

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	NRM1929839706
District RP	1RP-5768
Facility ID	
Application ID	111129

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
P	16	26S	34E	Lea

✓ -07/12/2022

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☒ Private (Name: ~~Bureau of Land Management~~)
✓ -07/12/2022

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 15-20 bbls	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> 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.

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.

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Michael Gant Title: Environmental Compliance Manager

Signature: MGant Date: 5/26/2022

email: MGant@lucid-energy.com Telephone: 3143307876

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: Nelson Velez Date: 07/13/2022

Printed Name: Nelson Velez Title: Environmental Specialist – Adv



WSP USA

3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

May 16, 2022

District II
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

**RE: Closure Request
Rattlesnake SWD Pump
Incident Number NRM1929839706
Eddy County, New Mexico**

To Whom it May Concern:

WSP USA Inc. (WSP) on behalf of Lucid Energy Delaware, LLC (Lucid) presents the following Closure Request detailing site assessment, excavation, and soil sampling activities at the Rattlesnake SWD Pump (Site) in Unit P, Section 16, Township 26 South, Range 34 East, in Lea County, New Mexico (Figure 1). The purpose of the site assessment, excavation, and soil sampling activities was to address impacts to soil following the release of produced water from pumping station the Site. Based on the excavation activities and soil sample laboratory analytical results, Lucid is submitting this Closure Request, and requesting no further action (NFA) for Incident Number NRM1929839706

RELEASE BACKGROUND

On August 7th, 2019, failure of flange on pumping station caused a release of 15-20 bbls produced water from the pumping station. From the total release volume, 0bbls of the pipeline liquid was recovered. Immediate notice was provided to New Mexico Oil Conservation Division (NMOCD). Lucid reported the release to the NMOCD on a Release Notification Form C-141 (Form C-141) on August 15, 2019. The release was assigned Incident Number NRM1929839706.

SITE CHARACTERIZATION

WSP characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is greater than 50 -100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NM OSE) well C-4583, located approximately 1 mile south of the Site. The groundwater well has a reported depth to groundwater of 55 feet bgs and a total depth of 56 feet bgs. The referenced well records are included in Attachment 1. The closest continuously flowing or significant watercourse to the Site is a Riverine, located approximately 1063 feet south of the Site. The Site is greater than 200 feet



from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

CLOSURE CRITERIA

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

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 10,000 mg/kg

A reclamation standard of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top four feet of the subsurface, per NMAC 19.15.29.13.D (1) for the top four feet of areas that will be reclaimed following remediation.

SITE ASSESSMENT AND DELINEATION ACTIVITIES

On April 22nd, 2022 WSP personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Nine boreholes were advanced and soil samples were collected within the release extent from a depth of 4 feet bgs to assess the lateral extent of impacted soil. Soil samples from the boreholes were field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Based on field screenings, clean lateral depth was determined to be at 0-4 ft bgs. Based on visual observations and, field screening activities, for nine borehole samples, excavation activities were warranted to remove impacted soil to a total depth of 4 ft bgs.

EXCAVATION ACTIVITIES AND ANALYTICAL RESULTS

On April 22nd and 26th, 2021, WSP personnel returned to the site to oversee additional excavation and completion of activities. Based on visual observations and, field screening activities, for the borehole soil samples, delineation and excavation were completed to remove impacted soil in the area surrounding the release extent. Excavation activities were performed using a track hoe and hydro excavator. To direct excavation activities, WSP screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. The excavation was completed to an approximate depth of 0-4'foot bgs.



Following removal of impacted soil, WSP collected 8-point composite soil samples every 200 square feet from the floor of the excavation. The 8-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS08 were collected from the floor of the excavation, from a depth of 1ft to 4-feet bgs. Due to the depth of the excavation, soil samples were taken for the sidewalls (SW) of the excavation. The excavation SW soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 4. Photographic documentation was completed during the Site visits and a photographic log is included in Attachment 3.

Laboratory analytical results for excavation soil samples FS01 through FS08 and SW01-SW04 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

The excavation area measured approximately 1,966.3 square feet. A total of approximately 291 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the Lea Land disposal in Carlsbad, New Mexico and R360 in Carlsbad, New Mexico. After completion of confirmation sampling, the excavation area was backfilled.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the August 7, 2019, release of produced water from the failed flange on the pumping station. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the most stringent Table 1 Closure Criteria. Based on the soil sample analytical results, no further remediation was required. Lucid backfilled the excavation with material purchased locally and recontoured the Site to match pre-existing site conditions.

Initial response efforts and excavation of impacted soil have mitigated impacts at the Site. Depth to groundwater has been determined to be greater than 50-100 feet bgs and no other sensitive receptors were identified near the release extent. WSP and Lucid believe these remedial actions are protective of human health, the environment, and groundwater. As such, Lucid respectfully requests no further action for Incident Number NRM1929839706. ~~A signed C141 Closure Request is included in Attachment 5.~~

✓✓ - 07/13/2022



District II
Page 4

If you have any questions or comments, please do not hesitate to contact Mr. Travis Casey
at (575) 689-5949.

Sincerely,

A handwritten signature in black ink, appearing to read 'Alisha Dahal', enclosed within a light gray rectangular box.

Alisha Dahal
Associate Consultant, Geologist

A handwritten signature in black ink, appearing to read 'Travis Casey', enclosed within a light gray rectangular box.

Travis Casey
Consultant, Environmental Scientist

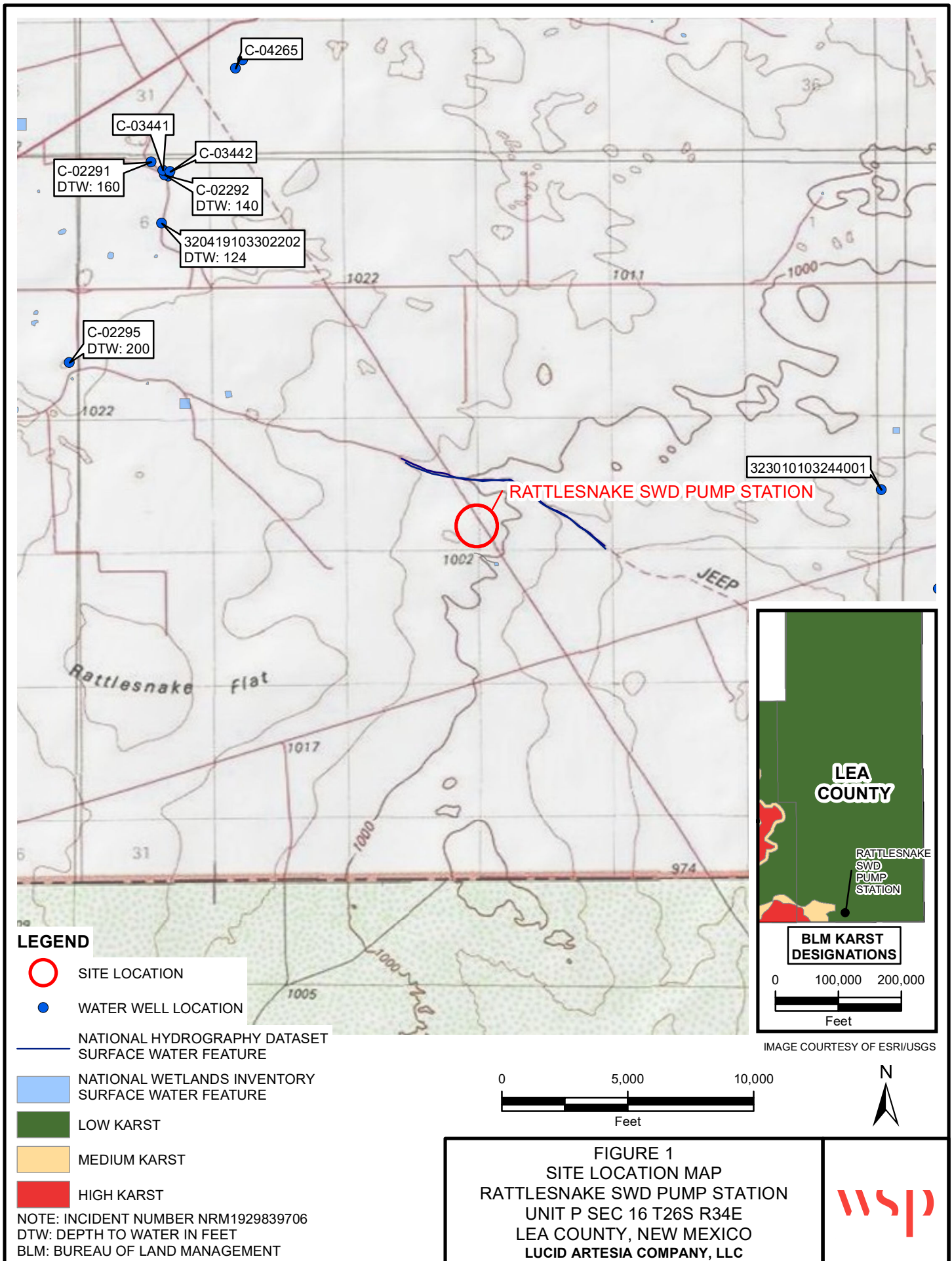
cc:

