



LT Environmental, Inc.

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

September 28, 2020

District 2
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

**RE: Variance and Closure Request
Saguaro 12" Line
Incident Number NRM1935234977
Eddy County, New Mexico**

To Whom it May Concern:

LT Environmental, Inc. (LTE), on behalf of Lucid Energy Group (Lucid), presents the following Variance and Deferral Request detailing site assessment and soil sampling activities at the Saguaro 12" Line (Site) in Unit C, Section 23, Township 20 South, Range 24 East, in Eddy County, New Mexico under surface ownership of the Bureau of Land Management (BLM) (Figure 1). The purpose of the site assessment and soil sampling activities was to confirm the presence or absence of impacts to soil associated with a release of natural gas at the Site, subsequent excavation and *in-situ* treatment of impacted soil.

On May 29, 2020, Lucid was notified of the denial associated with an original Variance and Deferral Request dated April 15, 2020. Lucid previously excavated 117 cubic yards of impacted soil surrounding active subsurface pipelines and requested a deferral to address remaining identified impacts during future construction or removal of the pipelines. The New Mexico Oil Conservation Division (NMOCD) denied the request due to the high potential for karst occurrence and the release occurring off of a developed well pad (although it did occur in a developed pipeline right-of-way [ROW]). The NMOCD requested use of alternative remediation methods to address the remaining hydrocarbon impacts on the floor of the excavation, specifically at soil sample location B-8-C. Additionally, Lucid had requested a variance for one vertical delineation sample that slightly exceeded the applicable Table 1 Closure Criteria. The NMOCD did not approve or deny that variance, but requested additional information regarding the laboratory analytical uncertainty associated with the result.

In response to the NMOCD denial, Lucid and LTE have conducted additional site remediation activities and collected new samples from the excavation floor near former soil sample B-8-C. LTE evaluated uncertainty for the analytical result of delineation soil sample BH09A. Based on field observations, field screening, compiled and final laboratory analytical results from soil sampling activities, Lucid is submitting this Variance and Closure Request.



REVISIONS

The revised report addresses the following updates:

- On July 27, 2020, LTE returned to the Site to apply a bio-remediation agent, Liquid Remediate™, to the floor of the excavation. The Site was left undisturbed for a 30-day incubation period with regular watering events for increased soil moisture content. On September 2, 2020, Lucid collected and submitted final confirmation floor samples of the treated soil inside the excavation. All samples were compliant with site-specific Closure Criteria;
- LTE contacted Xenco Laboratories in Midland, TX for further clarification of the United States Environmental Protection Agency (EPA) Method 300.0 Anions test for chloride concentration and the associated measurement uncertainty. Xenco defines its Relative Percent Difference (RPD) or measure of uncertainty to be approximately 20 percent (%) for the results pertaining to the analytical report for soil sample BH09A. Factoring the RPD into the results for chloride analysis of soil sample BH09A, results for chloride are in range of 488 mg/kg to 732 mg/kg.
- Support that identified chloride concentrations associated with soil sample BH09A are equally protective of public health and environment based on the depth of the identified concentration and lack of open pathways to nearby receptors.
- The revised Variance and Closure Request only includes field summaries relevant to fulfilling the conditions issued by the NMOCD on May 29, 2020.

RELEASE BACKGROUND

On October 23, 2019, it was discovered that a pinhole leak developed on a subsurface flow line due to internal corrosion. Approximately 8 Million cubic feet (Mmcf) of natural gas were released to the surrounding area. The release was initially identified by aerial imagery at a later date. Upon further investigation, it was determined that an immediate notice detailing the date and hour of occurrence was not documented. Lucid attentively reported the release to Jim Amos with the BLM and to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on October 24, 2019, which was received by the NMOCD on October 29, 2019 and was assigned Incident Number NRM1935234977 on December 18, 2019. The Form C-141 is provided as Attachment 1.

SITE CHARACTERIZATION

LTE 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 estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 323341104330401, located approximately 3,052 feet east of the Site. The groundwater well has a reported depth to groundwater of approximately 236 feet bgs and a total depth of approximately 272 feet bgs. The closest continuously-flowing water or significant watercourse to the Site is an intermittent stream, located approximately 703 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, or church. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located greater than 300 feet from a wetland. The Site is located in a high-potential karst area. Potential receptors identified during site characterization are displayed in 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
- Total petroleum hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

BIOREMEDIATION AND SOIL SAMPLING ACTIVITIES

On July, 27 2020, LTE utilized a bioremediation agent Liquid Remediate™, an active mixture of hydrocarbon-oxidizing, naturally occurring, single celled micro-organisms and cleaning agent, and water to assist with the bioremediation of residual hydrocarbons associated with the floor of the excavation. Based on analytical data for previous excavation soil sample B-8-C and BH01 delineation soil sample, the vertical deferral soil volume associated with the excavation was estimated to be 43 cubic yards. In a large pre-cleaned liquid storage tank, LTE combined 5 gallons of Liquid Remediate™ with 50 gallons of freshwater in order to create a 1-part Liquid Remediate™ to 10-parts water application mixture to treat approximately 50 cubic yards of hydrocarbon impacted soil. Using a battery powered electric pump and sprayer unit, LTE then applied thoroughly an even coat of the application mixture along the entire excavation floor, saturating the de minimis impacted soil. Once completed, the mixture was left for a 30-day period with regular additional watering events to regulate and maintain soil moisture content to enhance and accelerate the microbial bioremediation.

On September 2, 2020, a Lucid representative collected 5-point composite soil samples on a 200 square foot frequency from the floor of the excavation. The 5-point composite soil samples were



collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. The excavation encompassed an area approximately 600 square feet in size. A total of 3 composite floor soil samples (FS01 through FS03) were collected within the excavation extent at a depth of approximately 6 feet bgs. Soil samples were collected from 6 inches below the floor of the excavation. Field screening was conducted at each floor sample for volatile aromatic hydrocarbons using a calibrated photoionization detector. The soil samples were placed directly into a pre-cleaned glass jar, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius, under strict chain-of-custody procedures to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico for analysis of BTEX following United States EPA Method 8260B; TPH following EPA Method 8015M/D; and chloride following EPA Method 300.0. The soil sample locations are shown in relation to former excavation floor sample B-8-C on Figure 2.

ANALYTICAL BIOREMEDIATION SOIL RESULTS

Laboratory analytical results for soil samples FS01 through FS03 indicated BTEX, Total TPH, and chloride concentrations were below the applicable Closure Criteria. BTEX concentrations were non-detectable on all three soil samples; Total TPH values ranged from non-detectable limits to 80 mg/kg; and chloride ranged from non-detectable limits to 280 mg/kg. Based on the analytical data, bioremediation to address residual hydrocarbon impacts was successful. Watering events likely contributed to natural attenuation of residual chloride concentrations. Soil analytical results are presented in Table 1.

VARIANCE REQUEST

Lucid renews its request for a variance to allow delineation sample point BH09A at 6 feet bgs with a chloride concentration of 610 mg/kg to represent full vertical delineation. Delineation soil samples were originally presented in the April 15, 2020 report and are depicted here on Figure 3. In addition to the reasons originally stated, LTE has provided information on the laboratory uncertainty, and argues the variance request is equally protective of public health and environment:

- The acceptable RPD, or uncertainty, for chloride by Method E300 for soil sample BH09A is 20%. The exceeding 10 mg/kg from the reported 610 mg/kg is within range of this uncertainty.
- The depth of the identified concentration associated with soil sample BH09A prohibits a complete pathway to any surface receptors, including surface water, wildlife, humans, and vegetation. Chloride is not toxic to humans or wildlife, and is generally regulated for protection of vegetation and groundwater quality.

District 2
Page 5

- Soil sample BH09A was collected from 6 feet bgs, which is below the root zone of nearby vegetation and below the reclamation standard requirement of 4 feet bgs. Groundwater is estimated to be greater than 100 feet bgs and the exceeding chloride concentrations are unlikely to migrate vertically to such a depth as to degrade groundwater.
- The high karst designation stipulates the application of the most stringent Table 1 Closure Criteria at this Site. However, the exceeding chloride concentrations exist in the subsurface where sand to clayey sand was observed, which does not and is unlikely to ever undergo dissolution. The absence of karst features and a soluble host rock suggests the shallow subsurface is not affected by karst.

CLOSURE REQUEST

In response to the subject release, approximately 117 cubic yards of impacted soil up to 5.5 feet bgs were able to be safely excavated. Based on NMOC's request that alternative methods be used to lower the TPH concentration at excavation sample point B-8-C, *in-situ* remediation was carried out with a hydrocarbon amendment and water applications. The newly resulted excavation floor samples indicated BTEX, Total TPH, and chloride concentrations are below Table 1 Closure Criteria. Based on the data indicating impacts are remediated and the argued variance for full delineation, Lucid requests No Further Action associated with Incident Number NRM1935234977.

If you have any questions or comments, please do not hesitate to contact Ms. Ashley Ager at (970) 385-1096.

Sincerely,

LT ENVIRONMENTAL, INC.

Joseph S. Hernandez
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist



District 2
Page 6

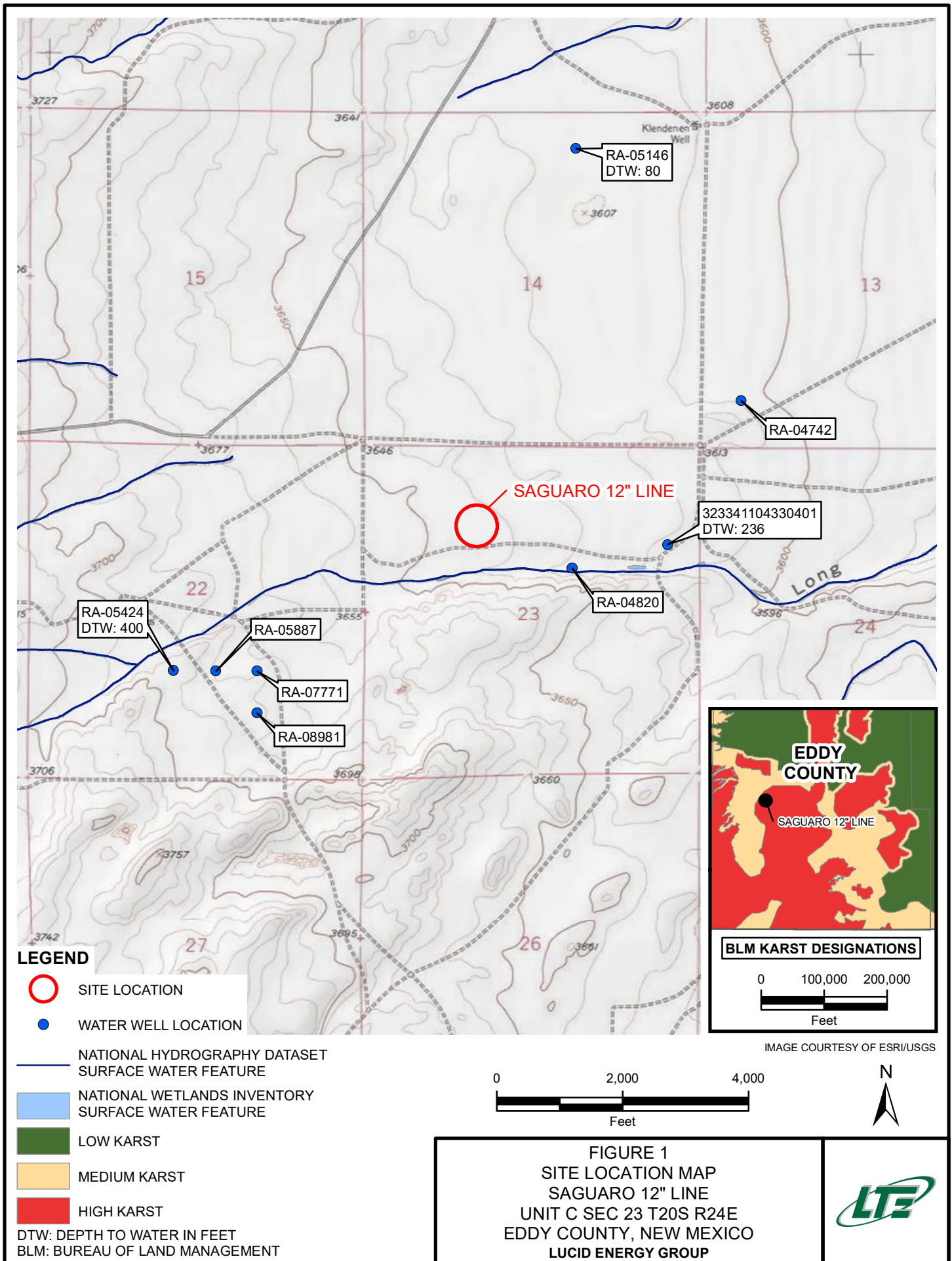
cc: Michael Gant, Lucid
Jim Amos, BLM
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Appendices:

