	
Client ID:	LCSS	Batch ID: 46834	RunNo: 62226		
Prep Date:	8/15/2019	Analysis Date: 8/16/2019	SeqNo: 2113642	Units: mg/Kg	
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride		14 1.5 15.00	0 93.4 90	110	
Sample ID:	MB-46894	SampType: MBLK	TestCode: EPA Method	l 300.0: Anions	
Client ID:	PBS	Batch ID: 46894	RunNo: 62256		
Prep Date:	8/19/2019	Analysis Date: 8/19/2019	SeqNo: 2114836	Units: mg/Kg	
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride		ND 1.5			
Sample ID:	LCS-46894	SampType: LCS	TestCode: EPA Method	300.0: Anions	
Client ID:	LCSS	Batch ID: 46894	RunNo: 62256		
Prep Date:	8/19/2019	Analysis Date: 8/19/2019	SeqNo: 2114837	Units: mg/Kg	
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride		14 1.5 15.00	0 95.6 90	110	

WO#: 1908854

21-Aug-19

WO#:	1908854
	21-Aug-19

Client: Project:	Lucid End Rattlesnal	ergy Delaw ke Pump	vare								
Sample ID:	MB-46851	SampT	ype: MI	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	PBS	Batch	n ID: 46	851	F	unNo: 62	2213				
Prep Date:	8/16/2019	Analysis D	ate: 8/	17/2019	S	eqNo: 21	112564	Units: %Rec	;		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		9.2		10.00		92.3	70	130			
Sample ID:	MB-46852	SampT	ype: MI	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	PBS	Batch	n ID: 46	852	F	unNo: 62	2213				
Prep Date:	8/16/2019	Analysis D	ate: 8/	/17/2019	S	eqNo: 21	112565	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (Organics (DRO)	ND	10								
Motor Oil Rang	e Organics (MRO)	ND	50								
Surr: DNOP		8.3		10.00		83.0	70	130			
Sample ID:	LCS-46851	SampT	ype: LC	s	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	LCSS	Batch	n ID: 46	851	F	unNo: 62	2213				
Prep Date:	8/16/2019	Analysis D	ate: 8/	/17/2019	S	eqNo: 2	112567	Units: %Rec	;		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		3.9		5.000		77.7	70	130			
Sample ID:	LCS-46852	SampT	ype: LC	s	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	LCSS	Batch	n ID: 46	852	F	unNo: 62	2213				
Prep Date:	8/16/2019	Analysis D	ate: 8/	/17/2019	S	eqNo: 2	112568	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (Organics (DRO)	47	10	50.00	0	93.5	63.9	124			
Surr: DNOP		3.6		5.000		72.9	70	130			

Qualifiers:

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

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

Client: Lue Project: Rat	cid Energy Delaware tlesnake Pump									
Sample ID: MB-46828	tCode: EF	PA Method	8015D: Gasc	oline Rang	e					
Prep Date: 8/15/2019	Analysis Date:	8/16/2019	S	SeqNo: 21	112322	Units: mg/k	ζg			
Analyte	Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GF Surr: BFB	20) ND 1000	5.0 1000		104	77.4	118				
Sample ID: LCS-46828	SampType	LCS	Tes	tCode: EF	PA Method	8015D: Gasc	line Rang	e		
Client ID: LCSS	Batch ID:	46828	R	RunNo: 62	2171					
Prep Date: 8/15/2019	Analysis Date:	8/16/2019	S	SeqNo: 21	112323	Units: mg/#	ζg			
Analyte	Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GF	(O) 25 1200	5.0 25.00	0	99.9 118	80 77 4	120			S	
	1200	1000		110	77.4	110			5	