Bureau of Land Management

Attachments:

- Figure 1 Site Location Map
- Figure 2 Preliminary Soil Sample Locations
- Figure 3 Delineation Soil Sample Locations
- Figure 4 Excavation Soil Sample Locations
- Table 1 Soil Analytical Results
- Attachment 1 Referenced Well Records
- Attachment 2 Lithologic/Sampling Logs
- Attachment 3 Photographic Log
- Attachment 4 Laboratory Analytical Reports
- Attachment 5 C141 Closure Request

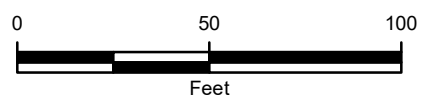
FIGURES



**LEGEND**

- PRELIMINARY SOIL SAMPLE
- RELEASE EXTENT

IMAGE COURTESY OF ESRI



NOTE: INCIDENT NUMBER NRM1929839706
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
RATTLESNAKE SWD PUMP STATION
UNIT P SEC 16 T26S R34E
LEA COUNTY, NEW MEXICO
LUCID ARTESIA COMPANY, LLC





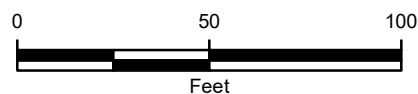
P:\Lucid Energy Group\GIS\31403665.009_RATTLESNAKE SWDMXD\31403665.009_FIG02_PRELIMINARY_2022.mxd



IMAGE COURTESY OF ESRI

LEGEND

-  DELINEATION SOIL SAMPLE
-  RELEASE EXTENT



NOTE: INCIDENT NUMBER NRM1929839706
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)



FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
RATTLESNAKE SWD PUMP STATION
UNIT P SEC 16 T26S R34E
LEA COUNTY, NEW MEXICO
LUCID ARTESIA COMPANY, LLC

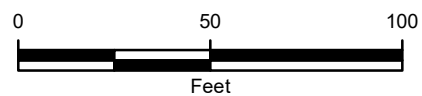




IMAGE COURTESY OF ESRI

LEGEND

-  EXCAVATION SOIL SAMPLE
-  EXCAVATION EXTENT



NOTE: INCIDENT NUMBER NRM1929839706
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
RATTLESNAKE SWD PUMP STATION
UNIT P SEC 16 T26S R34E
LEA COUNTY, NEW MEXICO
LUCID ARTESIA COMPANY, LLC



TABLES

ATTACHMENT 1: REFERENCED WELL RECORD



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

2/3/2022

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

Hand Delivered to the DII Office of the State Engineer

Re: Well Record C-4583 Pod1

To whom it may concern:

Attached please find a well log & record and a plugging record, in duplicate, for a one (1) soil borings, C-4583 Pod1.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Lucas Middleton".

Lucas Middleton

Enclosures: as noted above

OSE DIT FEB 4 2022 AM 10:34



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us


1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD1 (BH-01)		WELL TAG ID NO. n/a		OSE FILE NO(S). C-4583			
	WELL OWNER NAME(S) Lucid Energy Group (Michael Gant)				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 201 S 4th St.				CITY Artesia	STATE NM	ZIP 88210	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 12	SECONDS 38.03 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
		LONGITUDE 103	50	58.70 W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE SW SW SW Sec.15 T26S R34E, NMPM								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 1-4-2022		DRILLING ENDED 1-4-2022		DEPTH OF COMPLETED WELL (FT) temporary well material	BORE HOLE DEPTH (FT) 55	DEPTH WATER FIRST ENCOUNTERED (FT) n/a	
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) n/a		
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger							
	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	0 55		±8.5	Boring- HSA	--	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL		AMOUNT (cubic feet)	METHOD OF PLACEMENT	

OSE DIT FEB 4 2022 AM 10:34

FOR OSE INTERNAL USE

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

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

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
	0	6	6	Sand, well graded, poorly sorted, subangular gravel, brown , dry	Y ✓ N	
	6	13.5	7.5	Caliche, poorly-cemented, fine-grained sandy matrix, gravel, light tan, dry	Y ✓ N	
	13.5	55	41.5	Sand, well graded, well sorted, subangular gravel, light brown , moist	Y ✓ N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:					TOTAL ESTIMATED WELL YIELD (gpm): 0.00	
<input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER - SPECIFY:						
5. TEST; RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.				
	MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface. Logs adapted from WSP on-site geologist.					
	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Shane Eldridge, Cameron Pruitt, Carmelo Trevino					
6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING: <div style="display: flex; justify-content: space-between;"> <div>  SIGNATURE OF DRILLER / PRINT SIGNEE NAME </div> <div> Jackie D. Atkins DATE </div> </div>					

DSE 011 FEB 4 2022 10:34

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/2017)

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



PLUGGING RECORD



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

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-4583 POD1 (TW-1)

Well owner: Lucid Energy Group(Michael Gant)

Phone No.: 575-810-6144

Mailing address: 201 S 4th St.