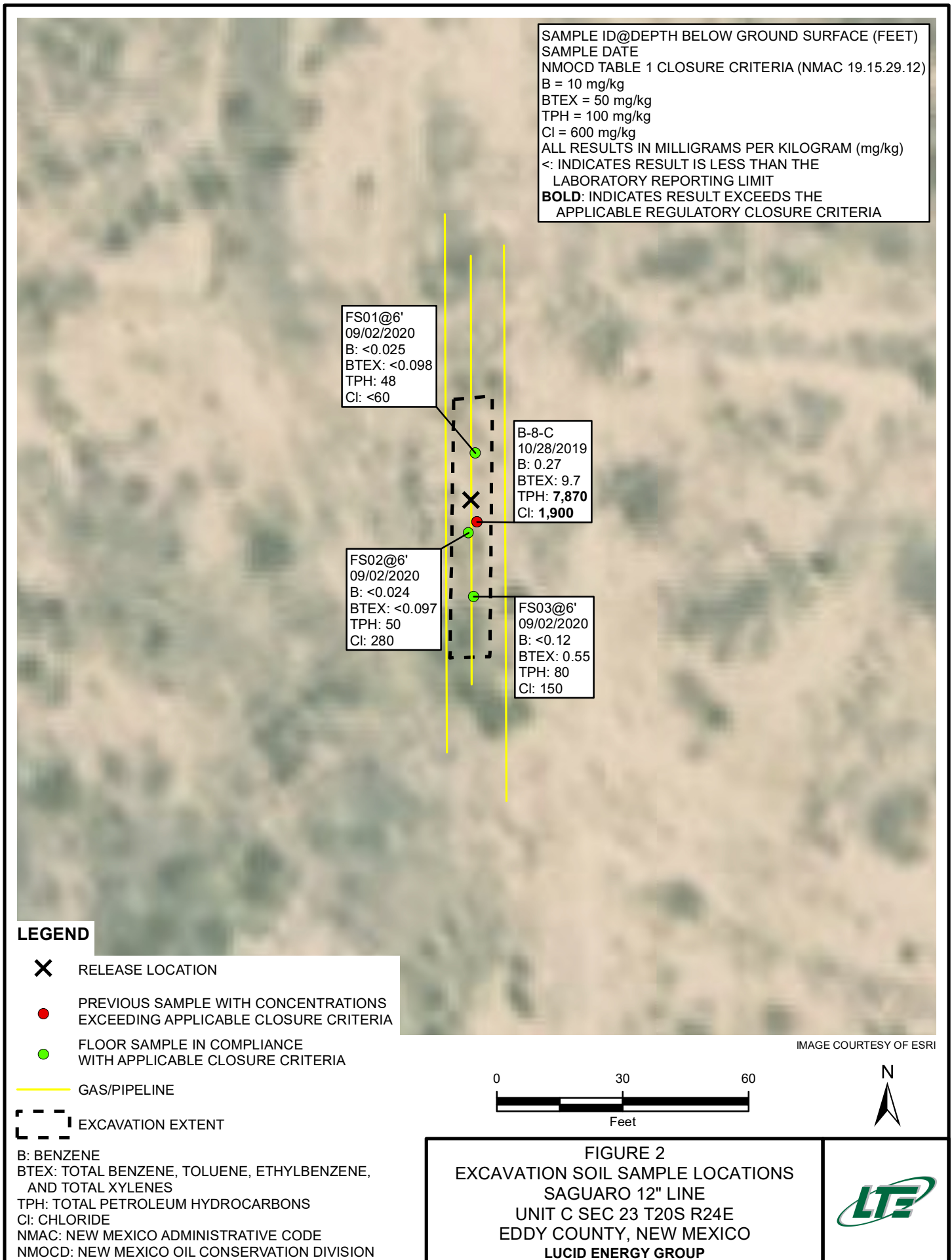
Figure 1 Site Receptor Map
Figure 2 Excavation Soil Sample Locations
Figure 3 Delineation Soil Sample Locations
Table 1 Soil Analytical Results
Attachment 1 Form C-141
Attachment 2 Photographic Log
Attachment 3 Lithologic/Soil Sampling Logs
Attachment 4 Laboratory Analytical Reports

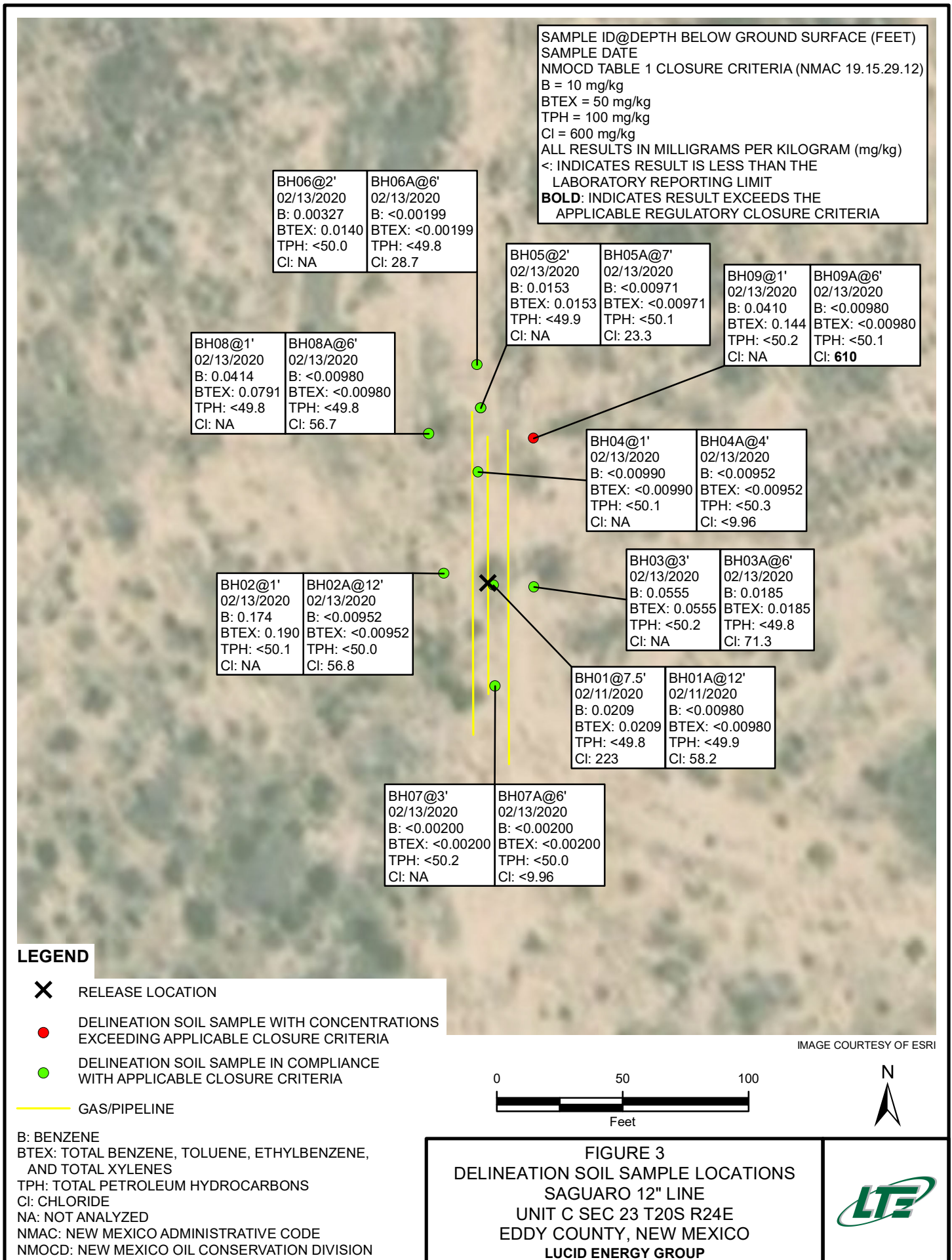
FIGURES





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TABLE



TABLE 1
SOIL ANALYTICAL RESULTS

SAGUARO 12" LINE
EDDY COUNTY, NEW MEXICO
LUCID ENERGY GROUP

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	100	600
SW-4-N-C	-	10/28/2019	0.031	0.18	0.099	0.37	0.68	8.5	92	<48.0	101	NA
SW-5-E-C	-	10/28/2019	<0.024	0.059	<0.047	<0.094	<0.024	<4.7	<9.8	<49.0	<4.7	NA
SW-6-S-C	-	10/28/2019	<0.025	<0.050	<0.050	<0.099	<0.025	<5.0	<9.8	<49.0	<5.0	NA
SW-7-W-C	-	10/28/2019	0.19	3.4	1.8	6.2	11.6	94	38	<46.0	132	NA
B-8-C	-	10/28/2019	0.27	3.9	1.5	4.0	9.7	65	5,000	2,800	7,870	1,900
SP-3-C	-	10/28/2019	0.21	4.3	1.7	6.1	12.3	100	250	<45.0	350	NA
FS01	6	09/02/2020	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<9.6	<48	<48	<60
FS02	6	09/02/2020	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<10	<50	<50	280
FS03	6	09/02/2020	<0.12	<0.24	<0.24	0.55	0.55	<24	80	<49	80	150
BH01	7.5	02/11/2020	0.0209	<0.00990	<0.00990	<0.00990	0.0209	<49.8	<49.8	<49.8	<49.8	223
BH01A	12	02/11/2020	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	<49.9	<49.9	<49.9	<49.9	58.2
BH02	1	02/13/2020	0.174	0.0156	<0.00962	<0.00962	0.190	<50.1	<50.1	<50.1	<50.1	NA
BH02A	12	02/13/2020	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<50.0	<50.0	<50.0	<50.0	56.8
BH03	3	02/13/2020	0.0555	<0.00952	<0.00952	<0.00952	0.0555	<50.2	<50.2	<50.2	<50.2	NA
BH03A	6	02/13/2020	0.0185	<0.0100	<0.0100	<0.0100	0.0185	<49.8	<49.8	<49.8	<49.8	71.3
BH04	1	02/13/2020	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<50.1	<50.1	<50.1	<50.1	NA
BH04A	4	02/13/2020	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<50.3	<50.3	<50.3	<50.3	<9.96
BH05	2	02/13/2020	0.0153	<0.00935	<0.00935	<0.00935	0.0153	<49.9	<49.9	<49.9	<49.9	NA
BH05A	7	02/13/2020	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	<50.1	<50.1	<50.1	<50.1	23.3
BH06	2	02/13/2020	0.00327	0.00546	0.00218	0.00311	0.0140	<50.0	<50.0	<50.0	<50.0	NA
BH06A	6	02/13/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	28.7

TABLE 1
SOIL ANALYTICAL RESULTS

SAGUARO 12" LINE
EDDY COUNTY, NEW MEXICO
LUCID ENERGY GROUP

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	100	600
BH07	3	02/13/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	NA
BH07A	6	02/13/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<9.96
BH08	1	02/13/2020	0.0414	0.0241	<0.0100	0.0136	0.0791	<49.8	<49.8	<49.8	<49.8	NA
BH08A	6	02/13/2020	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	<49.8	<49.8	<49.8	<49.8	56.7
BH09	1	02/13/2020	0.0410	0.0142	<0.00980	0.0891	0.144	<50.2	<50.2	<50.2	<50.2	NA
BH09A	6	02/13/2020	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	<50.1	<50.1	<50.1	<50.1	610

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

NA - not analyzed

st 2018

ATTACHMENT 1: FORM C-141

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	NRM1935234977
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	Lucid Artesia Company	OGRID	147831
Contact Name	Michael Gant	Contact Telephone	314 330 7876
Contact email	mgant@lucid-energy.com	Incident #	(assigned by OCD)
Contact mailing address	210 S. 4th St., Artesia, NM 88210		

Location of Release Source

Latitude 32.562800° Longitude -104.561853°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Saguaro 12" Line	Site Type	Natural Gas gathering
Date Release Discovered	10/23/2019	API#	(if applicable)

Unit Letter	Section	Township	Range	County
C	23	20S	24E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name: Bureau of Land Management)

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Natural Gas	Volume Released (Mcf) 8 Mmcf	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)


Cause of Release **The release was caused by internal corrosion of the pipeline which led to a pinhole leak in the pipeline.**

Incident ID	NRM1935234977
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? The total volume of released gas exceeds the 500 MCF limit.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? No, immediate response was not provided because the leak was identified at a later date by aerial imagery that was purchased from a 3rd party.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Michael Gant</u>	Title: <u>Environmental Coordinator</u>
Signature: <u></u>	Date: <u>10/24/2019</u>
email: <u>mgant@lucid-energy.com</u>	Telephone: <u>314 330 7876</u>
<u>OCD Only</u>	
Received by: <u>Ramona Marcus</u>	Date: <u>12/18/2019</u>

Incident ID	NRM1935234977
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	NRM1935234977
District RP	
Facility ID	
Application ID	

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

Printed Name: Michael Gant Title: Environmental Coordinator
Signature: _____ Date: _____
email: mgant@lucid-energy.com Telephone: 314-330-7876

OCD Only

Received by: _____ Date: _____

Incident ID	NRM1935234977
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 Coordinator

Signature: 

Date: 10/5/20

email: mgant@lucid-energy.com

Telephone: 314-330-7876

OCD Only

Received by: Cristina Eads

Date: 01/15/2021

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

Closure Approved by: 

Date: 01/15/2021

Printed Name: Cristina Eads

Title: Environmental Specialist

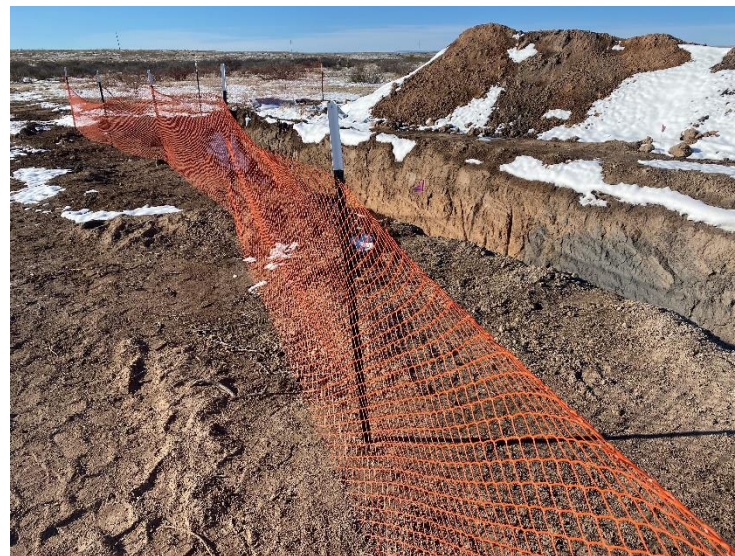
ATTACHMENT 2: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG



Photograph 1: View of the exposed subsurface flowline.