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

- RL Reporting Limit

Value above quantitation range

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

WO#: 1908854 21-Aug-19

Page 8 of 9

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#:	1908854

21-Aug-19

Client:	Lucid Ene	ergy Delav	ware								
Project:	Rattlesnal	ke Pump									
Sample ID:	ample ID: MB-46828 SampType: MBLK TestCode: EPA Method 8021B: Volatiles										
Client ID:	PBS	Batch	n ID: 46	828	F	RunNo: 62	2171				
Prep Date:	8/15/2019	Analysis D	0ate: 8/	16/2019	S	SeqNo: 21	112357	Units: mg/ł	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-Brom	ofluorobenzene	0.95		1.000		95.0	80	120			
Sample ID:	LCS-46828	SampT	ype: LC	S	Tes	tCode: EF	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Batch	n ID: 46	828	F	RunNo: 62	2171				
Prep Date:	8/15/2019	Analysis D	0ate: 8/	16/2019	S	SeqNo: 21	112358	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.96	0.025	1.000	0	96.1	80	120			
Toluene		1.0	0.050	1.000	0	102	80	120			
Ethylbenzene		1.1	0.050	1.000	0	105	80	120			
Xylenes, Total		3.1	0.10	3.000	0	105	80	120			
Surr: 4-Brom	ofluorobenzene	1.0		1.000		102	80	120			
Sample ID:	1908854-002AMS	SampT	ype: MS	6	Tes	tCode: EF	PA Method	8021B: Vola	tiles		
Client ID:	HA-C-12"	Batch	n ID: 46	828	F	RunNo: 62	2171				
Prep Date:	8/15/2019	Analysis D	0ate: 8/	16/2019	S	SeqNo: 21	112360	Units: mg/ł	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.91	0.024	0.9718	0.004980	93.5	63.9	127			
Toluene		0.99	0.049	0.9718	0	101	69.9	131			
Ethylbenzene		1.0	0.049	0.9718	0	106	71	132			
Xylenes, Total		3.1	0.097	2.915	0	105	71.8	131			
Surr: 4-Brom	ofluorobenzene	0.98		0.9718		101	80	120			
Sample ID:	1908854-002AMSD	SampT	ype: MS	SD	Tes	tCode: EF	PA Method	8021B: Vola	tiles		
Client ID:	HA-C-12"	Batch	n ID: 46	828	F	RunNo: 62	2171				
Prep Date:	8/15/2019	Analysis D	0ate: 8/	16/2019	S	SeqNo: 21	112361	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.89	0.025	0.9862	0.004980	89.4	63.9	127	3.00	20	
Toluene		0.97	0.049	0.9862	0	98.3	69.9	131	1.72	20	
Ethylbenzene		1.0	0.049	0.9862	0	102	71	132	2.38	20	
Xylenes, Total		3.0	0.099	2.959	0	102	71.8	131	1.45	20	
Surr: 4-Brom	ofluorobenzene	0.98		0.9862		99.6	80	120	0	0	

Qualifiers:

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

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name:	LUCID ENERGY DELAW	Work Order Nur	nber: 1908854		RcptNo: 1
Received By:	Daniel M	8/15/2019 8:30:00	AM		
Completed By:	Erin Melendrez	8/15/2019 10:27:2	2 AM	1 VA	
Reviewed By:	20	8/15/19		1-1-1	
Chain of Cus	stody				
1. Is Chain of C	ustody complete?		Yes 🖌	No 🗌	Not Present
2. How was the	sample delivered?		Courier		
<u>Log</u> In					
3. Was an atten	npt made to cool the samples?	,	Yes 🗹	No 🗌	
4. Were all samp	ples received at a temperature	of >0° C to 6.0°C	Yes 🗹	No 🗌	
5. Sample(s) in	proper container(s)?		Yes 🗹	No 🗌	
6. Sufficient sam	ple volume for indicated test(s)?	Yes 🗹	No 🗌	
7. Are samples (except VOA and ONG) proper	ly preserved?	Yes 🗹	No 🗌	
8. Was preserva	tive added to bottles?		Yes	No 🗹	NA 🗌
9. VOA vials hav	e zero headspace?		Yes	No 🗌	No VOA Vials 🗹
10. Were any san	nple containers received broke	n?	Yes	No 🗹	
11 Dees			_		# of preserved bottles checked
(Note discrepa	rk match bottle labels?		Yes 🗹	No 🗌	for pH:
2. Are matrices c	orrectly identified on Chain of	Custodv?	Ves 🗸	No 🗌	(S2" or >12 unless noted Adjusted?
3. Is it clear what	analyses were requested?		Yes 🗸		
4. Were all holdin (If no, notify cu	ig times able to be met? istomer for authorization.)		Yes 🗹		Checked by: DAD 8/15/19
Special Handli	ng (if applicable)				
15. Was client not	ified of all discrepancies with t	his order?	Yes	No 🗌	
Person I	Notified:	Date	1		
By Who	m:	Via	I eMail □ ¤	hone 🗔 Eav	
Regardir	ng:				
Client In:	structions:			·	
6. Additional rem	narks:				
	noti				
Cooler Inform			Charles al	territoria de la companya de la comp	
1	11 Cood Vac	armadi Sedi INO	Seal Date	Signed By	

,		- dilip O	Contaition	ocarmau	Seal NO	Seal Date	Signed By
ĺ	1	1. 1	Good	Yes		<u></u>	
	2	4.3	Good	Yes			a an
	3	4.5	Good	Yes		1997 WHITE BOARD AND AND A TOTAL COMPANY AND A ADDRESS OF	
			AND AND ALCONE AND AND A COMPANY AND	Annual Contraction of the Annual Contraction	Compared and the second s	3	3