City: Artesia

State: NM

Zip code: 88210

II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Jackie D. Atkins (Atkins Engineering Associates Inc.)
- 2) New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/23
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Lupe Leyba
- 4) Date well plugging began: 1/21/2022 Date well plugging concluded: 1/21/2022
- 5) GPS Well Location: Latitude: 32 deg, 2 min, 15.69 sec
Longitude: 103 deg, 27 min, 54.67 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 55.2 ft below ground level (bgl),
by the following manner: weighted tape
- 7) Static water level measured at initiation of plugging: n/a ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: 12/20/2021
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

USE DTI FEB 4 2022 09:10:34

- For each interval plugged, describe within the following columns:**

<u>Depth</u> (ft bgl)	<u>Plugging Material Used</u> (include any additives used)	<u>Volume of Material Placed</u> (gallons)	<u>Theoretical Volume of Borehole/ Casing</u> (gallons)	<u>Placement Method</u> (tremie pipe, other)	<u>Comments</u> ("casing perforated first", "open annular space also plugged", etc.)
0-10' Hydrated Bentonite		Approx. 18 gallons	15 gallons	Augers	
10'-55' Drill Cuttings		Approx. 71 gallons	71 gallons	Boring	

OSE DTI FEB 4 2022 PM10:34

05E 011 FEB 4 2022 PM 10:34

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

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

Jack Atkins

2/1/2022

Signature of Well Driller

Date _____






C-4583_OSE_Well Record and Log_-forsign

Final Audit Report

2022-02-01

Created:	2022-02-01
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAA5w9tkOjyA6NWhFADmwIV5Gt_HBjP1SLB


"C-4583_OSE_Well Record and Log_-forsign" History

-  Document created by Lucas Middleton (lucas@atkinseng.com)
2022-02-01 - 5:07:59 PM GMT- IP address: 69.21.248.123
-  Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2022-02-01 - 5:08:49 PM GMT
-  Email viewed by Jack Atkins (jack@atkinseng.com)
2022-02-01 - 5:28:15 PM GMT- IP address: 64.90.153.232
-  Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2022-02-01 - 5:31:04 PM GMT - Time Source: server- IP address: 64.90.153.232
-  Agreement completed.
2022-02-01 - 5:31:04 PM GMT

OSE DII FEB 4 2022 AM 10:34



Adobe Sign

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220				Boring Name:		Date:		
				BH01		1/5 & 1/6/2022		
				Site Name: Rattlesnake SWD Pump				
				DTW Boring				
WSP Job Number: 31403665.009				Logged By: AB		Method: Hollow Stem Auger		
LITHOLOGIC / SOIL SAMPLING LOG				Lat/Long: 32.037691, -103.465185		Field Screening: n/a		
				Hole Diameter: 6 inches		Total Depth: 55 feet		
Comments: Moisture content "M" - Moist; Once TD was reached, the boring was left open for at least 72 hours.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D			No	BH01	0	0		0-6' bgs: dry brown well-graded SAND (f. - c.) with silt and poorly sorted, subangular gravel (3 - 15 mm), no plasticity, no cohesiveness, trace roots, no odor
D					5	5	SW-SM	6-13.5' bgs: dry light tan CALICHE, poorly-cemented, no plasticity, no cohesiveness, fine-grained sandy matrix with well-sorted, subrounded gravel (4 - 6mm), no odor
D					10	10	CCHE	13.5-55' bgs: dry to moist light brown well-graded SAND (f. - c.) with silt and well-sorted, subrounded gravel (4 - 6 mm), no plasticity, no cohesiveness, no odor
D					15	15	SW-SM	general increased fines, increased red and darker soil coloring with depth, decrease gravel content
D					20	20	SW-SM	
D					25	25	SW-SM	
M					30	30	SW-SM	
M					35	35	SW-SM	
M					40	40	SW-SM	
M					45	45	SW-SM	
M					50	50	SW-SM	
D					55	55	SW-SM	


 <div>WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</div>	BH or PH Name: BH01	Date: 4/22/2022
	Site Name: Rattlesnake SWD Pump Station	
	RP or Incident Number: NRM1929839706	
	WSP Job Number: 31403665.009	


LITHOLOGIC / SOIL SAMPLING LOG		Logged By: MR, AD	Method: Back hoe
Lat/Long: 32.038771,-103.466485	Field Screening: Chloride, PID	Hole Diameter: N/A	Total Depth: 2 ft


Comments: Includes the correction factor of 1.4, SAA; Same As Above


Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	1,646	0	N	BH01	1	1	SP-SM	SAND, poorly graded sand with silt and gravel, moist, non plastic fines, dark brown, no stain, no odor
M	3,573	0.0	N		2	2	SP-SM	SAA


TD @ 2 ft bgs


 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220					BH or PH Name: BH02		Date: 4/22/2022	
					Site Name: Rattlesnake SWD Pump Station			
					RP or Incident Number: NRM1929839706			
					WSP Job Number: 31403665.009			
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long: 32.038776,-103.466428			Field Screening: Chloride, PID		Hole Diameter: N/A		Total Depth: 2 ft	
Comments: Includes the correction factor of 1.4, SAA; Same As Above								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	296	0	N	BH02	1	1	SP-SM	SAND, poorly graded sand with silt and gravel, moist, non-plastic fines, dark brown, no stain, no odor
M	296	0.0	N		2	2	SP-SM	SAA, but abundant gravel
TD @ 2 ft bgs								


 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220					BH or PH Name: BH03		Date: 4/22/2022		
					Site Name: Rattlesnake SWD Pump Station				
					RP or Incident Number: NRM1929839706				
					WSP Job Number: 31403665.009				
LITHOLOGIC / SOIL SAMPLING LOG									
Lat/Long: 32.038821,-103.466357				Field Screening: Chloride, PID		Hole Diameter: N/A		Total Depth: 2 ft	
Comments: Includes the correction factor of 1.4, SAA; Same As Above									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
M	<130	0	N	BH03	1	1	SP-SM	SAND, poorly graded sand with silt and gravel, moist, non-plastic fines, dark brown, no stain, no odor	
M	<130	0.0	N		2	2	SP-SM	SAA, but abundant gravel	
TD @ 2 ft bgs									


 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220					BH or PH Name: BH04		Date: 4/22/2022		
					Site Name: Rattlesnake SWD Pump Station				
					RP or Incident Number: NRM1929839706				
					WSP Job Number: 31403665.00				
LITHOLOGIC / SOIL SAMPLING LOG									
Lat/Long: 32.038766,-103.466305				Field Screening: Chloride, PID		Hole Diameter: N/A		Total Depth: 2 ft	
Comments: Includes the correction factor of 1.4, SAA; Same As Above									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
M	<130	0	N	BH04	1	1	SP-SM	SAND, poorly graded sand with silt and gravel, moist, non-plastic fines, dark brown, no stain, no odor	
M	<130	0.0	N		2	2	SP-SM	SAA, but abundant gravel	
TD @ 2 ft bgs									

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220					BH or PH Name: BH05		Date:4/22/2022		
					Site Name: Rattlesnake SWD Pump Station				
					RP or Incident Number: NRM1929839706				
					WSP Job Number: 31403665.00				
LITHOLOGIC / SOIL SAMPLING LOG									
Lat/Long: 32.038703,-103.466348				Field Screening: Chloride, PID		Hole Diameter: N/A		Total Depth:2 ft	
Comments: Includes the correction factor of 1.4, SAA; Same As Above									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
M	<130	0	N	BH05	1	1	SP-SM	SAND, poorly graded sand with silt and gravel,moist, non-plastic fines,dark brown, no stain, no odor	
M	<130	0.0	N		2	2	SP-SM	SAA,but abundant gravel	
TD @ 2 ft bgs									