Photograph 2: View of the Site facing southwest.



Photograph 3: View of the Site facing north.



Photograph 4: View of the Site facing west.

Saguaro 12" Line
32.562800,-104.561853
Photographs Taken: February 6, 2020 through August 3, 2020

PHOTOGRAPHIC LOG



Photograph 5: View of the repaired subsurface flowline.



Photograph 6: Northeast view of the Site during delineation events.



Photograph 7: North view of the Site during delineation events.



Photograph 8: View of the area associated with BH09.

Saguaro 12" Line
32.562800,-104.561853
Photographs Taken: February 6, 2020 through August 3, 2020

PHOTOGRAPHIC LOG



Photograph 9: View of the excavation floor during the Liquid Remediate™ application.



Photograph 10: View of the excavation floor following the Liquid Remediate™ application.



Photograph 11: View of the excavation floor prior to the watering treatment.




Photograph 12: View of the excavation floor following the watering treatment.

Saguaro 12" Line
32.562800,-104.561853
Photographs Taken: February 6, 2020 through August 3, 2020

ATTACHMENT 3: LITHOLOGIC/SOIL SAMPLING LOGS



 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: B401 Date: 02/11/20						
Project Name: Saguaro 12" line		RP Number:						
Logged By: Robert M.		Method: Hand Auger						
Hole Diameter: 3"		Total Depth:						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening:						
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
					2			
					3			
					4			
					5			
D	28.0	Y			6	6'	S	
D	8.8	Y				6.5'	S	
			X		7	7'	S	
D	6.0	Y				7.5'	S	
					8			
D	4.5	Y				8.5'	S	
					9			
D	6.0	Y				9.5'	S	
					10			
D	6.6	Y				10.5'	S	
					11			
D	8.5	Y				11.5'	S	
					12			
D	3.2	Y				12'	S	

OPEN Excavation

Grey SP-SC, small grain, odor present
non-plastic, tightly packed

Grey

lighter Grey

tan color faint odor



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Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

BH or PH Name:

BHO2

Date:

02/13/20

Site Name:

Saguro 12" line

RP or Incident Number:

LTE Job Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Robert M.

Method:

Lat/Long:

Field Screening:


Chloride, PID

Hole Diameter:

3"

Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D		52.4	N		1'	1	S	SP-SC Brown small grain, odor present Non-Plastic, tightly packed small round grain 
D		41.5	N		2'	2	S	
D		29.3	N		3'	3	S	
D	<124	21.7	N		4'	4	S	
D		28.7	N		5'	5	S	
D		36.1	N		6'	6	S	
D		32.4	N		7'	7	S	
D		38.4	N		8'	8	S	
D		15.9	N		9'	9	S	
D		14	N		10'	10	S	
D		13.4	N		11'	11	S	
D		14.7	N		12'	12	S	

H₂S odor Present all the
way till 12'



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BH or PH Name:

BH03

Date:

02/13/20

Site Name:

RP or Incident Number:

LTE Job Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:

Method:

Lat/Long:

Field Screening:

Hole Diameter:

Total Depth:

Chloride, PID

Comments:

Lithology/Remarks

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D		11.0	N		1'	1	S	SP-SC Brown Small grain odor non-plastic, tightly packed, round grain Present
D		38.5	N		2'	2	S	
D		44.0	N		3'	3	S	
D		32.1	N		4'	4	S	
D		20.1	N		5'	5	S	
D		14.3	N		6'	6	S	
						7		
						8		
						9		
						10		
						11		
						12		



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BH or PH Name:

BH04

Date:

02/13/20

Site Name:

RP or Incident Number:

LTE Job Number:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Chloride, PID

Logged By:

Method:

Hole Diameter:

Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D		238	Y		1'	1	S	SP-SC Small round grain, odor present non-plastic, tightly Packed, Dark Grey Grey Grey Grey
D		195.2	Y		2'	2	S	
D		159.8	Y		3'	3	S	
D		118.9	Y		4'	4	S	
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		



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BH or PH Name:

BH05

Date:

02/13/20

Site Name:

RP or Incident Number:

LTE Job Number:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Chloride, PID


Logged By:

Method:

Hole Diameter:

Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D		97.0	N		1'	1	S	SP-SC Brown, small round grain, non-Plastic, tightly pack, odor present 
D		227.	N		2'	2	S	
D		160.0	N		3'	3	S	
D		93.6	N		4'	4	S	
D		78.2	N		5'	5	S	
D		84.5	N		6'	6	S	
D		60.2	N		7'	7	S	
						8		light brown small cobble stones ✓ Refusal
						9		
						10		
						11		
						12		



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BH or PH Name:

BH06

Date:

02/13/20

Site Name:

RP or Incident Number:

LTE Job Number:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Chloride, PID

Logged By:

Method:

Hole Diameter:

Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D		67.6	N		1'	1	S	SP-SC Brown odor Present small round grain, non-plastic hard packed
D		69.2	N		2'	2	S	
D		29.0	N		3'	3	S	faint odor
D		16.4	N		4'	4	S	faint odor
D		4.4	N		5'	5	S	" "
D		2.2	N		6'	6	S	" "
						7		
						8		
						9		
						10		
						11		
						12		



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BH or PH Name:

BH07

Date:

02/13/20

Site Name:

RP or Incident Number:

LTE Job Number:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Chloride, PID

Logged By:

Method:

Hole Diameter:

Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M		0.4	N		0	0		SP-SC tightly packed very low Plasticity dark Brown, trace root No odor
M		0.1	N		1'	1	S	
M		0.4	N		2'	2	S	
M		0.3	N		3'	3	S	
M		0.3	N		4'	4	S	
M		0.2	N		5'	5	S	
M		0.2	N		6'	6	S	
					7	7		
					8	8		
					9	9		
					10	10		
					11	11		
					12	12		



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BH or PH Name:

BH08

Date:

02/20 02/13/20

Site Name:

RP or Incident Number:

LTE Job Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:

Method:

Lat/Long:

Field Screening:

Chloride, PID

Hole Diameter:

Total Depth:

Comments:

Lithology/Remarks

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D		115.7	N		1'	1	S	SP-SC tightly packed Brown non-plastic, odor Present ↓
D		97.5	N		2'	2	S	
D		86.8	N		3'	3	S	
D		68.3	N		4'	4	S	
D		30.2	N		5'	5	S	
D		32.1	N		6'	6	S	
						7		
						8		
						9		
						10		
						11		
						12		



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BH or PH Name:

BH09

Date:

02/13/20

Site Name:

RP or Incident Number:

LTE Job Number:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Chloride, PID

Logged By:

Method:

Hole Diameter:

Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D		116.4	N		0			
					1'	1	S	
D		104.9	N		2'	2	S	SP-SC, tightly Packed, non-plastic Brown, odor Present
D		66.9	N		3'	3	S	
D		69.3	N		4'	4	S	
D		61.3	N		5'	5	S	
D		72.5	N		6'	6	S	
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS





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

November 04, 2019

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

RE: Saguro 2 12 in

OrderNo.: 1910E99

Dear Michael Gant:

Hall Environmental Analysis Laboratory received 6 sample(s) on 10/30/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1910E99

Date Reported: 11/4/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy Delaware

Client Sample ID: SP-3-C

Project: Saguro 2 12 in

Collection Date: 10/28/2019 1:00:00 PM

Lab ID: 1910E99-001

Matrix: SOIL

Received Date: 10/30/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: BRM
Diesel Range Organics (DRO)	250	90		mg/Kg	10	11/1/2019 3:47:09 AM
Motor Oil Range Organics (MRO)	ND	450	D	mg/Kg	10	11/1/2019 3:47:09 AM
Surr: DNOP	0	70-130	S	%Rec	10	11/1/2019 3:47:09 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	100	9.3		mg/Kg	2	10/31/2019 11:30:40 AM
Surr: BFB	312	77.4-118	S	%Rec	2	10/31/2019 11:30:40 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	0.21	0.047		mg/Kg	2	10/31/2019 11:30:40 AM
Toluene	4.3	0.093		mg/Kg	2	10/31/2019 11:30:40 AM
Ethylbenzene	1.7	0.093		mg/Kg	2	10/31/2019 11:30:40 AM
Xylenes, Total	6.1	0.19		mg/Kg	2	10/31/2019 11:30:40 AM
Surr: 4-Bromofluorobenzene	148	80-120	S	%Rec	2	10/31/2019 11:30:40 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	Value above quantitation range
	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		

Page 1 of 10

Analytical Report

Lab Order 1910E99

Date Reported: 11/4/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy Delaware

Client Sample ID: SW-4-N-C

Project: Saguro 2 12 in

Collection Date: 10/28/2019 1:05:00 PM

Lab ID: 1910E99-002

Matrix: SOIL

Received Date: 10/30/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: BRM
Diesel Range Organics (DRO)	92	9.6		mg/Kg	1	11/1/2019 12:57:32 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/1/2019 12:57:32 PM
Surr: DNOP	121	70-130		%Rec	1	11/1/2019 12:57:32 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	8.5	5.0		mg/Kg	1	10/31/2019 1:04:47 PM
Surr: BFB	130	77.4-118	S	%Rec	1	10/31/2019 1:04:47 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	0.031	0.025		mg/Kg	1	10/31/2019 1:04:47 PM
Toluene	0.18	0.050		mg/Kg	1	10/31/2019 1:04:47 PM
Ethylbenzene	0.099	0.050		mg/Kg	1	10/31/2019 1:04:47 PM
Xylenes, Total	0.37	0.099		mg/Kg	1	10/31/2019 1:04:47 PM
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	1	10/31/2019 1:04:47 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	Value above quantitation range
	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		

Page 2 of 10

Analytical Report

Lab Order 1910E99

Date Reported: 11/4/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy Delaware

Client Sample ID: SW-5-E-C

Project: Saguro 2 12 in

Collection Date: 10/28/2019 1:10:00 PM

Lab ID: 1910E99-003

Matrix: SOIL

Received Date: 10/30/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: BRM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/1/2019 1:06:24 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/1/2019 1:06:24 PM
Surr: DNOP	112	70-130		%Rec	1	11/1/2019 1:06:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/31/2019 2:38:53 PM
Surr: BFB	106	77.4-118		%Rec	1	10/31/2019 2:38:53 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/31/2019 2:38:53 PM
Toluene	0.059	0.047		mg/Kg	1	10/31/2019 2:38:53 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/31/2019 2:38:53 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/31/2019 2:38:53 PM
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	1	10/31/2019 2:38:53 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	Value above quantitation range
	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		

Page 3 of 10

Analytical Report

Lab Order 1910E99

Date Reported: 11/4/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy Delaware

Client Sample ID: SW-6-S-C

Project: Saguro 2 12 in

Collection Date: 10/28/2019 1:15:00 PM

Lab ID: 1910E99-004

Matrix: SOIL

Received Date: 10/30/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: BRM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/1/2019 1:15:22 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/1/2019 1:15:22 PM
Surr: DNOP	107	70-130		%Rec	1	11/1/2019 1:15:22 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/31/2019 3:02:13 PM
Surr: BFB	100	77.4-118		%Rec	1	10/31/2019 3:02:13 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/31/2019 3:02:13 PM
Toluene	ND	0.050		mg/Kg	1	10/31/2019 3:02:13 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/31/2019 3:02:13 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/31/2019 3:02:13 PM
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	10/31/2019 3:02:13 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	Value above quantitation range
	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		

Page 4 of 10

Analytical Report

Lab Order 1910E99

Date Reported: 11/4/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy Delaware

Client Sample ID: SW-7-W-C

Project: Saguro 2 12 in

Collection Date: 10/28/2019 1:20:00 PM

Lab ID: 1910E99-005

Matrix: SOIL

Received Date: 10/30/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: BRM
Diesel Range Organics (DRO)	38	9.1		mg/Kg	1	11/1/2019 1:24:24 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/1/2019 1:24:24 PM
Surr: DNOP	114	70-130		%Rec	1	11/1/2019 1:24:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	94	24		mg/Kg	5	10/31/2019 10:43:36 AM
Surr: BFB	192	77.4-118	S	%Rec	5	10/31/2019 10:43:36 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	0.19	0.12		mg/Kg	5	10/31/2019 10:43:36 AM
Toluene	3.4	0.24		mg/Kg	5	10/31/2019 10:43:36 AM
Ethylbenzene	1.8	0.24		mg/Kg	5	10/31/2019 10:43:36 AM
Xylenes, Total	6.2	0.48		mg/Kg	5	10/31/2019 10:43:36 AM
Surr: 4-Bromofluorobenzene	130	80-120	S	%Rec	5	10/31/2019 10:43:36 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	Value above quantitation range
	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		

Page 5 of 10

Analytical Report

Lab Order 1910E99

Date Reported: 11/4/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy Delaware