C	Chain	-of-Cu	ustody Record	Turn-Aro	ound	Time:					_			_							
Client:	Luci	Fre	aller o	- □ Stan/	dard	⊃ □ Buek	ady														
			gy crap	Project N	lame		I				P		AL	.YS	515	5 L	AE	301	RA	ΓΟ	RY
Mailing	Address			$ \vec{R}\rangle$, Ø ,		www.hallenvironmental.com												
		"ON 1	tile	NATTRSMAKE TUMP				4901 Hawkins NE - Albuquerque, NM 87109													
				Project #			•		Т	el. 50)5-34	15-3	975	I	Fax	505-	-345-	4107			
Phone	#: ' <u>) (</u> L	1330	7876							,			A	naly	ysis	Req	uest				
email c	or Fax#: ע	<u>ngcint</u>	equild-energy, con	Project N	/lanag	ger: í		ź	÷					\$04			ji (
QA/QC	Package:		v	A	A 4		et		MH N	B		IMS		5			Abse				
□ Star	ndard		Level 4 (Full Validation)		<u>C 11 (</u>	aer Gl	int		g Q	2 PC		202		ď Ŭ			sht/				
Accred	itation:		ompliance	Sampler:	: <i>N</i> [6		Harris H		308;	4.1)	82		Ň			rese				
						I⊉'Yes	🖸 No	<u>ki ya</u> 1 zarta 1	L R	es/	20	0 or	<u>s</u>	3.		٩Ŏ	Ē				
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									015 015	Pes	Mei	by	8	Ъ,	2	(Sei	liii S				
	 .			Containe	r	Preservative	HEAL No.		Ĵ/ Ĥ	181	BO	AHs	R S	Å	60	20	otal		t		
Date	lime	Matrix		lype and	1# i	Type	1400804			8(Ξ	<u> </u>	<u> </u>	\overline{O}	8	ä	Ĕ	_	+	+	
8/14	1100	5	HA. 5.6	402.001	1	ICE	-001	\perp	1					Δ					\perp		
	1102		HA.C.12"				-002		$\langle X \rangle$					\times							
	1110		HA·E·6"				-003							$\boldsymbol{\lambda}$							
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18/14	1400	/~	Conc		11	r/	X 4 19	W C	1.74	0-2 4	- 1.7 '	-)		• •							
Date:	Time:	Relinquish	ed by:	Received by	ý:	Via:	Date Time														
BILY	191			D	Ć	ourier_	8/15/19 8:3	0													

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



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

August 26, 2019

Michael Gant Lucid Energy Delaware 201 South 4th St. Artesia, NM 88210 TEL: (575) 513-8988 FAX:

RE: Rattlesnake SWD Pump Station

OrderNo.: 1908B92

Dear Michael Gant:

Hall Environmental Analysis Laboratory received 3 sample(s) on 8/21/2019 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

Hall Environmental Analysis	Laboratory, In	с.	Lab Order 1908B92 Date Reported: 8/26/2019							
CLIENT: Lucid Energy Delaware		Clien	t Sample II	D: TP	9-3-1					
Project: Rattlesnake SWD Pump Station		Col	lection Dat	e: 8/1	6/2019 1:35:00 PM					
Lab ID: 1908B92-001	Matrix: SOIL	Re	ceived Dat	e: 8/2	21/2019 9:02:00 AM					
Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS					Analys	st: CAS				
Chloride	ND	60	mg/Kg	20	8/24/2019 5:24:53 AM	47025				

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 4

Analytical Report Lab Order 1908B92

Hall Er	•	Lab Order 1908B92 Date Reported: 8/26/2019									
CLIENT:	Lucid Energy Delaware		Cli	ent Sa	ample II	D: TP	9-3-3				
Project:	Rattlesnake SWD Pump Station	C	Collection Date: 8/16/2019 2:15:00 PM								
Lab ID:	1908B92-002	Matrix: SOIL		Recei	ved Dat	e: 8/2	21/2019 9:02:00 AN	1			
Analyses		Result	RL	Qual	Units	DF	Date Analyzed		Batch		
EPA MET	HOD 300.0: ANIONS						Anal	yst:	CAS		
Chloride		ND	60		mg/Kg	20	8/24/2019 5:37:18 A	M	47025		