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220					BH or PH Name: BH06		Date:4/22/2022		
					Site Name: Rattlesnake SWD Pump Station				
					RP or Incident Number: NRM1929839706				
					WSP Job Number: 31403665.00				
LITHOLOGIC / SOIL SAMPLING LOG									
Lat/Long: 32.038717,-103.466433				Field Screening: Chloride, PID		Hole Diameter: N/A		Total Depth:2 ft	
Comments: Includes the correction factor of 1.4, SAA; Same As Above									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
M	252	0	N	BH06	1	1	SP-SM	SAND, poorly graded sand with silt and gravel,moist, non-plastic fines,dark brown, no stain, no odor	
M	392	0.0	N		2	2	SP-SM	SAA,but abundant gravel	
TD @ 2 ft bgs									

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220					BH or PH Name:BHO7		Date:4/22/2022		
					Site Name: Rattlesnake SWD Pump Station				
					RP or Incident Number: NRM1929839706				
					WSP Job Number:				
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: AD,MR		Method:Back hoe		
Lat/Long: 32.038733,-103.466552			Field Screening: Chloride, PID			Hole Diameter: N/A		Total Depth:2 ft	
Comments: Includes the correction factor of 1.4 SAA; Same As Above									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
M	<130	0	N	BH07	1	1	SP-SM	SAND,poorly graded sand with silt and gravel,moist,non plastic fines,dark brown,no stain, no odor	
M	<130	0.4	N		2	2	SP-SM	SAA,but abundant gravel TD @ 2 ft bgs	

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220								BH or PH Name: BH08		Date: 4/22/2022	
								Site Name: Rattlesnake SWD Pump Station			
								RP or Incident Number: NRM1929839706			
								WSP Job Number: 31403665.00			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: MR, AD		Method: Back hoe	
Lat/Long: 32.038784,-103.466443				Field Screening: Chloride, PID				Hole Diameter: N/A		Total Depth: 4 ft	
Comments: Includes the correction factor of 1.4, SAA; Same As Above											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
						0					
M	643	0	N	BH08	1	1	SP-SM	SAND, poorly graded sand with silt and gravel, moist, non-plastic fines, dark brown, no stain, no odor			
M	643	0.4	N			2	SP-SM	SAA, but abundant gravel			
D	3,416	350	N			3	CCHE	CALICHE, large gravel, tan, non plastic fines, well graded gravel, no stain, slight odor			
D	3,416	400	N			4	CCHE	SAA, but strong odor			
TD @ 4 ft bgs											

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220								BH or PH Name: BH09		Date: 4/22/2022	
								Site Name: Rattlesnake SWD Pump Station			
								RP or Incident Number: NRM1929839707			
								WSP Job Number:			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: AD,MR		Method: Back hoe	
Lat/Long: 32.038822,-103.466518				Field Screening: Chloride, PID				Hole Diameter: N/A		Total Depth: 2 ft	
Comments: Includes the correction factor of 1.4, SAA; Same As Above											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
M	<130	1	N	BH09	1	1	SP-SM	Poorly graded sand with silt and gravel, moist, no stain, no odor Non Plastic fines, dark brown			
M	<130	0.0	N		2	2	SP-SM	SAA			
TD @ 2ft bgs											

ATTACHMENT 3: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG		
Lucid Energy Delaware	Rattlesnake SWD Pump Eddy County, New Mexico	NRM1929839706


Photo No.	Date	
1	April 25, 2022	
Photo taken during excavation activities.		

Photo No.	Date	
2	April 25, 2022	
Photo taken during excavation activities.		



PHOTOGRAPHIC LOG		
Lucid Energy Delaware	Rattlesnake SWD Pump Eddy County, New Mexico	NRM1929839706

Photo No.	Date	
3	April 26, 2022	
Photo taken during excavation activities.		

Photo No.	Date	
4	April 26, 2022	
Photo taken during excavation activities.		

ATTACHMENT 4: LABORATORY ANALYTICAL RESULTS



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

May 09, 2022

Michael Gant
Lucid Energy
201 South 4th St.
Artesia, NM 88210
TEL:
FAX

RE: Rattlesnake SWD Pump

OrderNo.: 2204C67

Dear Michael Gant:

Hall Environmental Analysis Laboratory received 4 sample(s) on 4/28/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2204C67

Date Reported: 5/9/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: SW01

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 2:50:00 PM

Lab ID: 2204C67-001

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	5/3/2022 8:47:10 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/3/2022 8:47:10 PM
Surr: DNOP	98.4	51.1-141		%Rec	1	5/3/2022 8:47:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/2/2022 6:53:35 PM
Surr: BFB	97.2	37.7-212		%Rec	1	5/2/2022 6:53:35 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/2/2022 6:53:35 PM
Toluene	ND	0.048		mg/Kg	1	5/2/2022 6:53:35 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/2/2022 6:53:35 PM
Xylenes, Total	ND	0.096		mg/Kg	1	5/2/2022 6:53:35 PM
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	5/2/2022 6:53:35 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	240	60		mg/Kg	20	5/5/2022 12:15:01 AM

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

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

Analytical Report

Lab Order 2204C67

Date Reported: 5/9/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: SW02

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 2:55:00 PM

Lab ID: 2204C67-002

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/3/2022 9:11:41 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/3/2022 9:11:41 PM
Surr: DNOP	98.4	51.1-141		%Rec	1	5/3/2022 9:11:41 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/2/2022 7:17:02 PM
Surr: BFB	97.3	37.7-212		%Rec	1	5/2/2022 7:17:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/2/2022 7:17:02 PM
Toluene	ND	0.047		mg/Kg	1	5/2/2022 7:17:02 PM
Ethylbenzene	ND	0.047		mg/Kg	1	5/2/2022 7:17:02 PM
Xylenes, Total	ND	0.094		mg/Kg	1	5/2/2022 7:17:02 PM
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	5/2/2022 7:17:02 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	200	60		mg/Kg	20	5/5/2022 12:27:25 AM

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

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

Analytical Report

Lab Order 2204C67

Date Reported: 5/9/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: SW03

Project: Rattlesnake SWD Pump

Collection Date: 4/26/2022 11:10:00 AM

Lab ID: 2204C67-003

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/3/2022 9:36:23 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/3/2022 9:36:23 PM
Surr: DNOP	92.5	51.1-141		%Rec	1	5/3/2022 9:36:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/2/2022 7:40:33 PM
Surr: BFB	97.3	37.7-212		%Rec	1	5/2/2022 7:40:33 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/2/2022 7:40:33 PM
Toluene	ND	0.049		mg/Kg	1	5/2/2022 7:40:33 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/2/2022 7:40:33 PM
Xylenes, Total	ND	0.097		mg/Kg	1	5/2/2022 7:40:33 PM
Surr: 4-Bromofluorobenzene	96.0	70-130		%Rec	1	5/2/2022 7:40:33 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	270	60		mg/Kg	20	5/5/2022 12:39:50 AM

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

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

Page 3 of 8

Analytical Report

Lab Order 2204C67

Date Reported: 5/9/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: SW04

Project: Rattlesnake SWD Pump

Collection Date: 4/26/2022 11:15:00 AM

Lab ID: 2204C67-004

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/3/2022 10:00:59 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/3/2022 10:00:59 PM
Surr: DNOP	86.1	51.1-141		%Rec	1	5/3/2022 10:00:59 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/2/2022 8:03:55 PM
Surr: BFB	98.6	37.7-212		%Rec	1	5/2/2022 8:03:55 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/2/2022 8:03:55 PM
Toluene	ND	0.049		mg/Kg	1	5/2/2022 8:03:55 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/2/2022 8:03:55 PM
Xylenes, Total	ND	0.098		mg/Kg	1	5/2/2022 8:03:55 PM
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	1	5/2/2022 8:03:55 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	250	60		mg/Kg	20	5/5/2022 12:52:15 AM