Client Sample ID: B-8-C

Project: Saguro 2 12 in

Collection Date: 10/28/2019 1:25:00 PM

Lab ID: 1910E99-006

Matrix: SOIL

Received Date: 10/30/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: BRM
Diesel Range Organics (DRO)	5000	470		mg/Kg	50	11/1/2019 4:11:05 AM
Motor Oil Range Organics (MRO)	2800	2400		mg/Kg	50	11/1/2019 4:11:05 AM
Surr: DNOP	0	70-130	S	%Rec	50	11/1/2019 4:11:05 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	65	24		mg/Kg	5	10/31/2019 11:07:04 AM
Surr: BFB	161	77.4-118	S	%Rec	5	10/31/2019 11:07:04 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	0.27	0.12		mg/Kg	5	10/31/2019 11:07:04 AM
Toluene	3.9	0.24		mg/Kg	5	10/31/2019 11:07:04 AM
Ethylbenzene	1.5	0.24		mg/Kg	5	10/31/2019 11:07:04 AM
Xylenes, Total	4.0	0.48		mg/Kg	5	10/31/2019 11:07:04 AM
Surr: 4-Bromofluorobenzene	136	80-120	S	%Rec	5	10/31/2019 11:07:04 AM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	1900	60		mg/Kg	20	10/31/2019 11:43:23 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	Value above quantitation range
	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		

Page 6 of 10

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910E99****04-Nov-19****Client:** Lucid Energy Delaware**Project:** Saguro 2 12 in

Sample ID: MB-48509	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 48509	RunNo: 64117								
Prep Date: 10/31/2019	Analysis Date: 10/31/2019	SeqNo: 2195081	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-48509	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 48509	RunNo: 64117								
Prep Date: 10/31/2019	Analysis Date: 10/31/2019	SeqNo: 2195082	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	99.7	90	110			

Qualifiers:

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

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

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

WO#: 1910E99

04-Nov-19

Client: Lucid Energy Delaware**Project:** Saguro 2 12 in

Sample ID: LCS-48508	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 48508	RunNo: 64116								
Prep Date: 10/31/2019	Analysis Date: 10/31/2019	SeqNo: 2194222	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	63.9	124			
Surr: DNOP	4.0		5.000		80.6	70	130			

Sample ID: MB-48508	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 48508	RunNo: 64116								
Prep Date: 10/31/2019	Analysis Date: 10/31/2019	SeqNo: 2194223	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	8.9		10.00		88.6	70	130			

Qualifiers:

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

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

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

WO#: 1910E99

04-Nov-19

Client: Lucid Energy Delaware**Project:** Saguro 2 12 in

Sample ID: MB-48491	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 48491	RunNo: 64127								
Prep Date: 10/30/2019	Analysis Date: 10/31/2019	SeqNo: 2194628 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		100	77.4	118			

Sample ID: LCS-48491	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 48491	RunNo: 64127								
Prep Date: 10/30/2019	Analysis Date: 10/31/2019	SeqNo: 2194629 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.4	80	120			
Surr: BFB	1100		1000		112	77.4	118			

Sample ID: 1910E99-001AMS	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: SP-3-C	Batch ID: 48491	RunNo: 64127								
Prep Date: 10/30/2019	Analysis Date: 10/31/2019	SeqNo: 2194634 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	120	9.6	23.97	102.1	94.3	69.1	142			
Surr: BFB	6100		1918		318	77.4	118			S

Sample ID: 1910E99-001AMSD	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: SP-3-C	Batch ID: 48491	RunNo: 64127								
Prep Date: 10/30/2019	Analysis Date: 10/31/2019	SeqNo: 2194636 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	130	9.5	23.79	102.1	105	69.1	142	1.97	20	
Surr: BFB	6100		1903		320	77.4	118	0	0	S

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

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

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

WO#: 1910E99

04-Nov-19

Client: Lucid Energy Delaware**Project:** Saguro 2 12 in

Sample ID: MB-48491	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 48491	RunNo: 64127								
Prep Date: 10/30/2019	Analysis Date: 10/31/2019	SeqNo: 2194655 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	1.1		1.000		108	80	120			

Sample ID: LCS-48491	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 48491	RunNo: 64127								
Prep Date: 10/30/2019	Analysis Date: 10/31/2019	SeqNo: 2194656 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	98.2	80	120			
Toluene	0.98	0.050	1.000	0	98.3	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.4	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.6	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

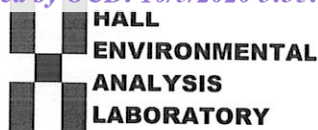
Sample ID: 1910E99-002AMS	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: SW-4-N-C	Batch ID: 48491	RunNo: 64127								
Prep Date: 10/30/2019	Analysis Date: 10/31/2019	SeqNo: 2194660 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9950	0.03132	106	76	123			
Toluene	1.3	0.050	0.9950	0.1792	111	80.3	127			
Ethylbenzene	1.2	0.050	0.9950	0.09861	110	80.2	131			
Xylenes, Total	3.6	0.10	2.985	0.3747	109	78	133			
Surr: 4-Bromofluorobenzene	1.1		0.9950		114	80	120			

Sample ID: 1910E99-002AMSD	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: SW-4-N-C	Batch ID: 48491	RunNo: 64127								
Prep Date: 10/30/2019	Analysis Date: 10/31/2019	SeqNo: 2194661 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.025	0.9950	0.03132	113	76	123	5.86	20	
Toluene	1.4	0.050	0.9950	0.1792	119	80.3	127	6.27	20	
Ethylbenzene	1.2	0.050	0.9950	0.09861	112	80.2	131	1.49	20	
Xylenes, Total	3.7	0.10	2.985	0.3747	110	78	133	0.954	20	
Surr: 4-Bromofluorobenzene	1.1		0.9950		114	80	120	0	0	

Qualifiers:

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

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



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

Sample Log-In Check List

Client Name: LUCID ENERGY DELAW

Work Order Number: 1910E99

RcptNo: 1

Received By: Juan Rojas 10/30/2019 9:00:00 AM

Completed By: Leah Baca 10/30/2019 9:42:15 AM

Reviewed By: DM 10/30/19

Leah Baca

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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
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: DAD 10/30/19

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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes			
2	0.7	Good	Yes			

Chain-of-Custody Record

Client: Lucid Energy GroupMailing Address: 201 S. 4th St.Albuquerque, NM 88210

Phone #:

email or Fax#: McGant@Lucid-energy.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)Accreditation: ☐ Az Compliance☐ NELAC ☐ Other☐ EDD (Type)

Project Manager:

Michael Cant

Sampler:

Michael McGaffillOn Ice: ☒ Yes ☐ No# of Coolers: 2Cooler Temp (including CF): 4.1 + 0.2 = 4.3 (°C)

Container Type and #

4 oz glass jar

Preservative Type

ICE

HEAL No.

1010509-001-002-003-004-005-0060.5 + 0.2 = 0.71010509-001-002-003-004-005



Certificate of Analysis Summary 652519

LT Environmental, Inc., Arvada, CO

Project Name: Saguaro #2

Project Id: 10122001
Contact: Christa Leibli
Project Location:

Date Received in Lab: Fri 02.14.2020 17:50
Report Date: 06.05.2020 13:22
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	652519-001	652519-002	652519-003	652519-004	652519-005	652519-006
	<i>Field Id:</i>	BH01	BH01A	BH02	BH02A	BH03	BH03A
	<i>Depth:</i>	7.5- ft	12- ft	1- ft	12- ft	3- ft	6- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	02.11.2020 11:03	02.11.2020 12:20	02.13.2020 08:35	02.13.2020 14:55	02.13.2020 10:35	02.13.2020 10:55
BTEX by EPA 8021B	<i>Extracted:</i>	02.17.2020 11:00	02.17.2020 11:00	02.17.2020 11:00	02.17.2020 11:00	02.17.2020 11:00	02.17.2020 11:00
	<i>Analyzed:</i>	02.18.2020 10:14	02.18.2020 10:34	02.18.2020 10:55	02.17.2020 18:16	02.17.2020 18:36	02.17.2020 18:57
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		0.0209 0.00990	<0.00980 0.00980	0.174 0.00962	<0.00952 0.00952	0.0555 0.00952	0.0185 0.0100
Toluene		<0.00990 0.00990	<0.00980 0.00980	0.0156 0.00962	<0.00952 0.00952	<0.00952 0.00952	<0.0100 0.0100
Ethylbenzene		<0.00990 0.00990	<0.00980 0.00980	<0.00962 0.00962	<0.00952 0.00952	<0.00952 0.00952	<0.0100 0.0100
m,p-Xylenes		<0.0198 0.0198	<0.0196 0.0196	<0.0192 0.0192	<0.0190 0.0190	<0.0190 0.0190	<0.0200 0.0200
o-Xylene		<0.00990 0.00990	<0.00980 0.00980	<0.00962 0.00962	<0.00952 0.00952	<0.00952 0.00952	<0.0100 0.0100
Xylenes, Total		<0.00990 0.00990	<0.00980 0.00980	<0.00962 0.00962	<0.00952 0.00952	<0.00952 0.00952	<0.0100 0.0100
Total BTEX		0.0209 0.00990	<0.00980 0.00980	0.190 0.00962	<0.00952 0.00952	0.0555 0.00952	0.0185 0.0100
Chloride by EPA 300	<i>Extracted:</i>	02.17.2020 11:00	02.17.2020 11:00		02.17.2020 11:00		02.17.2020 11:00
	<i>Analyzed:</i>	02.17.2020 12:54	02.17.2020 13:00		02.17.2020 13:05		02.17.2020 13:11
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL		mg/kg RL		mg/kg RL
Chloride		223 49.6	58.2 9.98		56.8 9.96		71.3 9.98
TPH by SW8015 Mod	<i>Extracted:</i>	02.17.2020 12:15	02.17.2020 12:15	02.17.2020 12:15	02.17.2020 12:15	02.17.2020 12:15	02.17.2020 12:15
	<i>Analyzed:</i>	02.17.2020 15:38	02.17.2020 15:17	02.17.2020 15:58	02.17.2020 15:58	02.17.2020 16:19	02.17.2020 16:19
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<49.9 49.9	<50.1 50.1	<50.0 50.0	<50.2 50.2	<49.8 49.8
Diesel Range Organics (DRO)		<49.8 49.8	<49.9 49.9	<50.1 50.1	<50.0 50.0	<50.2 50.2	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<49.9 49.9	<50.1 50.1	<50.0 50.0	<50.2 50.2	<49.8 49.8
Total GRO-DRO		<49.8 49.8	<49.9 49.9	<50.1 50.1	<50.0 50.0	<50.2 50.2	<49.8 49.8
Total TPH		<49.8 49.8	<49.9 49.9	<50.1 50.1	<50.0 50.0	<50.2 50.2	<49.8 49.8

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Manager



Certificate of Analysis Summary 652519

LT Environmental, Inc., Arvada, CO

Project Name: Saguario #2

Project Id: 10122001
 Contact: Christa Leibli
 Project Location:

Date Received in Lab: Fri 02.14.2020 17:50
 Report Date: 06.05.2020 13:22
 Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	652519-007	652519-008	652519-009	652519-010	652519-011	652519-012
	<i>Field Id:</i>	BH04	BH04A	BH05	BH05A	BH06	BH06A
	<i>Depth:</i>	1- ft	4- ft	2- ft	7- ft	2- ft	6- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	02.13.2020 11:15	02.13.2020 11:30	02.13.2020 11:40	02.13.2020 12:15	02.13.2020 12:30	02.13.2020 16:40
BTEX by EPA 8021B	<i>Extracted:</i>	02.17.2020 11:00	02.17.2020 11:00	02.17.2020 11:00	02.17.2020 11:00	02.17.2020 11:00	02.17.2020 11:00
	<i>Analyzed:</i>	02.17.2020 19:17	02.17.2020 19:38	02.17.2020 20:59	02.17.2020 21:20	02.18.2020 09:13	02.18.2020 11:15
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00990 0.00990	<0.00952 0.00952	0.0153 0.00935	<0.00971 0.00971	0.00327 0.00200	<0.00199 0.00199
Toluene		<0.00990 0.00990	<0.00952 0.00952	<0.00935 0.00935	<0.00971 0.00971	0.00546 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00990 0.00990	<0.00952 0.00952	<0.00935 0.00935	<0.00971 0.00971	0.00218 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.0198 0.0198	<0.0190 0.0190	<0.0187 0.0187	<0.0194 0.0194	<0.00399 0.00399	<0.00398 0.00398
o-Xylene		<0.00990 0.00990	<0.00952 0.00952	<0.00935 0.00935	<0.00971 0.00971	0.00311 0.00200	<0.00199 0.00199
Xylenes, Total		<0.00990 0.00990	<0.00952 0.00952	<0.00935 0.00935	<0.00971 0.00971	0.00311 0.00200	<0.00199 0.00199
Total BTEX		<0.00990 0.00990	<0.00952 0.00952	0.0153 0.00935	<0.00971 0.00971	0.0140 0.00200	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>		02.17.2020 11:00		02.17.2020 11:00		02.17.2020 11:00
	<i>Analyzed:</i>		02.17.2020 13:16		02.17.2020 13:22		02.17.2020 13:39
	<i>Units/RL:</i>		mg/kg RL		mg/kg RL		mg/kg RL
Chloride			<9.96 9.96		23.3 9.98		28.7 9.98
TPH by SW8015 Mod	<i>Extracted:</i>	02.17.2020 12:15	02.17.2020 12:15	02.17.2020 12:15	02.17.2020 12:15	02.17.2020 12:15	02.17.2020 17:00
	<i>Analyzed:</i>	02.17.2020 16:39	02.17.2020 16:39	02.17.2020 16:59	02.17.2020 16:59	02.17.2020 17:20	02.17.2020 19:22
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<50.3 50.3	<49.9 49.9	<50.1 50.1	<50.0 50.0	<49.8 49.8
Diesel Range Organics (DRO)		<50.1 50.1	<50.3 50.3	<49.9 49.9	<50.1 50.1	<50.0 50.0	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.3 50.3	<49.9 49.9	<50.1 50.1	<50.0 50.0	<49.8 49.8
Total TPH		<50.1 50.1	<50.3 50.3	<49.9 49.9	<50.1 50.1	<50.0 50.0	<49.8 49.8
TPH by SW8015 Mod	<i>Extracted:</i>	02.17.2020 12:15	02.17.2020 12:15	02.17.2020 12:15	02.17.2020 12:15	02.17.2020 12:15	
	<i>Analyzed:</i>	02.17.2020 16:39	02.17.2020 16:39	02.17.2020 16:59	02.17.2020 16:59	02.17.2020 17:20	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Total GRO-DRO		<50.1 50.1	<50.3 50.3	<49.9 49.9	<50.1 50.1	<50.0 50.0	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
 The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
 XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
 Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
 Project Manager