Analytical Report

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

Qualifiers: *

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

- 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 4

Hall E	•	Lab Order 1908B92 Date Reported: 8/26/2019								
CLIENT:	Lucid Energy Delaware		C	lient S	ample I	D: B(G-1			
Project:	Rattlesnake SWD Pump Station	(Collection Date: 8/16/2019 10:10:00 AM							
Lab ID:	1908B92-003	Matrix: SOIL		Recei	ved Dat	e: 8/2	21/2019 9:02:00 AM			
Analyses	5	Result	RL	Qual	Units	DF	Date Analyzed	Batch		
EPA MET	THOD 300.0: ANIONS						Analyst	CAS		
Chloride		ND	60		mg/Kg	20	8/24/2019 5:49:43 AM	47025		

Analytical Report

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 3 of 4

WO#:	1908B92

26-Aug-19

Client: Project:	Lu Ra	cid Energy Delawa ttlesnake SWD Pu	are mp St	ation							
Sample ID:	MB-47025	SampTy	pe: m k	olk	Tes	tCode: EF	PA Method	300.0: Anion:	S		
Client ID:	PBS	Batch I	D: 47	025	R	lunNo: 62	2388				
Prep Date:	8/23/2019	Analysis Da	te: 8/	24/2019	S	eqNo: 21	121577	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-47025	SampTy	oe: Ics	6	Tes	tCode: EF	PA Method	300.0: Anion:	S		
Client ID:	LCSS	Batch I	D: 47	025	R	unNo: 62	2388				
Prep Date:	8/23/2019	Analysis Da	te: 8/	24/2019	S	eqNo: 21	121579	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
- 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 4 of 4



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:	LUCID ENERGY DELA	W Work Order Num	nber: 1908B92		RcptNo	: 1
Received By:	Isaiah Ortiz	8/21/2019 9:02:00	АМ	INC	2/	
Completed By:	Erin Melendrez	8/21/2019 9:42:07	AM	11 MA		
Reviewed By:	mg	08/21/19				
Chain of Cus	tody					
1. Is Chain of C	ustody complete?		Yes 🖌	No 🗌	Not Present	
2. How was the	sample delivered?		Courier			
Log In						
3. Was an attem	npt made to cool the samp	les?	Yes 🔽	No 🗌		
4. Were all samp	oles received at a tempera	ture of >0° C to 6.0°C	Yes 🖌	No 🗌		
5. Sample(s) in p	proper container(s)?		Yes 🖌	No 🗌		
6. Sufficient sam	ple volume for indicated te	est(s)?	Yes 🗸	No 🗌		
7. Are samples (except VOA and ONG) pro	perly preserved?	Yes 🗸	No		
8. Was preservat	tive added to bottles?		Yes	No 🔽	NA 🗌	
9. VOA vials have	e zero headspace?		Yes	No 🗌	No VOA Vials 🗹	
10. Were any sam	nple containers received br	oken?	Yes	No 🗸		
					# of preserved bottles checked	/
11. Does paperwo	rk match bottle labels?		Yes 🔽	No 🗌	for pH:	
12 Are matrices c	orrectly identified on Chain	of Custody2	Vec M		Adjusted?	>12 unless noted)
13 Is it clear what	analyses were requested?		Yes V		/ lajuoted !	
14. Were all holdin	ig times able to be met?		Yes V		Checked by: D	00 8/21/19
(If no, notify cu	stomer for authorization.)					
Special Handli	ng (if applicable)					
15. Was client not	ified of all discrepancies w	ith this order?	Yes 🗌	No 🗌	NA 🔽	
Person	Notified:	Date:				
By Whor	m:	Via:	eMail	Phone 🗌 Fax	In Person	
Regardir	ng:				and the second state of the second second second	
Client In:	structions:					
16. Additional rem	narks:					
17. Cooler Inform	nation					
Cooler No	Temp °C Condition	Seal Intact Seal No	Seal Date	Signed By		
1	2.7 Good	Yes	and A hore which for the 12			