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2204C67

09-May-22

Client: Lucid Energy
Project: Rattlesnake SWD Pump

Sample ID: MB-67266	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 67266	RunNo: 87761								
Prep Date: 5/4/2022	Analysis Date: 5/4/2022	SeqNo: 3108607	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-67266	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 67266	RunNo: 87761								
Prep Date: 5/4/2022	Analysis Date: 5/4/2022	SeqNo: 3108608	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Qualifiers:

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

Page 5 of 8

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

WO#: 2204C67

09-May-22

Client: Lucid Energy
Project: Rattlesnake SWD Pump

Sample ID: MB-67173	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 67173	RunNo: 87671								
Prep Date: 4/29/2022	Analysis Date: 5/3/2022	SeqNo: 3104297	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	5.3		10.00		52.8	51.1	141			

Sample ID: LCS-67173	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 67173	RunNo: 87671								
Prep Date: 4/29/2022	Analysis Date: 5/3/2022	SeqNo: 3106761	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.7	68.9	135			
Surr: DNOP	2.6		5.000		52.5	51.1	141			

Qualifiers:

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

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

WO#: 2204C67

09-May-22

Client: Lucid Energy
Project: Rattlesnake SWD Pump

Sample ID: mb-67165	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 67165	RunNo: 87658								
Prep Date: 4/29/2022	Analysis Date: 5/2/2022	SeqNo: 3103516	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	980		1000		97.9	37.7	212			

Sample ID: lcs-67165	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 67165	RunNo: 87658								
Prep Date: 4/29/2022	Analysis Date: 5/2/2022	SeqNo: 3103517	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.5	72.3	137			
Surr: BFB	2000		1000		200	37.7	212			

Qualifiers:

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

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

WO#: 2204C67

09-May-22

Client: Lucid Energy
Project: Rattlesnake SWD Pump

Sample ID: mb-67165	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 67165	RunNo: 87658								
Prep Date: 4/29/2022	Analysis Date: 5/2/2022	SeqNo: 3103563	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.4	70	130			

Sample ID: LCS-67165	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 67165	RunNo: 87658								
Prep Date: 4/29/2022	Analysis Date: 5/2/2022	SeqNo: 3103564	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.025	1.000	0	80.1	80	120			
Toluene	0.84	0.050	1.000	0	84.3	80	120			
Ethylbenzene	0.85	0.050	1.000	0	85.4	80	120			
Xylenes, Total	2.6	0.10	3.000	0	86.2	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		99.0	70	130			

Qualifiers:

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



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**Work Order Number: **2204C67**RcptNo: **1**Received By: **Desiree Dominguez** **4/28/2022 2:45:00 PM**Completed By: **Desiree Dominguez** **4/28/2022 3:28:18 PM**Reviewed By: **JN 4/28/22***JD**JD*

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐5. Sample(s) in proper container(s)? Yes ☒ No ☐6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒10. Were any sample containers received broken? Yes ☐ No ☒11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐13. Is it clear what analyses were requested? Yes ☒ No ☐14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐# of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: *JN 4-28-22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good				

Chain-of-Custody Record

Client:	Lucid Energy Group
	Michael Gant
Mailing Address:	201 S 4th Artesia, NM 88210
Phone #:	575-810-6144
	email or Fax#: mgant@lucid-energy.com
QA/QC Package:	
<input type="checkbox"/> Standard	<input type="checkbox"/> Level 4 (Full Validation)

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

Turn-Around Time:

☐ Standard ☒ Rush 5 day

Project Name:
Rattlesnake SWD Pump

Project #:	31403665.009
------------	--------------

Project Manager:
Travis L. Casey

Sampler:

On Ice: ☒ Yes ☐ No

of Coolers:


Cooler Temp (including CF): $2.4 + 0.0 = 2.4^{\circ}\text{C}$ Container
Type and #Preservative
Type

HEAL No.


2204C67

[illegible]

Date:	Time:	Relinquished by:
4/27/2022	10:38	<i>[Signature]</i>

Date:	Time:	Relinquished by:
4/27/20	1900	

Received by:	Via:	Date	Time
<i>[Signature]</i>		4/27/22	1038

Received by:	Via:	Date	Time
	Courier	4.28.22	14:45

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

[illegible]

Remarks:
Direct bill to Lucid Energy
Prop # 195211500
Company # 860
Send confirmation and lab report to joe.hernandez@wsp.com

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



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

May 10, 2022

Michael Gant
Lucid Energy
201 South 4th St.
Artesia, NM 88210
TEL:
FAX:

RE: Rattlesnake SWD Pump

OrderNo.: 2204C68

Dear Michael Gant:

Hall Environmental Analysis Laboratory received 18 sample(s) on 4/28/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH01

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 12:30:00 PM

Lab ID: 2204C68-001

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	5/3/2022 10:25:37 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/3/2022 10:25:37 PM
Surr: DNOP	85.8	51.1-141		%Rec	1	5/3/2022 10:25:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/2/2022 9:14:27 PM
Surr: BFB	96.7	37.7-212		%Rec	1	5/2/2022 9:14:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/2/2022 9:14:27 PM
Toluene	ND	0.050		mg/Kg	1	5/2/2022 9:14:27 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/2/2022 9:14:27 PM
Xylenes, Total	ND	0.099		mg/Kg	1	5/2/2022 9:14:27 PM
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	5/2/2022 9:14:27 PM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	210	60		mg/Kg	20	5/4/2022 2:45:49 AM

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

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

Page 1 of 25

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH01A

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 12:35:00 PM

Lab ID: 2204C68-002

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	5/3/2022 10:50:07 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/3/2022 10:50:07 PM
Surr: DNOP	82.2	51.1-141		%Rec	1	5/3/2022 10:50:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/2/2022 9:37:57 PM
Surr: BFB	99.9	37.7-212		%Rec	1	5/2/2022 9:37:57 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/2/2022 9:37:57 PM
Toluene	ND	0.049		mg/Kg	1	5/2/2022 9:37:57 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/2/2022 9:37:57 PM
Xylenes, Total	ND	0.097		mg/Kg	1	5/2/2022 9:37:57 PM
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	5/2/2022 9:37:57 PM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	480	60		mg/Kg	20	5/4/2022 2:58:14 AM

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

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

Page 2 of 25

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH02

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 12:40:00 PM

Lab ID: 2204C68-003

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	5/3/2022 11:14:40 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/3/2022 11:14:40 PM
Surr: DNOP	88.6	51.1-141		%Rec	1	5/3/2022 11:14:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/2/2022 10:01:33 PM
Surr: BFB	96.2	37.7-212		%Rec	1	5/2/2022 10:01:33 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/2/2022 10:01:33 PM
Toluene	ND	0.050		mg/Kg	1	5/2/2022 10:01:33 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/2/2022 10:01:33 PM
Xylenes, Total	ND	0.10		mg/Kg	1	5/2/2022 10:01:33 PM
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	5/2/2022 10:01:33 PM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	130	60		mg/Kg	20	5/4/2022 3:10:38 AM