Certificate of Analysis Summary 652519

LT Environmental, Inc., Arvada, CO

Project Name: Saguario #2

Project Id: 10122001
Contact: Christa Leibli
Project Location:

Date Received in Lab: Fri 02.14.2020 17:50
Report Date: 06.05.2020 13:22
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	652519-013	652519-014	652519-015	652519-016	652519-017	652519-018
	<i>Field Id:</i>	BH07	BH07A	BH08	BH08A	BH09	BH09A
	<i>Depth:</i>	3- ft	6- ft	1- ft	6- ft	1- ft	6- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	02.13.2020 13:05	02.13.2020 13:20	02.13.2020 15:40	02.13.2020 16:25	02.13.2020 16:00	02.13.2020 16:35
BTEX by EPA 8021B	<i>Extracted:</i>	02.17.2020 11:00	02.17.2020 11:00	02.17.2020 11:00	02.17.2020 11:00	02.17.2020 11:00	02.17.2020 11:00
	<i>Analyzed:</i>	02.17.2020 22:21	02.17.2020 22:41	02.18.2020 09:33	02.17.2020 23:22	02.18.2020 09:54	02.18.2020 00:03
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	0.0414 0.0100	<0.00980 0.00980	0.0410 0.00980	<0.00980 0.00980
Toluene		<0.00200 0.00200	<0.00200 0.00200	0.0241 0.0100	<0.00980 0.00980	0.0142 0.00980	<0.00980 0.00980
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.0100 0.0100	<0.00980 0.00980	<0.00980 0.00980	<0.00980 0.00980
m,p-Xylenes		<0.00400 0.00400	<0.00399 0.00399	<0.0200 0.0200	<0.0196 0.0196	<0.0196 0.0196	<0.0196 0.0196
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	0.0136 0.0100	<0.00980 0.00980	0.0891 0.00980	<0.00980 0.00980
Xylenes, Total		<0.00200 0.00200	<0.00200 0.00200	0.0136 0.0100	<0.00980 0.00980	0.0891 0.00980	<0.00980 0.00980
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	0.0791 0.0100	<0.00980 0.00980	0.144 0.00980	<0.00980 0.00980
Chloride by EPA 300	<i>Extracted:</i>		02.17.2020 11:00		02.17.2020 11:00		02.17.2020 11:00
	<i>Analyzed:</i>		02.17.2020 14:00		02.17.2020 14:06		02.17.2020 14:12
	<i>Units/RL:</i>		mg/kg RL		mg/kg RL		mg/kg RL
Chloride			<9.96 9.96		56.7 9.98		610 9.98
TPH by SW8015 Mod	<i>Extracted:</i>	02.17.2020 17:00	02.17.2020 17:00	02.17.2020 17:00	02.17.2020 17:00	02.17.2020 17:00	02.17.2020 17:00
	<i>Analyzed:</i>	02.17.2020 19:22	02.17.2020 19:42	02.17.2020 19:42	02.17.2020 20:02	02.17.2020 20:22	02.17.2020 20:22
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.0 50.0	<49.8 49.8	<49.8 49.8	<50.2 50.2	<50.1 50.1
Diesel Range Organics (DRO)		<50.2 50.2	<50.0 50.0	<49.8 49.8	<49.8 49.8	<50.2 50.2	<50.1 50.1
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.0 50.0	<49.8 49.8	<49.8 49.8	<50.2 50.2	<50.1 50.1
Total TPH		<50.2 50.2	<50.0 50.0	<49.8 49.8	<49.8 49.8	<50.2 50.2	<50.1 50.1

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Manager



Analytical Report 652519

for

LT Environmental, Inc.

Project Manager: Christa Leibli

Saguaro #2

10122001

06.05.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-23), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



06.05.2020

Project Manager: **Christa Leibli**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **652519**

Saguaro #2

Project Address:

Christa Leibli:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 652519. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 652519 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	02.11.2020 11:03	7.5 ft	652519-001
BH01A	S	02.11.2020 12:20	12 ft	652519-002
BH02	S	02.13.2020 08:35	1 ft	652519-003
BH02A	S	02.13.2020 14:55	12 ft	652519-004
BH03	S	02.13.2020 10:35	3 ft	652519-005
BH03A	S	02.13.2020 10:55	6 ft	652519-006
BH04	S	02.13.2020 11:15	1 ft	652519-007
BH04A	S	02.13.2020 11:30	4 ft	652519-008
BH05	S	02.13.2020 11:40	2 ft	652519-009
BH05A	S	02.13.2020 12:15	7 ft	652519-010
BH06	S	02.13.2020 12:30	2 ft	652519-011
BH06A	S	02.13.2020 16:40	6 ft	652519-012
BH07	S	02.13.2020 13:05	3 ft	652519-013
BH07A	S	02.13.2020 13:20	6 ft	652519-014
BH08	S	02.13.2020 15:40	1 ft	652519-015
BH08A	S	02.13.2020 16:25	6 ft	652519-016
BH09	S	02.13.2020 16:00	1 ft	652519-017
BH09A	S	02.13.2020 16:35	6 ft	652519-018



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Saguaro #2

Project ID: 10122001
Work Order Number(s): 652519

Report Date: 06.05.2020
Date Received: 02.14.2020

Sample receipt non conformances and comments:

Company name Lucid Energy

V1.001 - Revision Corrected project name

V1.002 - Revision: Regarding sample 018 BH09A, The RPD (Relative Percent Difference) is $> \pm 20\%$ of the result. For this particular sample the result is anywhere between 488ppm - 732ppm

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3116796 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH01** Matrix: Soil Date Received: 02.14.2020 17:50
 Lab Sample Id: 652519-001 Date Collected: 02.11.2020 11:03 Sample Depth: 7.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.2020 11:00 Basis: Wet Weight
 Seq Number: 3116743

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	223	49.6	mg/kg	02.17.2020 12:54		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.2020 12:15 Basis: Wet Weight
 Seq Number: 3116742

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.17.2020 15:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.17.2020 15:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.17.2020 15:38	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.17.2020 15:38	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.17.2020 15:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	02.17.2020 15:38	
o-Terphenyl	84-15-1	103	%	70-135	02.17.2020 15:38	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH01**
Lab Sample Id: 652519-001

Matrix: Soil
Date Collected: 02.11.2020 11:03

Date Received: 02.14.2020 17:50
Sample Depth: 7.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Seq Number: 3116796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0209	0.00990	mg/kg	02.18.2020 10:14		1
Toluene	108-88-3	<0.00990	0.00990	mg/kg	02.18.2020 10:14	U	1
Ethylbenzene	100-41-4	<0.00990	0.00990	mg/kg	02.18.2020 10:14	U	1
m,p-Xylenes	179601-23-1	<0.0198	0.0198	mg/kg	02.18.2020 10:14	U	1
o-Xylene	95-47-6	<0.00990	0.00990	mg/kg	02.18.2020 10:14	U	1
Xylenes, Total	1330-20-7	<0.00990	0.00990	mg/kg	02.18.2020 10:14	U	1
Total BTEX		0.0209	0.00990	mg/kg	02.18.2020 10:14		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.18.2020 10:14		
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.18.2020 10:14		



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH01A** Matrix: Soil Date Received: 02.14.2020 17:50
 Lab Sample Id: 652519-002 Date Collected: 02.11.2020 12:20 Sample Depth: 12 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.2020 11:00 Basis: Wet Weight
 Seq Number: 3116743

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	58.2	9.98	mg/kg	02.17.2020 13:00		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.2020 12:15 Basis: Wet Weight
 Seq Number: 3116742

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.17.2020 15:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.17.2020 15:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.17.2020 15:17	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	02.17.2020 15:17	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.17.2020 15:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	02.17.2020 15:17	
o-Terphenyl	84-15-1	105	%	70-135	02.17.2020 15:17	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH01A**
Lab Sample Id: 652519-002

Matrix: Soil
Date Collected: 02.11.2020 12:20

Date Received: 02.14.2020 17:50
Sample Depth: 12 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Seq Number: 3116796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00980	0.00980	mg/kg	02.18.2020 10:34	U	1
Toluene	108-88-3	<0.00980	0.00980	mg/kg	02.18.2020 10:34	U	1
Ethylbenzene	100-41-4	<0.00980	0.00980	mg/kg	02.18.2020 10:34	U	1
m,p-Xylenes	179601-23-1	<0.0196	0.0196	mg/kg	02.18.2020 10:34	U	1
o-Xylene	95-47-6	<0.00980	0.00980	mg/kg	02.18.2020 10:34	U	1
Xylenes, Total	1330-20-7	<0.00980	0.00980	mg/kg	02.18.2020 10:34	U	1
Total BTEX		<0.00980	0.00980	mg/kg	02.18.2020 10:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.18.2020 10:34	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.18.2020 10:34	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH02**
Lab Sample Id: 652519-003

Matrix: Soil
Date Collected: 02.13.2020 08:35

Date Received: 02.14.2020 17:50
Sample Depth: 1 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3116742

Prep Method: SW8015P

% Moisture:

Date Prep: 02.17.2020 12:15

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.17.2020 15:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.17.2020 15:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.17.2020 15:58	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.17.2020 15:58	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.17.2020 15:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	02.17.2020 15:58	
o-Terphenyl	84-15-1	105	%	70-135	02.17.2020 15:58	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Prep Method: SW5030B

% Moisture:

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.174	0.00962	mg/kg	02.18.2020 10:55		1
Toluene	108-88-3	0.0156	0.00962	mg/kg	02.18.2020 10:55		1
Ethylbenzene	100-41-4	<0.00962	0.00962	mg/kg	02.18.2020 10:55	U	1
m,p-Xylenes	179601-23-1	<0.0192	0.0192	mg/kg	02.18.2020 10:55	U	1
o-Xylene	95-47-6	<0.00962	0.00962	mg/kg	02.18.2020 10:55	U	1
Xylenes, Total	1330-20-7	<0.00962	0.00962	mg/kg	02.18.2020 10:55	U	1
Total BTEX		0.190	0.00962	mg/kg	02.18.2020 10:55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.18.2020 10:55	
1,4-Difluorobenzene	540-36-3	99	%	70-130	02.18.2020 10:55	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH02A** Matrix: Soil Date Received: 02.14.2020 17:50
 Lab Sample Id: 652519-004 Date Collected: 02.13.2020 14:55 Sample Depth: 12 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.2020 11:00 Basis: Wet Weight
 Seq Number: 3116743

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	56.8	9.96	mg/kg	02.17.2020 13:05		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.2020 12:15 Basis: Wet Weight
 Seq Number: 3116742

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.17.2020 15:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.17.2020 15:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.17.2020 15:58	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.17.2020 15:58	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.17.2020 15:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.17.2020 15:58	
o-Terphenyl	84-15-1	106	%	70-135	02.17.2020 15:58	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH02A**
Lab Sample Id: 652519-004

Matrix: Soil
Date Collected: 02.13.2020 14:55

Date Received: 02.14.2020 17:50
Sample Depth: 12 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Seq Number: 3116796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00952	0.00952	mg/kg	02.17.2020 18:16	U	1
Toluene	108-88-3	<0.00952	0.00952	mg/kg	02.17.2020 18:16	U	1
Ethylbenzene	100-41-4	<0.00952	0.00952	mg/kg	02.17.2020 18:16	U	1
m,p-Xylenes	179601-23-1	<0.0190	0.0190	mg/kg	02.17.2020 18:16	U	1
o-Xylene	95-47-6	<0.00952	0.00952	mg/kg	02.17.2020 18:16	U	1
Xylenes, Total	1330-20-7	<0.00952	0.00952	mg/kg	02.17.2020 18:16	U	1
Total BTEX		<0.00952	0.00952	mg/kg	02.17.2020 18:16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.17.2020 18:16		
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.17.2020 18:16		



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH03**
Lab Sample Id: 652519-005

Matrix: Soil
Date Collected: 02.13.2020 10:35

Date Received: 02.14.2020 17:50
Sample Depth: 3 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3116742

Prep Method: SW8015P

% Moisture:

Date Prep: 02.17.2020 12:15

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.17.2020 16:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.17.2020 16:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.17.2020 16:19	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.17.2020 16:19	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.17.2020 16:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.17.2020 16:19	
o-Terphenyl	84-15-1	117	%	70-135	02.17.2020 16:19	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Prep Method: SW5030B