2.3

Good

Yes

2

Client:	hain	-of-C	ustody Record	Turn-Around	Time: <u></u>					HALL ENVIRONMENTAL ANALYSIS LABORATOR							AL	
Mailing	Address	s: on	File	- Ratt Stat	lesnake su	nd pump		49	901 H	v awkir	ww.r ns NE	allen	viron Ibuau	men Ierau	ital.com	י 87109		
Dhana	#. /211	2220-		Project #: Batt	lesnake S	wp		Т	el. 50)5-34	5-397	5	Fax	505	-345-4	107		
email o	r Fax#:	Magn	+ Queid-energy Com	Project Mana	ader.							Ana	iysis 	Req	uest			
QA/QC I	Package: dard	J	Level 4 (Full Validation)) Michael Gant			0 / MRC	PCB's		SIMS	204, SC	1 - 6 1 - 1 1 - 1 1 - 1 2 - 1		/Absen				
Accredi	tation: AC	□ Az C □ Othe	ompliance er	Sampler:	Joshua Pi Ves	No		O / DRO	s/8082 F	04.1)	or 8270	, NO ₂ , I		(A)	Present			
	(Type)			# of Coolers:	٢			19	cide	3 poi	310	N ₀ 3		i-VO	n (20 1	
Date	Time	Matrix	Sample Name	Cooler Temp Container	Preservative	z.4 -0.1 (cF) Z.7(°) HEAL NO.		PH:8015	081 Pesti	DB (Meth	AHs by 8	E, Br,	260 (VOA	270 (Sem	otal Colifo			
8-16-19	13.25	S	TP-3-1	1 gal sample	sta	-001		<u>++</u>	~	<u> </u>] ∞	8				++
8-16-19	1415	S	TP-3-3	1 gat sample	NA	-007						_ <u>₹</u>						++
8/1619	11010	3	BG-1	leng		-003		+				X	- 11					
-1-1-			marspi													wetter of		
						1-80												
								_							(*) - 186.	2.01		
							-	-								10 10 10 10		++
												1.				000000 100000 10000		++
Date: 8-20-19	Time: 7:30	Relinquist	hed by:	Received by:	Via:	Date Time	Re	mark	s:	PA	300	ماع	loci	de				
Øate: 170 19	Time: 19 D	Relinquist	ged by:	Received by:	Via:	Date Time)7	As	per	r M	110	nae	R (.	7a	nt.	.Ad	fed	-003

1 If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



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

September 05, 2019

Michael Gant Lucid Energy Delaware 201 South 4th St. Artesia, NM 88210 TEL: (575) 513-8988 FAX

OrderNo.: 1908G59

RE: Rattlesnake SWD

Dear Michael Gant:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/28/2019 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

Hall Environmental Analy	sis Laboratory, Inc.		Lab Order 1908G59 Date Reported: 9/5/2019								
CLIENT: Lucid Energy Delaware		Client Sample ID: TP-4-6'									
Project: Rattlesnake SWD		Collectio	Collection Date: 8/26/2019 10:45:00 AM								
Lab ID: 1908G59-001	Matrix: SOIL	Receive	ed Date:	8/28/2	019 8:45:00 AM						
Analyses	Result	RL Qual	Units	DF	Date Analyzed						
EPA METHOD 300.0: ANIONS					Analyst: CJS						
Chloride	ND	60	mg/Kg	20	9/4/2019 7:34:37 PM						

Analytical Report

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

Qualifiers:

* Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix

D 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

- 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 1 of 5

Hall Environmental Analy	sis Laboratory, Inc	• •	Date Reported: 9/5/2019								
CLIENT: Lucid Energy Delaware		Client Sa	mple ID:	TP-4-	10'						
Project: Rattlesnake SWD		Collecti	Collection Date: 8/26/2019 11:00:00 AM								
Lab ID: 1908G59-002	Matrix: SOIL	Receiv	Received Date: 8/28/2019 8:45:00 AM								
Analyses	Result	RL Qual	Units	DF	Date Analyzed						
EPA METHOD 300.0: ANIONS					Analyst: CJS						
Chloride	ND	60	mg/Kg	20	9/4/2019 8:36:41 PM						

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

Qualifiers:

* Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 2 of 5

Analytical Report Lab Order 1908G59

Hall Environmental Analy	sis Laboratory, Inc.		Date Reported: 9/5/2019								
CLIENT: Lucid Energy Delaware		Client Sa	Client Sample ID: TP-5-6'								
Project: Rattlesnake SWD		Collecti	Collection Date: 8/26/2019 11:35:00 AM								
Lab ID: 1908G59-003	Matrix: SOIL	Received Date: 8/28/2019 8:45:00 AM									
Analyses	Result	RL Qual	Units	DF	Date Analyzed						
EPA METHOD 300.0: ANIONS					Analyst: CJS						
Chloride	ND	60	mg/Kg	20	9/4/2019 8:49:06 PM						

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

Qualifiers:

* Value exceeds Maximum Contaminant Level.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 3 of 5

Analytical Report Lab Order 1908G59

Hall Environmental Anal	ysis Laboratory, Inc.		Lab Order 1908G59 Date Reported: 9/5/2019								
CLIENT: Lucid Energy Delaware		Client Sample ID: TP-5-10'									
Project: Rattlesnake SWD		Collection	Collection Date: 8/26/2019 11:55:00 AM								
Lab ID: 1908G59-004	Matrix: SOIL	Receive	ed Date:	8/28/2	019 8:45:00 AM						
Analyses	Result	RL Qual	Units	DF	Date Analyzed						
EPA METHOD 300.0: ANIONS					Analyst: CJS						
Chloride	ND	60	mg/Kg	20	9/4/2019 9:01:31 PM						