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

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

Page 3 of 25

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH02A

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 12:45:00 PM

Lab ID: 2204C68-004

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	8.3		mg/Kg	1	5/3/2022 5:31:49 AM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	5/3/2022 5:31:49 AM
Surr: DNOP	52.6	51.1-141		%Rec	1	5/3/2022 5:31:49 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/2/2022 9:12:00 PM
Surr: BFB	103	37.7-212		%Rec	1	5/2/2022 9:12:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	5/2/2022 9:12:00 PM
Toluene	ND	0.050		mg/Kg	1	5/2/2022 9:12:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/2/2022 9:12:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	5/2/2022 9:12:00 PM
Surr: 4-Bromofluorobenzene	81.5	70-130		%Rec	1	5/2/2022 9:12:00 PM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	260	60		mg/Kg	20	5/4/2022 3:23:03 AM

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

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

Page 4 of 25

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH03

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 1:45:00 PM

Lab ID: 2204C68-005

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	5/3/2022 5:56:07 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/3/2022 5:56:07 AM
Surr: DNOP	55.1	51.1-141		%Rec	1	5/3/2022 5:56:07 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/2/2022 10:11:00 PM
Surr: BFB	103	37.7-212		%Rec	1	5/2/2022 10:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	5/2/2022 10:11:00 PM
Toluene	ND	0.050		mg/Kg	1	5/2/2022 10:11:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/2/2022 10:11:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	5/2/2022 10:11:00 PM
Surr: 4-Bromofluorobenzene	84.4	70-130		%Rec	1	5/2/2022 10:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	66	59		mg/Kg	20	5/4/2022 3:35:28 AM

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

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

Page 5 of 25

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH03A

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 1:50:00 PM

Lab ID: 2204C68-006

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/3/2022 6:20:09 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/3/2022 6:20:09 AM
Surr: DNOP	59.8	51.1-141		%Rec	1	5/3/2022 6:20:09 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/2/2022 11:10:00 PM
Surr: BFB	102	37.7-212		%Rec	1	5/2/2022 11:10:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	5/2/2022 11:10:00 PM
Toluene	ND	0.049		mg/Kg	1	5/2/2022 11:10:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/2/2022 11:10:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	5/2/2022 11:10:00 PM
Surr: 4-Bromofluorobenzene	82.0	70-130		%Rec	1	5/2/2022 11:10:00 PM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	170	60		mg/Kg	20	5/4/2022 4:12:41 AM

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

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

Page 6 of 25

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH04

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 2:10:00 PM

Lab ID: 2204C68-007

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	5/3/2022 6:44:27 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/3/2022 6:44:27 AM
Surr: DNOP	55.2	51.1-141		%Rec	1	5/3/2022 6:44:27 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/2/2022 11:30:00 PM
Surr: BFB	102	37.7-212		%Rec	1	5/2/2022 11:30:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	5/2/2022 11:30:00 PM
Toluene	ND	0.049		mg/Kg	1	5/2/2022 11:30:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/2/2022 11:30:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	5/2/2022 11:30:00 PM
Surr: 4-Bromofluorobenzene	81.9	70-130		%Rec	1	5/2/2022 11:30:00 PM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	75	60		mg/Kg	20	5/4/2022 4:25:06 AM

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

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

Page 7 of 25

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH04A

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 2:15:00 PM

Lab ID: 2204C68-008

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/3/2022 7:08:34 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/3/2022 7:08:34 AM
Surr: DNOP	56.6	51.1-141		%Rec	1	5/3/2022 7:08:34 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/2/2022 11:50:00 PM
Surr: BFB	101	37.7-212		%Rec	1	5/2/2022 11:50:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	5/2/2022 11:50:00 PM
Toluene	ND	0.048		mg/Kg	1	5/2/2022 11:50:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/2/2022 11:50:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	5/2/2022 11:50:00 PM
Surr: 4-Bromofluorobenzene	82.0	70-130		%Rec	1	5/2/2022 11:50:00 PM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	300	60		mg/Kg	20	5/4/2022 4:37:30 AM

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

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

Page 8 of 25

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH05

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 2:30:00 PM

Lab ID: 2204C68-009

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/3/2022 7:32:41 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/3/2022 7:32:41 AM
Surr: DNOP	60.5	51.1-141		%Rec	1	5/3/2022 7:32:41 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/3/2022 12:10:00 AM
Surr: BFB	104	37.7-212		%Rec	1	5/3/2022 12:10:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	5/3/2022 12:10:00 AM
Toluene	ND	0.050		mg/Kg	1	5/3/2022 12:10:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/3/2022 12:10:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	5/3/2022 12:10:00 AM
Surr: 4-Bromofluorobenzene	84.2	70-130		%Rec	1	5/3/2022 12:10:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	120	60		mg/Kg	20	5/4/2022 4:49:55 AM

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

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

Page 9 of 25

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH05A

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 2:35:00 PM

Lab ID: 2204C68-010

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	5/3/2022 7:56:41 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	5/3/2022 7:56:41 AM
Surr: DNOP	59.9	51.1-141		%Rec	1	5/3/2022 7:56:41 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/3/2022 12:29:00 AM
Surr: BFB	106	37.7-212		%Rec	1	5/3/2022 12:29:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	5/3/2022 12:29:00 AM
Toluene	ND	0.049		mg/Kg	1	5/3/2022 12:29:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/3/2022 12:29:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	5/3/2022 12:29:00 AM
Surr: 4-Bromofluorobenzene	86.1	70-130		%Rec	1	5/3/2022 12:29:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	5/4/2022 5:02:19 AM

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

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

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH06

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 2:40:00 PM

Lab ID: 2204C68-011

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/3/2022 4:14:03 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/3/2022 4:14:03 PM
Surr: DNOP	82.7	51.1-141		%Rec	1	5/3/2022 4:14:03 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/3/2022 12:49:00 AM
Surr: BFB	104	37.7-212		%Rec	1	5/3/2022 12:49:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	5/3/2022 12:49:00 AM
Toluene	ND	0.050		mg/Kg	1	5/3/2022 12:49:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/3/2022 12:49:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	5/3/2022 12:49:00 AM
Surr: 4-Bromofluorobenzene	85.9	70-130		%Rec	1	5/3/2022 12:49:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	230	60		mg/Kg	20	5/5/2022 1:04:39 AM

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

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

Page 11 of 25

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH06A

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 2:45:00 PM

Lab ID: 2204C68-012

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/3/2022 4:24:55 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/3/2022 4:24:55 PM
Surr: DNOP	123	51.1-141		%Rec	1	5/3/2022 4:24:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/3/2022 1:09:00 AM
Surr: BFB	105	37.7-212		%Rec	1	5/3/2022 1:09:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	5/3/2022 1:09:00 AM
Toluene	ND	0.049		mg/Kg	1	5/3/2022 1:09:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/3/2022 1:09:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	5/3/2022 1:09:00 AM
Surr: 4-Bromofluorobenzene	84.7	70-130		%Rec	1	5/3/2022 1:09:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	240	60		mg/Kg	20	5/5/2022 1:17:03 AM

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

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

Page 12 of 25

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH07

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 2:50:00 PM

Lab ID: 2204C68-013

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/3/2022 4:35:46 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/3/2022 4:35:46 PM
Surr: DNOP	155	51.1-141	S	%Rec	1	5/3/2022 4:35:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/3/2022 1:29:00 AM
Surr: BFB	104	37.7-212		%Rec	1	5/3/2022 1:29:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	5/3/2022 1:29:00 AM
Toluene	ND	0.050		mg/Kg	1	5/3/2022 1:29:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/3/2022 1:29:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	5/3/2022 1:29:00 AM
Surr: 4-Bromofluorobenzene	82.0	70-130		%Rec	1	5/3/2022 1:29:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	83	60		mg/Kg	20	5/5/2022 1:29:28 AM