% Moisture:

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0555	0.00952	mg/kg	02.17.2020 18:36		1
Toluene	108-88-3	<0.00952	0.00952	mg/kg	02.17.2020 18:36	U	1
Ethylbenzene	100-41-4	<0.00952	0.00952	mg/kg	02.17.2020 18:36	U	1
m,p-Xylenes	179601-23-1	<0.0190	0.0190	mg/kg	02.17.2020 18:36	U	1
o-Xylene	95-47-6	<0.00952	0.00952	mg/kg	02.17.2020 18:36	U	1
Xylenes, Total	1330-20-7	<0.00952	0.00952	mg/kg	02.17.2020 18:36	U	1
Total BTEX		0.0555	0.00952	mg/kg	02.17.2020 18:36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	02.17.2020 18:36	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.17.2020 18:36	



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Saguaro #2

Sample Id: **BH03A** Matrix: Soil Date Received: 02.14.2020 17:50
 Lab Sample Id: 652519-006 Date Collected: 02.13.2020 10:55 Sample Depth: 6 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.2020 11:00 Basis: Wet Weight
 Seq Number: 3116743

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	71.3	9.98	mg/kg	02.17.2020 13:11		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.2020 12:15 Basis: Wet Weight
 Seq Number: 3116742

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.17.2020 16:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.17.2020 16:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.17.2020 16:19	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.17.2020 16:19	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.17.2020 16:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.17.2020 16:19	
o-Terphenyl	84-15-1	111	%	70-135	02.17.2020 16:19	



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Saguaro #2

Sample Id: **BH03A**
Lab Sample Id: 652519-006

Matrix: Soil
Date Collected: 02.13.2020 10:55

Date Received: 02.14.2020 17:50
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Prep Method: SW5030B

% Moisture:

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0185	0.0100	mg/kg	02.17.2020 18:57		1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	02.17.2020 18:57	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	02.17.2020 18:57	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	02.17.2020 18:57	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	02.17.2020 18:57	U	1
Xylenes, Total	1330-20-7	<0.0100	0.0100	mg/kg	02.17.2020 18:57	U	1
Total BTEX		0.0185	0.0100	mg/kg	02.17.2020 18:57		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.17.2020 18:57		
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.17.2020 18:57		



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Saguaro #2

Sample Id: **BH04**
Lab Sample Id: 652519-007

Matrix: Soil
Date Collected: 02.13.2020 11:15

Date Received: 02.14.2020 17:50
Sample Depth: 1 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3116742

Prep Method: SW8015P

% Moisture:

Date Prep: 02.17.2020 12:15

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.17.2020 16:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.17.2020 16:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.17.2020 16:39	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.17.2020 16:39	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.17.2020 16:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.17.2020 16:39	
o-Terphenyl	84-15-1	110	%	70-135	02.17.2020 16:39	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Prep Method: SW5030B

% Moisture:

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00990	0.00990	mg/kg	02.17.2020 19:17	U	1
Toluene	108-88-3	<0.00990	0.00990	mg/kg	02.17.2020 19:17	U	1
Ethylbenzene	100-41-4	<0.00990	0.00990	mg/kg	02.17.2020 19:17	U	1
m,p-Xylenes	179601-23-1	<0.0198	0.0198	mg/kg	02.17.2020 19:17	U	1
o-Xylene	95-47-6	<0.00990	0.00990	mg/kg	02.17.2020 19:17	U	1
Xylenes, Total	1330-20-7	<0.00990	0.00990	mg/kg	02.17.2020 19:17	U	1
Total BTEX		<0.00990	0.00990	mg/kg	02.17.2020 19:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.17.2020 19:17	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.17.2020 19:17	



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Saguaro #2

Sample Id: **BH04A** Matrix: Soil Date Received: 02.14.2020 17:50
 Lab Sample Id: 652519-008 Date Collected: 02.13.2020 11:30 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.2020 11:00 Basis: Wet Weight
 Seq Number: 3116743

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.96	9.96	mg/kg	02.17.2020 13:16	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.2020 12:15 Basis: Wet Weight
 Seq Number: 3116742

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	02.17.2020 16:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.17.2020 16:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.17.2020 16:39	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	02.17.2020 16:39	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.17.2020 16:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	02.17.2020 16:39	
o-Terphenyl	84-15-1	111	%	70-135	02.17.2020 16:39	



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LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH04A**
Lab Sample Id: 652519-008

Matrix: Soil
Date Collected: 02.13.2020 11:30

Date Received: 02.14.2020 17:50
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Seq Number: 3116796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00952	0.00952	mg/kg	02.17.2020 19:38	U	1
Toluene	108-88-3	<0.00952	0.00952	mg/kg	02.17.2020 19:38	U	1
Ethylbenzene	100-41-4	<0.00952	0.00952	mg/kg	02.17.2020 19:38	U	1
m,p-Xylenes	179601-23-1	<0.0190	0.0190	mg/kg	02.17.2020 19:38	U	1
o-Xylene	95-47-6	<0.00952	0.00952	mg/kg	02.17.2020 19:38	U	1
Xylenes, Total	1330-20-7	<0.00952	0.00952	mg/kg	02.17.2020 19:38	U	1
Total BTEX		<0.00952	0.00952	mg/kg	02.17.2020 19:38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.17.2020 19:38		
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.17.2020 19:38		



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Saguaro #2

Sample Id: **BH05**
Lab Sample Id: 652519-009

Matrix: Soil
Date Collected: 02.13.2020 11:40

Date Received: 02.14.2020 17:50
Sample Depth: 2 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3116742

Prep Method: SW8015P

% Moisture:

Date Prep: 02.17.2020 12:15

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.17.2020 16:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.17.2020 16:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.17.2020 16:59	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	02.17.2020 16:59	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.17.2020 16:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	02.17.2020 16:59	
o-Terphenyl	84-15-1	108	%	70-135	02.17.2020 16:59	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Prep Method: SW5030B

% Moisture:

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0153	0.00935	mg/kg	02.17.2020 20:59		1
Toluene	108-88-3	<0.00935	0.00935	mg/kg	02.17.2020 20:59	U	1
Ethylbenzene	100-41-4	<0.00935	0.00935	mg/kg	02.17.2020 20:59	U	1
m,p-Xylenes	179601-23-1	<0.0187	0.0187	mg/kg	02.17.2020 20:59	U	1
o-Xylene	95-47-6	<0.00935	0.00935	mg/kg	02.17.2020 20:59	U	1
Xylenes, Total	1330-20-7	<0.00935	0.00935	mg/kg	02.17.2020 20:59	U	1
Total BTEX		0.0153	0.00935	mg/kg	02.17.2020 20:59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.17.2020 20:59	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.17.2020 20:59	



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Saguaro #2

Sample Id: **BH05A** Matrix: Soil Date Received: 02.14.2020 17:50
 Lab Sample Id: 652519-010 Date Collected: 02.13.2020 12:15 Sample Depth: 7 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.2020 11:00 Basis: Wet Weight
 Seq Number: 3116743

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.3	9.98	mg/kg	02.17.2020 13:22		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.2020 12:15 Basis: Wet Weight
 Seq Number: 3116742

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.17.2020 16:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.17.2020 16:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.17.2020 16:59	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.17.2020 16:59	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.17.2020 16:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	02.17.2020 16:59	
o-Terphenyl	84-15-1	113	%	70-135	02.17.2020 16:59	



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LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH05A**
Lab Sample Id: 652519-010

Matrix: Soil
Date Collected: 02.13.2020 12:15

Date Received: 02.14.2020 17:50
Sample Depth: 7 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Seq Number: 3116796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00971	0.00971	mg/kg	02.17.2020 21:20	U	1
Toluene	108-88-3	<0.00971	0.00971	mg/kg	02.17.2020 21:20	U	1
Ethylbenzene	100-41-4	<0.00971	0.00971	mg/kg	02.17.2020 21:20	U	1
m,p-Xylenes	179601-23-1	<0.0194	0.0194	mg/kg	02.17.2020 21:20	U	1
o-Xylene	95-47-6	<0.00971	0.00971	mg/kg	02.17.2020 21:20	U	1
Xylenes, Total	1330-20-7	<0.00971	0.00971	mg/kg	02.17.2020 21:20	U	1
Total BTEX		<0.00971	0.00971	mg/kg	02.17.2020 21:20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.17.2020 21:20		
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.17.2020 21:20		



Certificate of Analytical Results 652519

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Saguaro #2

Sample Id: **BH06**
Lab Sample Id: 652519-011

Matrix: Soil
Date Collected: 02.13.2020 12:30

Date Received: 02.14.2020 17:50
Sample Depth: 2 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3116742

Prep Method: SW8015P

% Moisture:

Date Prep: 02.17.2020 12:15

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.17.2020 17:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.17.2020 17:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.17.2020 17:20	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.17.2020 17:20	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.17.2020 17:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	02.17.2020 17:20	
o-Terphenyl	84-15-1	95	%	70-135	02.17.2020 17:20	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Prep Method: SW5030B

% Moisture:

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00327	0.00200	mg/kg	02.18.2020 09:13		1
Toluene	108-88-3	0.00546	0.00200	mg/kg	02.18.2020 09:13		1
Ethylbenzene	100-41-4	0.00218	0.00200	mg/kg	02.18.2020 09:13		1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.18.2020 09:13	U	1
o-Xylene	95-47-6	0.00311	0.00200	mg/kg	02.18.2020 09:13		1
Xylenes, Total	1330-20-7	0.00311	0.00200	mg/kg	02.18.2020 09:13		1
Total BTEX		0.0140	0.00200	mg/kg	02.18.2020 09:13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.18.2020 09:13	
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.18.2020 09:13	



Certificate of Analytical Results 652519

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Saguaro #2

Sample Id: **BH06A** Matrix: Soil Date Received: 02.14.2020 17:50
 Lab Sample Id: 652519-012 Date Collected: 02.13.2020 16:40 Sample Depth: 6 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.2020 11:00 Basis: Wet Weight
 Seq Number: 3116743

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	28.7	9.98	mg/kg	02.17.2020 13:39		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.2020 17:00 Basis: Wet Weight
 Seq Number: 3116808

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.17.2020 19:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.17.2020 19:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.17.2020 19:22	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.17.2020 19:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	02.17.2020 19:22	
o-Terphenyl	84-15-1	100	%	70-135	02.17.2020 19:22	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH06A**
Lab Sample Id: 652519-012

Matrix: Soil
Date Collected: 02.13.2020 16:40

Date Received: 02.14.2020 17:50
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Seq Number: 3116796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.18.2020 11:15	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.18.2020 11:15	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.18.2020 11:15	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.18.2020 11:15	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.18.2020 11:15	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	02.18.2020 11:15	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.18.2020 11:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	02.18.2020 11:15	
1,4-Difluorobenzene	540-36-3	95	%	70-130	02.18.2020 11:15	



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Saguaro #2

Sample Id: **BH07**
Lab Sample Id: 652519-013

Matrix: Soil
Date Collected: 02.13.2020 13:05

Date Received: 02.14.2020 17:50
Sample Depth: 3 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3116808

Prep Method: SW8015P

% Moisture:

Date Prep: 02.17.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.17.2020 19:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.17.2020 19:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.17.2020 19:22	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.17.2020 19:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	02.17.2020 19:22	
o-Terphenyl	84-15-1	104	%	70-135	02.17.2020 19:22	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Prep Method: SW5030B

% Moisture:

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.17.2020 22:21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.17.2020 22:21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.17.2020 22:21	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.17.2020 22:21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.17.2020 22:21	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.17.2020 22:21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.17.2020 22:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.17.2020 22:21	
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.17.2020 22:21	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH07A** Matrix: Soil Date Received: 02.14.2020 17:50
 Lab Sample Id: 652519-014 Date Collected: 02.13.2020 13:20 Sample Depth: 6 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.2020 11:00 Basis: Wet Weight
 Seq Number: 3116743

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.96	9.96	mg/kg	02.17.2020 14:00	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.2020 17:00 Basis: Wet Weight
 Seq Number: 3116808

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.17.2020 19:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.17.2020 19:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.17.2020 19:42	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.17.2020 19:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	02.17.2020 19:42	
o-Terphenyl	84-15-1	106	%	70-135	02.17.2020 19:42	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH07A**
Lab Sample Id: 652519-014

Matrix: Soil
Date Collected: 02.13.2020 13:20

Date Received: 02.14.2020 17:50
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Seq Number: 3116796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.17.2020 22:41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.17.2020 22:41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.17.2020 22:41	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.17.2020 22:41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.17.2020 22:41	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.17.2020 22:41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.17.2020 22:41	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.17.2020 22:41		
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.17.2020 22:41		



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH08**
Lab Sample Id: 652519-015

Matrix: Soil
Date Collected: 02.13.2020 15:40

Date Received: 02.14.2020 17:50
Sample Depth: 1 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3116808

Prep Method: SW8015P

% Moisture:

Date Prep: 02.17.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.17.2020 19:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.17.2020 19:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.17.2020 19:42	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.17.2020 19:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	02.17.2020 19:42	
o-Terphenyl	84-15-1	107	%	70-135	02.17.2020 19:42	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Prep Method: SW5030B

% Moisture:

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0414	0.0100	mg/kg	02.18.2020 09:33		1
Toluene	108-88-3	0.0241	0.0100	mg/kg	02.18.2020 09:33		1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	02.18.2020 09:33	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	02.18.2020 09:33	U	1
o-Xylene	95-47-6	0.0136	0.0100	mg/kg	02.18.2020 09:33		1
Xylenes, Total	1330-20-7	0.0136	0.0100	mg/kg	02.18.2020 09:33		1
Total BTEX		0.0791	0.0100	mg/kg	02.18.2020 09:33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.18.2020 09:33	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.18.2020 09:33	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH08A** Matrix: Soil Date Received: 02.14.2020 17:50
 Lab Sample Id: 652519-016 Date Collected: 02.13.2020 16:25 Sample Depth: 6 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.2020 11:00 Basis: Wet Weight
 Seq Number: 3116743

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	56.7	9.98	mg/kg	02.17.2020 14:06		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.2020 17:00 Basis: Wet Weight
 Seq Number: 3116808

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.17.2020 20:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.17.2020 20:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.17.2020 20:02	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.17.2020 20:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.17.2020 20:02	
o-Terphenyl	84-15-1	116	%	70-135	02.17.2020 20:02	



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LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH08A**
Lab Sample Id: 652519-016

Matrix: Soil
Date Collected: 02.13.2020 16:25

Date Received: 02.14.2020 17:50
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Seq Number: 3116796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00980	0.00980	mg/kg	02.17.2020 23:22	U	1
Toluene	108-88-3	<0.00980	0.00980	mg/kg	02.17.2020 23:22	U	1
Ethylbenzene	100-41-4	<0.00980	0.00980	mg/kg	02.17.2020 23:22	U	1
m,p-Xylenes	179601-23-1	<0.0196	0.0196	mg/kg	02.17.2020 23:22	U	1
o-Xylene	95-47-6	<0.00980	0.00980	mg/kg	02.17.2020 23:22	U	1
Xylenes, Total	1330-20-7	<0.00980	0.00980	mg/kg	02.17.2020 23:22	U	1
Total BTEX		<0.00980	0.00980	mg/kg	02.17.2020 23:22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.17.2020 23:22		
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.17.2020 23:22		



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LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH09** Matrix: Soil Date Received: 02.14.2020 17:50
 Lab Sample Id: 652519-017 Date Collected: 02.13.2020 16:00 Sample Depth: 1 ft
 Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.2020 17:00 Basis: Wet Weight
 Seq Number: 3116808

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.17.2020 20:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.17.2020 20:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.17.2020 20:22	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.17.2020 20:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.17.2020 20:22	
o-Terphenyl	84-15-1	105	%	70-135	02.17.2020 20:22	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.2020 11:00 Basis: Wet Weight
 Seq Number: 3116796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0410	0.00980	mg/kg	02.18.2020 09:54		1
Toluene	108-88-3	0.0142	0.00980	mg/kg	02.18.2020 09:54		1
Ethylbenzene	100-41-4	<0.00980	0.00980	mg/kg	02.18.2020 09:54	U	1
m,p-Xylenes	179601-23-1	<0.0196	0.0196	mg/kg	02.18.2020 09:54	U	1
o-Xylene	95-47-6	0.0891	0.00980	mg/kg	02.18.2020 09:54		1
Xylenes, Total	1330-20-7	0.0891	0.00980	mg/kg	02.18.2020 09:54		1
Total BTEX		0.144	0.00980	mg/kg	02.18.2020 09:54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.18.2020 09:54	
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.18.2020 09:54	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH09A** Matrix: Soil Date Received: 02.14.2020 17:50
 Lab Sample Id: 652519-018 Date Collected: 02.13.2020 16:35 Sample Depth: 6 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.2020 11:00 Basis: Wet Weight
 Seq Number: 3116743

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	610	9.98	mg/kg	02.17.2020 14:12		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.2020 17:00 Basis: Wet Weight
 Seq Number: 3116808

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.17.2020 20:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.17.2020 20:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.17.2020 20:22	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.17.2020 20:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.17.2020 20:22	
o-Terphenyl	84-15-1	102	%	70-135	02.17.2020 20:22	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH09A**
Lab Sample Id: 652519-018

Matrix: Soil
Date Collected: 02.13.2020 16:35

Date Received: 02.14.2020 17:50
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.17.2020 11:00

Basis: Wet Weight

Seq Number: 3116796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00980	0.00980	mg/kg	02.18.2020 00:03	U	1
Toluene	108-88-3	<0.00980	0.00980	mg/kg	02.18.2020 00:03	U	1
Ethylbenzene	100-41-4	<0.00980	0.00980	mg/kg	02.18.2020 00:03	U	1
m,p-Xylenes	179601-23-1	<0.0196	0.0196	mg/kg	02.18.2020 00:03	U	1
o-Xylene	95-47-6	<0.00980	0.00980	mg/kg	02.18.2020 00:03	U	1
Xylenes, Total	1330-20-7	<0.00980	0.00980	mg/kg	02.18.2020 00:03	U	1
Total BTEX		<0.00980	0.00980	mg/kg	02.18.2020 00:03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.18.2020 00:03		
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.18.2020 00:03		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



LT Environmental, Inc.

Saguaro #2

Analytical Method: Chloride by EPA 300

Seq Number: 3116743

MB Sample Id: 7696809-1-BLK

Matrix: Solid

LCS Sample Id: 7696809-1-BKS

Prep Method: E300P

Date Prep: 02.17.2020

LCSD Sample Id: 7696809-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	255	102	255	102	90-110	0	20	mg/kg	02.17.2020 11:54	

Analytical Method: Chloride by EPA 300

Seq Number: 3116743

Parent Sample Id: 652519-010

Matrix: Soil

MS Sample Id: 652519-010 S

Prep Method: E300P

Date Prep: 02.17.2020

MSD Sample Id: 652519-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23.3	200	232	104	232	104	90-110	0	20	mg/kg	02.17.2020 13:27	

Analytical Method: Chloride by EPA 300

Seq Number: 3116743

Parent Sample Id: 652566-001

Matrix: Soil

MS Sample Id: 652566-001 S

Prep Method: E300P

Date Prep: 02.17.2020

MSD Sample Id: 652566-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	733	200	948	108	953	110	90-110	1	20	mg/kg	02.17.2020 12:10	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116742

MB Sample Id: 7696815-1-BLK

Matrix: Solid

LCS Sample Id: 7696815-1-BKS

Prep Method: SW8015P

Date Prep: 02.17.2020

LCSD Sample Id: 7696815-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	797	80	837	84	70-135	5	35	mg/kg	02.17.2020 12:52	
Diesel Range Organics (DRO)	<50.0	1000	870	87	920	92	70-135	6	35	mg/kg	02.17.2020 12:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		110		119		70-135	%	02.17.2020 12:52
o-Terphenyl	97		97		104		70-135	%	02.17.2020 12:52

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116808

MB Sample Id: 7696871-1-BLK

Matrix: Solid

LCS Sample Id: 7696871-1-BKS

Prep Method: SW8015P

Date Prep: 02.17.2020

LCSD Sample Id: 7696871-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	936	94	741	74	70-135	23	35	mg/kg	02.17.2020 17:40	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	803	80	70-135	23	35	mg/kg	02.17.2020 17:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	71		117		101		70-135	%	02.17.2020 17:40
o-Terphenyl	77		113		93		70-135	%	02.17.2020 17:40

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



LT Environmental, Inc.

Saguaro #2

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116742

Matrix: Solid

Prep Method: SW8015P

Date Prep: 02.17.2020

MB Sample Id: 7696815-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

MB
Result

<50.0

Units

mg/kg

Analysis
Date

02.17.2020 12:32

Flag

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116808

Matrix: Solid

Prep Method: SW8015P

Date Prep: 02.17.2020

MB Sample Id: 7696871-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

MB
Result

<50.0

Units

mg/kg

Analysis
Date

02.17.2020 17:40

Flag

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116742

Matrix: Soil

Prep Method: SW8015P

Date Prep: 02.17.2020

Parent Sample Id: 652566-001

MS Sample Id: 652566-001 S

MSD Sample Id: 652566-001 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

Parent
Result

<49.9

Spike
Amount

998

MS
Result

846

MS
%Rec

85

MSD
Result

809

MSD
%Rec

81

Limits

70-135

%RPD

4

RPD
Limit

35

Units

mg/kg

Analysis
Date

02.17.2020 13:12

Flag

Diesel Range Organics (DRO)

<49.9

998

953

95

894

90

70-135

6

35

mg/kg

02.17.2020 13:12

Surrogate

1-Chlorooctane

MS
%Rec

107

MS
FlagMSD
%Rec

99

MSD
Flag

Limits

70-135

Units

%

Analysis
Date

02.17.2020 13:12

o-Terphenyl

106

100

70-135

%

02.17.2020 13:12

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116808

Matrix: Soil

Prep Method: SW8015P

Date Prep: 02.17.2020

Parent Sample Id: 652644-002

MS Sample Id: 652644-002 S

MSD Sample Id: 652644-002 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

Parent
Result

<49.8

Spike
Amount

996

MS
Result

832

MS
%Rec

84

MSD
Result

931

MSD
%Rec

93

Limits

70-135

%RPD

11

RPD
Limit

35

Units

mg/kg

Analysis
Date

02.17.2020 18:21

Flag

Diesel Range Organics (DRO)

<49.8

996

883

89

992

99

70-135

12

35

mg/kg

02.17.2020 18:21

Surrogate

1-Chlorooctane

MS
%Rec

113

MS
FlagMSD
%Rec

114

MSD
Flag

Limits

70-135

Units

%

Analysis
Date

02.17.2020 18:21

o-Terphenyl

102

112

70-135

%

02.17.2020 18:21

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



LT Environmental, Inc.

Saguaro #2

Analytical Method: BTEX by EPA 8021B

Seq Number: 3116796

MB Sample Id: 7696813-1-BLK

Matrix: Solid

LCS Sample Id: 7696813-1-BKS

Prep Method: SW5030B

Date Prep: 02.17.2020

LCSD Sample Id: 7696813-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.106	106	0.109	109	70-130	3	35	mg/kg	02.17.2020 14:32	
Toluene	<0.00200	0.100	0.102	102	0.104	104	70-130	2	35	mg/kg	02.17.2020 14:32	
Ethylbenzene	<0.00200	0.100	0.0966	97	0.0976	98	71-129	1	35	mg/kg	02.17.2020 14:32	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.199	100	70-135	1	35	mg/kg	02.17.2020 14:32	
o-Xylene	<0.00200	0.100	0.100	100	0.101	101	71-133	1	35	mg/kg	02.17.2020 14:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		105		70-130	%	02.17.2020 14:32
4-Bromofluorobenzene	94		93		92		70-130	%	02.17.2020 14:32

Analytical Method: BTEX by EPA 8021B

Seq Number: 3116796

Parent Sample Id: 652514-025

Matrix: Soil

MS Sample Id: 652514-025 S

Prep Method: SW5030B

Date Prep: 02.17.2020

MSD Sample Id: 652514-025 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0771	77	0.0828	83	70-130	7	35	mg/kg	02.17.2020 15:53	
Toluene	<0.00200	0.0998	0.0734	74	0.0717	72	70-130	2	35	mg/kg	02.17.2020 15:53	
Ethylbenzene	<0.00200	0.0998	0.0866	87	0.0796	80	71-129	8	35	mg/kg	02.17.2020 15:53	
m,p-Xylenes	<0.00399	0.200	0.157	79	0.150	76	70-135	5	35	mg/kg	02.17.2020 15:53	
o-Xylene	<0.00200	0.0998	0.0801	80	0.0818	82	71-133	2	35	mg/kg	02.17.2020 15:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		70-130	%	02.17.2020 15:53
4-Bromofluorobenzene	93		96		70-130	%	02.17.2020 15:53

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1296
Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

Chain of Custody
Work Order No: 652519
www.xenco.com Page 1 of 2

Project Manager:	Christa Leibli	Bill to: (if different)	Michael Gant
Company Name:	LT Environmental, Inc., Permian office	Company Name:	Lucid Energy
Address:	3300 North A St. Bldg 1, Unit 222	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Artesia, NM
Phone:	(432) 701-2610	Email:	aager@ltenv.com cleib@ltenv.com mmcafee@ltenv.com
Project Name:	Saguro	Turn Around	
Project Number:	101220001	Routine	<input checked="" type="checkbox"/>
P. O. Number:		Rush:	
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT		Temp Blank:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wet Ice:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature (°C):	0.2	Thermometer ID	TMM007		
Received Inact:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Correction Factor:	-0.2		
Cooler Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Total Containers:	18		
Sample Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A				

Sample Identification					Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)											Sample Comments																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
BH01					S	2/11/2020	1103	7.5'	1	X	X	X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											</

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

Note: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		2/14/20 17:50			



Chain of Custody

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1256

Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

Work Order No:

www.xenco.com

Page

2 of 2

Project Manager:	Christa Leibli	Bill to: (if different)	Michael Gant
Company Name:	LT Environmental, Inc., Permian office	Company Name:	Lucid Energy
Address:	3300 North A St. Bldg 1, Unit 222	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Artesia, NM
Phone:	(432) 701-2610	Email:	leibli@ltenv.com cleibli@ltenv.com rmcafee@ltenv.com

Project Name:	Saguro	Turn Around	
Project Number:	101220001	Routine	<input checked="" type="checkbox"/>
P.O. Number:		Rush:	
Sampler's Name:	Robert McAfee	Due Date:	