Analytical Report

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 4 of 5

Client: Project:	Luc Rat	eid Energy Delav tlesnake SWD	ware									
Sample ID: MB-47268		SampT	SampType: mblk			TestCode: EPA Method 300.0: Anions						
Client ID: PBS		Batch	Batch ID: 47268			RunNo: 62	2664					
Prep Date: 9/4/2019		Analysis D	Analysis Date: 9/4/2019		SeqNo: 2133793			Units: mg/Kg				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride		ND	1.5									
Sample ID: LCS-47268		SampT	SampType: Ics			TestCode: EPA Method 300.0: Anions						
Client ID: LCSS		Batch	Batch ID: 47268			RunNo: 62664						
Prep Date: 9/4/2019		Analysis D	Analysis Date: 9/4/2019			SeqNo: 2133794			Units: mg/Kg			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride		15	1.5	15.00	0	101	90	110				

Qualifiers:

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

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

WO#: **1908G59**

05-Sep-19

Page 5 of 5
HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Albı TEL: 505-345-3975 Website: www.ha	Analy. 490 Iquerq FAX: Ilenvir	sis Laboratory 1 Hawkins NE ue, NM 87109 505-345-4107 onmental.com	S	ample	e Log-In Ci	heck List
Client Name: LUCID ENERGY DELAW	Work Order Number:	1908	IG59			RcptNo:	1
Received By: Daniel M. Completed By: Michelle Garcia Reviewed By: DAD 8/78/10	8/28/2019 8:45:00 AM 8/28/2019 2:26:50 PM		4	Nin	le Connie	>	
<u>Chain of Custody</u> 1. Is Chain of Custody complete? 2. How was the sample delivered?		Yes		No [Not Present	
 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) 7 Are samples (except VOA and ONG) property 	? nresen/ed?	Yes]		
8. Was preservative added to bottles?	proservou :	Yes		No 🔽	•	NA 🗌	
9. VOA vials have zero headspace?		Yes		No 🗌	No	VOA Vials 🗹	10
10. Were any sample containers received broker	1?	Yes		No 🖢	# o bot	preserved	5126/04
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes	✓	No 🗌] for	pH. (<2 or >	12 unless noted)
12. Are matrices correctly identified on Chain of C	Sustody?	Yes		No		Adjusted?	
13. Is it clear what analyses were requested?		Yes		No			
 Were all holding times able to be met? (If no, notify customer for authorization.) 		Yes	Y	No L		Checked by:	
Special Handling (if applicable)							
15. Was client notified of all discrepancies with the	nis order?	Yes		No 🗌		NA 🗹	$\mathbf{\lambda}$
Person Notified: By Whom: Regarding: Client Instructions:] eMa	il 📄 Phone	• F	ax []	n Person	

17. Cooler Information

.

Cooler No	Temp ⁰C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.7	Good	Yes			
2	4.0	Good	Yes			

C	hain	-of-Cu	ustody Record	Turn-Around	Time: 5	an Sural				_		* -	_											
Client:	Luci	4		Standard	i ⊓ Rusł					F			. E V		/1¥ ~ 1	20		ME	NT					
				Project Nam	e:			7. p -	精炼	F		AL	- T 3	21:	> L		BO	KA	II C	RI				
Mailing	Address	:		Rat	flesneke	swb					WW۱	w.ha	llen	viron	men	tal.c	om							
		on	rile	Proiect #:				49	01 H	lawki	ins I	NE -	· Alt	upuc	erqu	rque, NM 87109								
Bhono	<i>.</i>			- · · · · · · · · · · · · · · · · · · ·	1201757			Te	əl. 50)5-34	-5-3	975 A	hal	Fax	505 Bec	-345	-410: •	7						
email o	+. r Fax#:	Mgante	Olucid-energy.com	Project Mana																				
	Package:	<u> 3044. w</u>	a l Ferla gud. com		Michzel	Gant	21)	on	MR(1							S0	n. M			ļ.		
□ Stan	dard		Level 4 (Full Validation)	-	Teffer h	/alker	80(80)	Gas	0			IMS		0 0	PC									
Accredi	tation			Sampler:	Jocken P.	99	MB	PH (DR/	Ê	1)	70 S		03,1	082				õ					
	AP	□ Othe	er	On Ice:	Yes	1 No j	 -	ц +	RO	18.	504.	- 827		°°,	s/8		<u>र</u>			N N				
	(Type)	1	I	Sample Tem	perature:4/-(4=374	BE	ШШ	۳ ق	od 4	od 5	0 or	etals	Ž	cide,	F	>		-8	E				
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	1908659	BTEX + MI	BTEX + MT	TPH 8015E	TPH (Meth	EDB (Meth	PAH's (831	RCRA 8 Me	Anions (F,C	3081 Pestic	3260B (VO	3270 (Semi		دلمارد	Air Bubbles				
R-26-19	1045	s	TP-4-6'	4.2 glass	NA	-001												\neg	x					
1	11 00	1	TP-4-10'	1.00	1	-002													$\frac{1}{x}$					
	1135		TP-5-6			-003											-		x	+ + -				
4			TP-C-10			-014													\mathbf{x}^{\dagger}					
	1.22																		\rightarrow					
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Date:	Time:	Relinquish	ed by:	Received by		Date Time	Ren) arks																
6-26-19	1000		and Car	-0		8/27/19 0902	1 COL																	
Date:	Time:	Rethquish	ed by:	Received by:	Concort F. Ini	Date Time																		
1 <u>00/17</u>	<u> 7 N)</u>		Sitted to Hell Environmental may be subs	A		$\frac{9/8}{7}$ 8-9	noecih	ality A		h contr	acted	data	will be				46.0.00							