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

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

Page 13 of 25

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH07A

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 2:55:00 PM

Lab ID: 2204C68-014

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	5/3/2022 4:46:35 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/3/2022 4:46:35 PM
Surr: DNOP	128	51.1-141		%Rec	1	5/3/2022 4:46:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/3/2022 2:28:00 AM
Surr: BFB	96.9	37.7-212		%Rec	1	5/3/2022 2:28:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	5/3/2022 2:28:00 AM
Toluene	ND	0.048		mg/Kg	1	5/3/2022 2:28:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	5/3/2022 2:28:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	5/3/2022 2:28:00 AM
Surr: 4-Bromofluorobenzene	80.5	70-130		%Rec	1	5/3/2022 2:28:00 AM
EPA METHOD 300.0: ANIONS						Analyst: LRN
Chloride	120	60		mg/Kg	20	5/4/2022 7:29:13 PM

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

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

Page 14 of 25

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH08

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 3:05:00 PM

Lab ID: 2204C68-015

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	640	9.9		mg/Kg	1	5/3/2022 4:57:24 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/3/2022 4:57:24 PM
Surr: DNOP	124	51.1-141		%Rec	1	5/3/2022 4:57:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/3/2022 2:47:00 AM
Surr: BFB	100	37.7-212		%Rec	1	5/3/2022 2:47:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	5/3/2022 2:47:00 AM
Toluene	ND	0.050		mg/Kg	1	5/3/2022 2:47:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/3/2022 2:47:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	5/3/2022 2:47:00 AM
Surr: 4-Bromofluorobenzene	80.2	70-130		%Rec	1	5/3/2022 2:47:00 AM
EPA METHOD 300.0: ANIONS						Analyst: LRN
Chloride	1300	60		mg/Kg	20	5/4/2022 7:41:37 PM

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

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

Page 15 of 25

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH08A

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 3:10:00 PM

Lab ID: 2204C68-016

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/3/2022 5:08:13 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/3/2022 5:08:13 PM
Surr: DNOP	105	51.1-141		%Rec	1	5/3/2022 5:08:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/3/2022 3:07:00 AM
Surr: BFB	99.0	37.7-212		%Rec	1	5/3/2022 3:07:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	5/3/2022 3:07:00 AM
Toluene	ND	0.050		mg/Kg	1	5/3/2022 3:07:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/3/2022 3:07:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	5/3/2022 3:07:00 AM
Surr: 4-Bromofluorobenzene	81.9	70-130		%Rec	1	5/3/2022 3:07:00 AM
EPA METHOD 300.0: ANIONS						Analyst: LRN
Chloride	1000	60		mg/Kg	20	5/4/2022 7:54:03 PM

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

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

Page 16 of 25

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH09

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 3:35:00 PM

Lab ID: 2204C68-017

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	17	9.5		mg/Kg	1	5/3/2022 5:19:02 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/3/2022 5:19:02 PM
Surr: DNOP	98.6	51.1-141		%Rec	1	5/3/2022 5:19:02 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/3/2022 3:27:00 AM
Surr: BFB	105	37.7-212		%Rec	1	5/3/2022 3:27:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	5/3/2022 3:27:00 AM
Toluene	ND	0.049		mg/Kg	1	5/3/2022 3:27:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/3/2022 3:27:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	5/3/2022 3:27:00 AM
Surr: 4-Bromofluorobenzene	81.9	70-130		%Rec	1	5/3/2022 3:27:00 AM
EPA METHOD 300.0: ANIONS						Analyst: LRN
Chloride	ND	60		mg/Kg	20	5/4/2022 8:06:27 PM

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

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

Page 17 of 25

Analytical Report

Lab Order 2204C68

Date Reported: 5/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy

Client Sample ID: BH09A

Project: Rattlesnake SWD Pump

Collection Date: 4/25/2022 3:38:00 PM

Lab ID: 2204C68-018

Matrix: SOIL

Received Date: 4/28/2022 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/3/2022 5:29:48 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/3/2022 5:29:48 PM
Surr: DNOP	131	51.1-141		%Rec	1	5/3/2022 5:29:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/3/2022 3:47:00 AM
Surr: BFB	101	37.7-212		%Rec	1	5/3/2022 3:47:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	5/3/2022 3:47:00 AM
Toluene	ND	0.049		mg/Kg	1	5/3/2022 3:47:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/3/2022 3:47:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	5/3/2022 3:47:00 AM
Surr: 4-Bromofluorobenzene	82.8	70-130		%Rec	1	5/3/2022 3:47:00 AM
EPA METHOD 300.0: ANIONS						Analyst: LRN
Chloride	ND	60		mg/Kg	20	5/4/2022 8:18:52 PM

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

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

Page 18 of 25

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

WO#: 2204C68

10-May-22

Client: Lucid Energy
Project: Rattlesnake SWD Pump

Sample ID: MB-67244	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBS	Batch ID: 67244		RunNo: 87665							
Prep Date: 5/3/2022	Analysis Date: 5/3/2022		SeqNo: 3106432		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-67244	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSS	Batch ID: 67244		RunNo: 87665							
Prep Date: 5/3/2022	Analysis Date: 5/3/2022		SeqNo: 3106433		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.0	90	110			

Sample ID: MB-67267	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBS	Batch ID: 67267		RunNo: 87756							
Prep Date: 5/4/2022	Analysis Date: 5/4/2022		SeqNo: 3108183		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-67267	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSS	Batch ID: 67267		RunNo: 87756							
Prep Date: 5/4/2022	Analysis Date: 5/4/2022		SeqNo: 3108184		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.2	90	110			

Sample ID: MB-67266	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBS	Batch ID: 67266		RunNo: 87761							
Prep Date: 5/4/2022	Analysis Date: 5/4/2022		SeqNo: 3108607		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-67266	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSS	Batch ID: 67266		RunNo: 87761							
Prep Date: 5/4/2022	Analysis Date: 5/4/2022		SeqNo: 3108608		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Qualifiers:

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

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

WO#: 2204C68

10-May-22

Client: Lucid Energy
Project: Rattlesnake SWD Pump

Sample ID: MB-67173	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 67173	RunNo: 87671								
Prep Date: 4/29/2022	Analysis Date: 5/3/2022	SeqNo: 3104297 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	5.3		10.00		52.8	51.1	141			

Sample ID: MB-67195	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 67195	RunNo: 87671								
Prep Date: 5/2/2022	Analysis Date: 5/2/2022	SeqNo: 3104298 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	5.2		10.00		52.4	51.1	141			

Sample ID: 2204C68-011AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH06	Batch ID: 67196	RunNo: 87693								
Prep Date: 5/2/2022	Analysis Date: 5/3/2022	SeqNo: 3105174 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	9.9	49.55	9.408	97.5	36.1	154			
Surr: DNOP	4.7		4.955		95.7	51.1	141			

Sample ID: 2204C68-011AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH06	Batch ID: 67196	RunNo: 87693								
Prep Date: 5/2/2022	Analysis Date: 5/3/2022	SeqNo: 3105175 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	9.3	46.51	9.408	105	36.1	154	0.684	33.9	
Surr: DNOP	5.3		4.651		113	51.1	141	0	0	