ANALYSIS REQUEST										Work Order Notes	
Turn Around											
Routine											
Rush:											
Due Date:											
Thermometer ID											
Correction Factor:											
Total Containers:											
Temp Blank:											
Yes No											
Wet Ice:											
Yes No											
Cooler Custody Seals:											
Yes No N/A											
Sample Custody Seals:											
Yes No N/A											
SAMPLE RECEIPT											
Temperature (°C):											
Received Intact:											
Yes No											
Matrix											
Date Sampled											
Time Sampled											
Depth											
Sample Identification											
BH06	S	2/13/2020	1230	2'	1	X	X	X	X		
BH06A	S	2/13/2020	1640	6'	1	X	X	X	X		
BH07	S	2/13/2020	1305	3'	1	X	X	X	X		
BH07A	S	2/13/2020	1320	6'	1	X	X	X	X		
BH08	S	2/13/2020	1540	1'	1	X	X	X	X		
BH08A	S	2/13/2020	1625	6'	1	X	X	X	X		
BH09	S	2/13/2020	1600	1'	1	X	X	X	X		
BH09A	S	2/13/2020	1635	6'	1	X	X	X	X		

Total	200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg		

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Robert McAfee	[Signature]	2/14/20 17:50	2		
3			4		
5			6		

Revised Date 05/4/18 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02.14.2020 05.50.00 PM

Work Order #: 652519

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : TNM 007

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	No
#6 *Custody Seals Signed and dated?	No
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by:



Martha Castro

Date: 02.15.2020

Checklist reviewed by:



Jessica Kramer

Date: 02.18.2020



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

September 11, 2020

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

RE: Saguaro 2

OrderNo.: 2009217

Dear Michael Gant:

Hall Environmental Analysis Laboratory received 3 sample(s) on 9/3/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2009217

Date Reported: 9/11/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy Delaware

Client Sample ID: FS01@6'

Project: Saguario 2

Collection Date: 9/2/2020 11:00:00 AM

Lab ID: 2009217-001

Matrix: SOIL

Received Date: 9/3/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	9/6/2020 3:39:06 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/6/2020 3:39:06 AM
Surr: DNOP	102	30.4-154		%Rec	1	9/6/2020 3:39:06 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	9/10/2020 7:08:41 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: DJF
Benzene	ND	0.025		mg/Kg	1	9/5/2020 5:19:21 PM
Toluene	ND	0.049		mg/Kg	1	9/5/2020 5:19:21 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/5/2020 5:19:21 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/5/2020 5:19:21 PM
Surr: 1,2-Dichloroethane-d4	92.4	70-130		%Rec	1	9/5/2020 5:19:21 PM
Surr: 4-Bromofluorobenzene	97.3	70-130		%Rec	1	9/5/2020 5:19:21 PM
Surr: Dibromofluoromethane	107	70-130		%Rec	1	9/5/2020 5:19:21 PM
Surr: Toluene-d8	95.8	70-130		%Rec	1	9/5/2020 5:19:21 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/5/2020 5:19:21 PM
Surr: BFB	104	70-130		%Rec	1	9/5/2020 5:19:21 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	Value above quantitation range
	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		

Page 1 of 8

Analytical Report

Lab Order 2009217

Date Reported: 9/11/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy Delaware

Client Sample ID: FS02@6'

Project: Saguario 2

Collection Date: 9/2/2020 11:10:00 AM

Lab ID: 2009217-002

Matrix: SOIL

Received Date: 9/3/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/6/2020 4:03:19 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/6/2020 4:03:19 AM
Surr: DNOP	49.8	30.4-154		%Rec	1	9/6/2020 4:03:19 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	280	60		mg/Kg	20	9/10/2020 7:21:06 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: DJF
Benzene	ND	0.024		mg/Kg	1	9/5/2020 6:45:12 PM
Toluene	ND	0.048		mg/Kg	1	9/5/2020 6:45:12 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/5/2020 6:45:12 PM
Xylenes, Total	ND	0.097		mg/Kg	1	9/5/2020 6:45:12 PM
Surr: 1,2-Dichloroethane-d4	96.9	70-130		%Rec	1	9/5/2020 6:45:12 PM
Surr: 4-Bromofluorobenzene	96.0	70-130		%Rec	1	9/5/2020 6:45:12 PM
Surr: Dibromofluoromethane	109	70-130		%Rec	1	9/5/2020 6:45:12 PM
Surr: Toluene-d8	97.4	70-130		%Rec	1	9/5/2020 6:45:12 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/5/2020 6:45:12 PM
Surr: BFB	103	70-130		%Rec	1	9/5/2020 6:45:12 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	Value above quantitation range
	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		

Page 2 of 8

Analytical Report

Lab Order 2009217

Date Reported: 9/11/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lucid Energy Delaware

Client Sample ID: FS03@6'

Project: Saguro 2

Collection Date: 9/2/2020 11:15:00 AM

Lab ID: 2009217-003

Matrix: SOIL

Received Date: 9/3/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	80	9.7		mg/Kg	1	9/6/2020 4:27:40 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/6/2020 4:27:40 AM
Surr: DNOP	51.6	30.4-154		%Rec	1	9/6/2020 4:27:40 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	150	60		mg/Kg	20	9/10/2020 7:33:31 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: DJF
Benzene	ND	0.12		mg/Kg	5	9/5/2020 8:10:43 PM
Toluene	ND	0.24		mg/Kg	5	9/5/2020 8:10:43 PM
Ethylbenzene	ND	0.24		mg/Kg	5	9/5/2020 8:10:43 PM
Xylenes, Total	0.55	0.48		mg/Kg	5	9/5/2020 8:10:43 PM
Surr: 1,2-Dichloroethane-d4	96.9	70-130		%Rec	5	9/5/2020 8:10:43 PM
Surr: 4-Bromofluorobenzene	98.6	70-130		%Rec	5	9/5/2020 8:10:43 PM
Surr: Dibromofluoromethane	108	70-130		%Rec	5	9/5/2020 8:10:43 PM
Surr: Toluene-d8	97.5	70-130		%Rec	5	9/5/2020 8:10:43 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: DJF
Gasoline Range Organics (GRO)	ND	24		mg/Kg	5	9/5/2020 8:10:43 PM
Surr: BFB	107	70-130		%Rec	5	9/5/2020 8:10:43 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	Value above quantitation range
	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		

Page 3 of 8

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

WO#: 2009217

15-Sep-20

Client: Lucid Energy Delaware**Project:** Saguaro 2

Sample ID: MB-55077	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 55077	RunNo: 71765								
Prep Date: 9/10/2020	Analysis Date: 9/10/2020	SeqNo: 2510884	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-55077	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 55077	RunNo: 71765								
Prep Date: 9/10/2020	Analysis Date: 9/10/2020	SeqNo: 2510885	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.9	90	110			

Qualifiers:

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

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

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

WO#: 2009217

15-Sep-20

Client: Lucid Energy Delaware**Project:** Saguaro 2

Sample ID: LCS-54955	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 54955		RunNo: 71657							
Prep Date: 9/4/2020	Analysis Date: 9/5/2020		SeqNo: 2505399		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	106	70	130			
Surr: DNOP	3.9		5.000		77.3	30.4	154			

Sample ID: MB-54955	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 54955		RunNo: 71657							
Prep Date: 9/4/2020	Analysis Date: 9/5/2020		SeqNo: 2505404		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	8.3		10.00		82.6	30.4	154			

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

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

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

WO#: 2009217

15-Sep-20

Client: Lucid Energy Delaware**Project:** Saguaro 2

Sample ID: mb-54944	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: PBS	Batch ID: 54944	RunNo: 71645								
Prep Date: 9/3/2020	Analysis Date: 9/5/2020	SeqNo: 2504612	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: 1,2-Dichloroethane-d4	0.48		0.5000		97.0	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.5	70	130			
Surr: Dibromofluoromethane	0.56		0.5000		112	70	130			
Surr: Toluene-d8	0.46		0.5000		91.8	70	130			

Sample ID: lcs-54944	SampType: LCS4	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: BatchQC	Batch ID: 54944	RunNo: 71645								
Prep Date: 9/3/2020	Analysis Date: 9/5/2020	SeqNo: 2504722	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.3	80	120			
Toluene	0.96	0.050	1.000	0	96.1	80	120			
Ethylbenzene	0.97	0.050	1.000	0	96.8	80	120			
Xylenes, Total	3.1	0.10	3.000	0	102	80	120			
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		97.8	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		101	70	130			
Surr: Dibromofluoromethane	0.55		0.5000		110	70	130			
Surr: Toluene-d8	0.47		0.5000		93.6	70	130			

Sample ID: 2009217-001ams	SampType: MS4	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: FS01@6'	Batch ID: 54944	RunNo: 71651								
Prep Date: 9/3/2020	Analysis Date: 9/5/2020	SeqNo: 2504900	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.024	0.9785	0	96.8	71.1	115			
Toluene	1.0	0.049	0.9785	0	103	79.6	132			
Ethylbenzene	1.0	0.049	0.9785	0	106	83.8	134			
Xylenes, Total	3.3	0.098	2.935	0	111	82.4	132			
Surr: 1,2-Dichloroethane-d4	0.46		0.4892		93.3	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.4892		98.6	70	130			
Surr: Dibromofluoromethane	0.54		0.4892		109	70	130			
Surr: Toluene-d8	0.47		0.4892		96.8	70	130			

Qualifiers:

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

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

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

WO#: 2009217

15-Sep-20

Client: Lucid Energy Delaware**Project:** Saguario 2

Sample ID: 2009217-001amsd		SampType: MSD4		TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: FS01@6'		Batch ID: 54944		RunNo: 71651						
Prep Date: 9/3/2020		Analysis Date: 9/5/2020		SeqNo: 2504901		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	0.9940	0	97.4	71.1	115	2.19	20	
Toluene	1.0	0.050	0.9940	0	103	79.6	132	1.50	20	
Ethylbenzene	1.1	0.050	0.9940	0	109	83.8	134	5.15	20	
Xylenes, Total	3.3	0.099	2.982	0	112	82.4	132	2.26	20	
Surr: 1,2-Dichloroethane-d4	0.46		0.4970		92.1	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.50		0.4970		101	70	130	0	0	
Surr: Dibromofluoromethane	0.54		0.4970		109	70	130	0	0	
Surr: Toluene-d8	0.49		0.4970		98.3	70	130	0	0	

Qualifiers:

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

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

Page 7 of 8

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

WO#: 2009217

15-Sep-20

Client: Lucid Energy Delaware**Project:** Saguaro 2

Sample ID: mb-54944	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: 54944	RunNo: 71645								
Prep Date: 9/3/2020	Analysis Date: 9/5/2020	SeqNo: 2504782 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	510		500.0		103	70	130			

Sample ID: lcs-54944	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: 54944	RunNo: 71645								
Prep Date: 9/3/2020	Analysis Date: 9/5/2020	SeqNo: 2504783 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.6	70	130			
Surr: BFB	530		500.0		107	70	130			

Sample ID: 2009217-002ams	SampType: MS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: FS02@6'	Batch ID: 54944	RunNo: 71651								
Prep Date: 9/3/2020	Analysis Date: 9/5/2020	SeqNo: 2504940 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.61	0	96.7	49.2	122			
Surr: BFB	540		492.1		109	70	130			

Sample ID: 2009217-002amsd	SampType: MSD	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: FS02@6'	Batch ID: 54944	RunNo: 71651								
Prep Date: 9/3/2020	Analysis Date: 9/5/2020	SeqNo: 2504941 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.9	24.73	0	91.0	49.2	122	5.60	20	
Surr: BFB	510		494.6		103	70	130	0	0	

Qualifiers:

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

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



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

Sample Log-In Check List

Client Name: Lucid Energy Delaware

Work Order Number: 2009217

RcptNo: 1

Received By: Juan Rojas 9/3/2020 8:00:00 AM

Completed By: Juan Rojas 9/3/2020 9:20:14 AM

Reviewed By: *gm 9/3/20*

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? Yes ☒ No ☐
(Note discrepancies on chain of custody)
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? Yes ☒ No ☐
(If no, notify customer for authorization.)

of preserved bottles checked for pH:
(<2 or >12 unless noted)

Adjusted? _____

Checked by: *CRC 9/3/20*

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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good				

Chain-of-Custody Record

Client:	Lvoid Energy
Mailing Address:	on file
Phone #:	314 330 7876
email or Fax#:	mgant@lvoid-energy.com
QA/QC Package:	<input type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)
Accreditation:	<input type="checkbox"/> Az Compliance <input type="checkbox"/> NELAC <input type="checkbox"/> Other _____
	<input type="checkbox"/> EDD (Type) _____

email or Fax#: mgant@ucid-energy.com

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

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:	5 Days
<input checked="" type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush	
Project Name:	Sagvato 2
Project #:	

Project Manager:	Michael Cant
Sampler:	MB
On Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
# of Coolers:	1

Cooler Temp_(including CF): $0.6 - 0 = 0.6$ (°C)

Container Type and #	Preservative Type	HEAL No. 206977
-------------------------	----------------------	--------------------

4oz Soil	FCE	-991
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202	1	
203		

	-063
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[illegible]

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Received by:	Via:	Date	Time
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9/2/20

Received by: 	Via:	Date	Time
--	------	------	------

pdf aenier 9/3/70 8:00

contracted to other accredited laboratories. This serves as notice of this



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:

Date:	Time:	Relinquished by:	Received by:	Via:	Date:	Time:
9/2/00	1210	<i>[Signature]</i>	<i>[Signature]</i>		9/2/00	1210
9/2/00	1900	<i>[Signature]</i>	<i>[Signature]</i>		9/2/00	8:00

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 10504

CONDITIONS OF APPROVAL

Operator: LUCID ARTESIA COMPANY 201 South Fourth Street Artesia, NM88210			OGRID: 147831	Action Number: 10504	Action Type: C-141
OCD Reviewer			Condition		
ceads			None		