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



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

September 19, 2019

Michael Gant Lucid Energy Delaware 201 South 4th St. Artesia, NM 88210 TEL: (575) 513-8988 FAX

RE: Rattlesnake SWD

OrderNo.: 1909636

Dear Michael Gant:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/12/2019 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

Lab Order: 1909636

Hall Environ	mental Analysis L	nc. Date Reported: 9/19/2019	
CLIENT: I Project: H	Lucid Energy Delaware Rattlesnake SWD		Lab Order: 1909636
Lab ID:	1909636-001		Collection Date: 9/9/2019 11:20:00 AM
Client Sample ID:	SW-2-C		Matrix: SOIL
Analyses		Result	RL Qual Units DF Date Analyzed Batch
EPA METHOD 300 Chloride	D.0: ANIONS	2500	Analyst: MF 150 mg/Kg 50 9/19/2019 12:02:19 AM 47
Lab ID:	1909636-002		Collection Date: 9/9/2019 11:50:00 AM
Client Sample ID:	SW-4-C		Matrix: SOIL
Analyses		Result	RL Qual Units DF Date Analyzed Batch
EPA METHOD 300 Chloride	D.0: ANIONS	63	Analyst: MF 60 mg/Kg 20 9/17/2019 1:21:05 PM 475
Lab ID:	1909636-003		Collection Date: 9/9/2019 12:25:00 PM
Client Sample ID:	SW-5-C		Matrix: SOIL
Analyses		Result	RL Qual Units DF Date Analyzed Batch
EPA METHOD 300	0.0: ANIONS		Analyst: MF
Chloride		830	60 mg/Kg 20 9/17/2019 1:33:29 PM 47
Lab ID:	1909636-004		Collection Date: 9/10/2019 12:00:00 PM
Client Sample ID:	SW-1-C		Matrix: SOIL
Analyses		Result	RL Qual Units DF Date Analyzed Batch
EPA METHOD 300	0.0: ANIONS		Analyst: MF
Chloride		ND	60 mg/Kg 20 9/17/2019 1:45:54 PM 47
Lab ID:	1909636-005		Collection Date: 9/10/2019 12:30:00 PM
Client Sample ID:	SW-3-C		Matrix: SOIL
Analyses		Result	RL Qual Units DF Date Analyzed Batch
EPA METHOD 300	0.0: ANIONS		Analyst: MF
Chloride		1900	60 mg/Kg 20 9/17/2019 1:58:18 PM 47

H .

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

* Value exceeds Maximum Contaminant Level. Qualifiers:

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

Е Value above quantitation range

Analyte detected in the associated Method Blank

Analyte detected below quantitation limits J

Sample pH Not In Range Р RL Reporting Limit

в

Page 1 of 2

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Project:	Lucid Rattle	Energy Delav snake SWD	vare								
Sample ID:	MB-47517	SampT	ype: m t	olk	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID:	PBS	Batch	n ID: 47	517	F	RunNo: 6	2982				
Prep Date:	9/17/2019	Analysis D	ate: 9/	17/2019	S	SeqNo: 2	148372	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-47517	SampT	ype: Ics	5	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID:	LCSS	Batch	n ID: 47	517	F	RunNo: 6 2	2982				
Prep Date:	9/17/2019	Analysis D	ate: 9/	17/2019	S	SeqNo: 2	148373	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	95.9	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