Sample ID: LCS-67196	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 67196	RunNo: 87693								
Prep Date: 5/2/2022	Analysis Date: 5/3/2022	SeqNo: 3105199 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	10	50.00	0	112	68.9	135			
Surr: DNOP	4.9		5.000		98.1	51.1	141			

Qualifiers:

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

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

WO#: 2204C68

10-May-22

Client: Lucid Energy
Project: Rattlesnake SWD Pump

Sample ID: MB-67196	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 67196	RunNo: 87693								
Prep Date: 5/2/2022	Analysis Date: 5/3/2022	SeqNo: 3105200 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	16		10.00		159	51.1	141			S

Sample ID: LCS-67195	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 67195	RunNo: 87694								
Prep Date: 5/2/2022	Analysis Date: 5/3/2022	SeqNo: 3105598 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	101	68.9	135			
Surr: DNOP	3.6		5.000		72.7	51.1	141			

Sample ID: LCS-67173	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 67173	RunNo: 87671								
Prep Date: 4/29/2022	Analysis Date: 5/3/2022	SeqNo: 3106761 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.7	68.9	135			
Surr: DNOP	2.6		5.000		52.5	51.1	141			

Qualifiers:

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

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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

WO#: 2204C68

10-May-22

Client: Lucid Energy
Project: Rattlesnake SWD Pump

Sample ID: mb-67165	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 67165		RunNo: 87658							
Prep Date: 4/29/2022	Analysis Date: 5/2/2022		SeqNo: 3103516		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	980		1000		97.9	37.7	212			

Sample ID: lcs-67165	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 67165		RunNo: 87658							
Prep Date: 4/29/2022	Analysis Date: 5/2/2022		SeqNo: 3103517		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.5	72.3	137			
Surr: BFB	2000		1000		200	37.7	212			

Sample ID: lcs-67167	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 67167		RunNo: 87661							
Prep Date: 4/29/2022	Analysis Date: 5/2/2022		SeqNo: 3103657		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	111	72.3	137			
Surr: BFB	2300		1000		226	37.7	212			S

Sample ID: mb-67167	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 67167		RunNo: 87661							
Prep Date: 4/29/2022	Analysis Date: 5/2/2022		SeqNo: 3103658		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		104	37.7	212			

Sample ID: 2204c68-004ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH02A	Batch ID: 67167		RunNo: 87661							
Prep Date: 4/29/2022	Analysis Date: 5/2/2022		SeqNo: 3103660		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.9	24.27	0	102	70	130			
Surr: BFB	2000		970.9		210	37.7	212			

Sample ID: 2204c68-004amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH02A	Batch ID: 67167		RunNo: 87661							
Prep Date: 4/29/2022	Analysis Date: 5/2/2022		SeqNo: 3103661		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2204C68

10-May-22

Client: Lucid Energy
Project: Rattlesnake SWD Pump

Sample ID: 2204c68-004amsd		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: BH02A		Batch ID: 67167		RunNo: 87661						
Prep Date: 4/29/2022		Analysis Date: 5/2/2022		SeqNo: 3103661			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	24.85	0	105	70	130	5.76	20	
Surr: BFB	2200		994.0		218	37.7	212	0	0	S

Qualifiers:

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

Page 23 of 25

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

WO#: 2204C68

10-May-22

Client: Lucid Energy
Project: Rattlesnake SWD Pump

Sample ID: mb-67165	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 67165	RunNo: 87658								
Prep Date: 4/29/2022	Analysis Date: 5/2/2022	SeqNo: 3103563 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.4	70	130			

Sample ID: LCS-67165	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 67165	RunNo: 87658								
Prep Date: 4/29/2022	Analysis Date: 5/2/2022	SeqNo: 3103564 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.025	1.000	0	80.1	80	120			
Toluene	0.84	0.050	1.000	0	84.3	80	120			
Ethylbenzene	0.85	0.050	1.000	0	85.4	80	120			
Xylenes, Total	2.6	0.10	3.000	0	86.2	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		99.0	70	130			

Sample ID: lcs-67167	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 67167	RunNo: 87661								
Prep Date: 4/29/2022	Analysis Date: 5/2/2022	SeqNo: 3103705 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	91.3	80	120			
Toluene	0.93	0.050	1.000	0	93.2	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.2	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.6	80	120			
Surr: 4-Bromofluorobenzene	0.82		1.000		82.4	70	130			

Sample ID: mb-67167	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 67167	RunNo: 87661								
Prep Date: 4/29/2022	Analysis Date: 5/2/2022	SeqNo: 3103706 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.84		1.000		84.1	70	130			

Qualifiers:

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

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

WO#: 2204C68

10-May-22

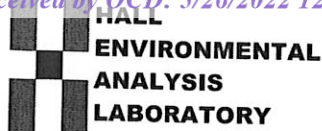
Client: Lucid Energy
Project: Rattlesnake SWD Pump

Sample ID: 2204c68-005ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH03	Batch ID: 67167	RunNo: 87661								
Prep Date: 4/29/2022	Analysis Date: 5/2/2022	SeqNo: 3103709 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.024	0.9747	0	82.1	68.8	120			
Toluene	0.83	0.049	0.9747	0	84.7	73.6	124			
Ethylbenzene	0.84	0.049	0.9747	0	85.9	72.7	129			
Xylenes, Total	2.5	0.097	2.924	0	85.8	75.7	126			
Surr: 4-Bromofluorobenzene	0.79		0.9747		81.4	70	130			

Sample ID: 2204c68-005amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH03	Batch ID: 67167	RunNo: 87661								
Prep Date: 4/29/2022	Analysis Date: 5/2/2022	SeqNo: 3103710 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.024	0.9718	0	86.0	68.8	120	4.35	20	
Toluene	0.86	0.049	0.9718	0	88.2	73.6	124	3.79	20	
Ethylbenzene	0.87	0.049	0.9718	0	89.7	72.7	129	3.99	20	
Xylenes, Total	2.6	0.097	2.915	0	89.5	75.7	126	3.96	20	
Surr: 4-Bromofluorobenzene	0.79		0.9718		81.5	70	130	0	0	

Qualifiers:

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



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**

Work Order Number: **2204C68**

RcptNo: 1

Received By: **Desiree Dominguez** 4/28/2022 2:45:00 PM

DD

Completed By: **Desiree Dominguez** 4/28/2022 3:33:43 PM

DD

Reviewed By: *SM 4/28/22*

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐

2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐

4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐

5. Sample(s) in proper container(s)? Yes ☒ No ☐

6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐

7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐

8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐

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

10. Were any sample containers received broken? Yes ☐ No ☒

11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐

12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐

13. Is it clear what analyses were requested? Yes ☒ No ☐

14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: *SM 4/28/22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good				

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.

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.

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 111129

CONDITIONS

Operator: LUCID ENERGY DELAWARE, LLC 201 S. Fourth Street Artesia, NM 88210	OGRID: 372422
	Action Number: 111129
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Closure report approved. Release Resolved. The report failed to provide a substantial amount of the applicable 19.15.29 NMAC requirements. A follow up email will be submitted to the responsible party which will include the deficiencies, reasoning for the approval, and a pronouncement of OCD stance for any future reportable incidents. This email will then be recorded and inserted within the incident file associated with this release.	7/13/2022