- 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

WO#: 1909636

19-Sep-19

	HALL
120	ENVIRONMENTAL
	ANALYSIS
Ref.	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:	LUCID ENERGY DELAW	Work Order Number:	1909	9636		RcptNo	1
Received By:	Erin Melendrez	9/12/2019 9:00:00 AM			in	5	
Completed By:	Yazmine Garduno	,9/12/2019 2:23:51 PM			Maynin Colondert	Ā	
Reviewed By:	Dm 9	12/19			v		
Chain of Cust	tody						
1. Is Chain of Cu	ustody complete?		Yes		No 🗌	Not Present	
2. How was the s	sample delivered?		Cour	rier			
Log In							
3. Was an attem	pt made to cool the samples?		Yes		No 🗌	NA 🗌	
4. Were all samp	les received at a temperature	of >0° C to 6.0°C	Yes	\checkmark	No 🗌	NA 🗌	
5. Sample(s) in p	proper container(s)?		Yes		No 🗌		
6. Sufficient sam	ple volume for indicated test(s	5)?	Yes	\checkmark	No 🗌		
7. Are samples (e	except VOA and ONG) proper	ly preserved?	Yes	\checkmark	No 🗌		
8. Was preservat	ive added to bottles?		Yes		No 🗸	NA 🗌	
9. VOA vials have	e zero headspace?		Yes		No 🗌	No VOA Vials 🗹	/
10. Were any sam	pple containers received broke	en?	Yes		No 🔽	# of preserved	
11. Does paperwoi (Note discrepa	rk match bottle labels? ncies on chain of custody)		Yes	\checkmark	No 🗌	bottles checked for pH: (<2 or	>12 unless noted)
12. Are matrices co	orrectly identified on Chain of	Custody?	Yes	\checkmark	No 🗌	Adjusted?	
13. Is it clear what	analyses were requested?		Yes	\checkmark	No 🗌	/	NGGLIDIN
14. Were all holdin (If no, notify cu	ng times able to be met? Istomer for authorization.)		Yes	\checkmark	No 🗌	Checked by:	YCATICK
Special Handli	ing (if applicable)					/	
15. Was client not	tified of all discrepancies with	this order?	Yes		No 🗌	NA 🔽	
Person N	Notified:	Date					
By Whor	m:	Via:] eMa	ail 🗌	Phone 🗌 Fax	In Person	
Regardir	ng:		otras-initia-turo			angalang sa katalang	
Client In	structions:		Research Colorest	to and an task			
16. Additional ren	narks:						1
17. Cooler Inform	mation						
Cooler No.		and Interet Seal No. S.		ata I	Cianad Du	1	

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.8	Good				

Client:	Turn-Around Time: 5 day Jurn Standard DRush Project Name:	HALL ENVIRONMENTAL ANALYSIS LABORATORY
Mailing Address: on File	Rattlesnate SWD	4901 Hawkins NE - Albuquerque, NM 87109
	Project #:	Tel. 505-345-3975 Fax 505-345-4107
Phone #: 314 330 7876	a firm concernent of a manufacture of the state	Analysis Request
email or Fax#MGnn + Oliveral energy com	Project Manager:	1) (0) (0) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1
QA/QC Package:		(802) (802)
□ Standard □ Level 4 (Full Validation)	Michael Gart	PC S
Accreditation: Az Compliance	Sampler: Joshua Piga	
□ NELAC □ Other	Unice: X Yes TNO	7 (P A 33, 20 0 or 150 0 0 or 150 0 0 or 150 0 0 0 or 150 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Cooler Temp(including CF): $4.7 - 0.4$ (CF) = (°C)	Mett Thoc
Date Time Matrix Sample Name	Container Type and # Type	BTEX / 1 TPH:8014 8081 Pes B2B6 (Me PAHs by RCRA 8 RCRA 8 8250 (VC Se 10tal Col
9-9:10/120 5 SW.2.C	Haz Salze I-CE - DO I	
11150 1 SW.4.C	-002	
1225 SW 51	-003	
9/12/19/1200 SW.1.C	-204	
1 1230 SW/3.(-005	
and 10ta strates a product and the	a constant of the branching of the second se	
Construction of a construction of the construc		
and a second sec	R1	
Date: Time: Relinquished by:	Received by: Via: Date / Time	Remarks:
9-11-19112 Date: Time: Bettinguished by:	Received by: Via: Force Date Time	2
11/19 1900 11-	MAG 1/12/19	Development of the second seco

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



about GHD

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

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Tom Larson Tom.Larson@ghd.com 832.203.8671

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