



LT Environmental, Inc.

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

April 15, 2020

Mr. Mike Bratcher
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

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

Dear Mr. Bratcher:

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 and subsequent excavation of impacted soil. Based on field observations, field screening, and laboratory analytical results from soil sampling activities, Lucid is submitting this Deferral and Variance Request in an effort to forbear from disturbing de minimis impacted soil within a major utility Right of Way (ROW). Lucid respectfully requests no further action that may contribute to compromising the safety of field personnel and integrity of sensitive subsurface flowlines during active pipeline operations.

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 NMOC 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

INITIAL RESPONSE

In response to the release, Lucid excavated approximately 117 cubic yards of impacted soil to 5.5 feet bgs. Generated material was staged onsite over an impermeable liner. The subject pipeline was repaired and the sidewalls and floor of the excavation were composite sampled. A composite sample of the stockpile was also collected. Samples were relinquished to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-motor oil range organics (MRO) following EPA Method 8015M/D. Based on process knowledge of the source, no chloride was analyzed. The locations of samples are presented on Figure 2 and laboratory analytical results are summarized in Table 1. The complete laboratory analytical report is included in Attachment 4. Because the base of the excavation, north sidewall, and west sidewall contained impacts exceeding Table 1 Closure Criteria, Lucid contracted LTE to delineate vertical and lateral impact to soil.



DELINEATION SOIL SAMPLING ACTIVITIES

On February 6, 2020, LTE personnel conducted site investigative activities of the Site to evaluate the release extent and current conditions. Surface staining throughout the release was visually observed to be minimal. Photographic documentation was conducted during the Site visit and a Photographic Log is included in Attachment 2.

On February 11, 2020 and February 13, 2020, LTE personnel conducted delineation activities in an effort to define the vertical and horizontal extent of the impacted area. Utilizing a hand auger, nine boreholes (BH01 through BH09) were advanced within and around the release footprint and open excavation to verify the presence or absence of soil impacts. Field screening was conducted at every 1-foot interval for volatile aromatic hydrocarbons using a photoionization detector (PID) and/or chloride using Hach® chloride QuanTab® test strips. Two samples were collected from each borehole: the most impacted sample based on field screening results and the terminus of the borehole. Field screening results and observations for each borehole were logged on lithologic/soil sampling logs, which are included in Attachment 3. The locations of delineation boreholes are presented on Figure 3. 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 (°C), under strict chain-of-custody (COC) procedures, to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States EPA Method 8021B; TPH-GRO, TPH-DRO, and TPH-MRO following EPA Method 8015M/D; and/or chloride following EPA Method 300.0. Lucid did not request chloride concentration analysis for samples collected from shallow depths outside of the excavation; however, the deepest samples were analyzed for chloride for potential closure arguments. The complete laboratory analytical report is included in Attachment 4. Additionally, photographic documentation from delineation activities is also included in Attachment 2.

ANALYTICAL DELINEATION RESULTS

Excluding BH09A, terminus boreholes analyzed for chloride concentrations yielded concentrations below the Closure Criteria. BH09A only slightly exceeded the Closure Criteria for chloride, containing 610 milligrams per kilogram (mg/kg) compared to the Closure Criteria of 600 mg/kg. All other delineation boring samples indicated BTEX, TPH-GRO, TPH-DRO, and Total TPH concentrations below the applicable Closure Criteria. Hydrocarbon impacts, which were the only impacts expected based on source of the release, have been delineated vertically and laterally. Laboratory analytical results are reported in Table 1.

VARIANCE REQUEST

LTE and Lucid seek approval for qualifying BH09A as a fully vertically delineated sample due to contiguity to the chloride Closure Criteria. The exceeding 10 mg/kg is equally protective of public health and environment based on the depth of the identified concentration and lack of open

Bratcher, M.
Page 4

pathways to nearby receptors. The depth of the identified concentration 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. The sample 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 10 mg/kg is unlikely to migrate vertically to such a depth as to degrade groundwater. As such, Lucid requests approval to consider the chloride identified as 610 mg/kg at 6 feet bgs in BH09 as vertically and laterally delineated.

DEFERRAL REQUEST

Based on the data indicating hydrocarbon impacts are delineated and the argued variance for full chloride delineation, Lucid responsibly requests deferral to suspend investigation of potentially related impacts associated with Incident Number NRM1935234977. Lucid will periodically monitor any altered Site configurations that may lead to the permanent removal of sensitive subsurface flow lines located within the subject area. At that time, Lucid will commence corrective action to address de minimis impacts in the area associated with BH09A and address remaining hydrocarbon impacts associated with the floor of the excavation (B-8-C), north sidewall (SW-4-N-C) and west sidewall (SW-7-W-C).

Approximately 190 cubic yards of hydrocarbon impacted soil remains in place at the Site, assuming a remaining total of approximately 2 feet bgs in the excavation below the pipeline, average total depth of approximately 4 feet bgs from SW-4-N-C to BH04, and average total depth of approximately 4 feet bgs from SW-7-W-C to BH02.

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



Bratcher, M.
Page 5

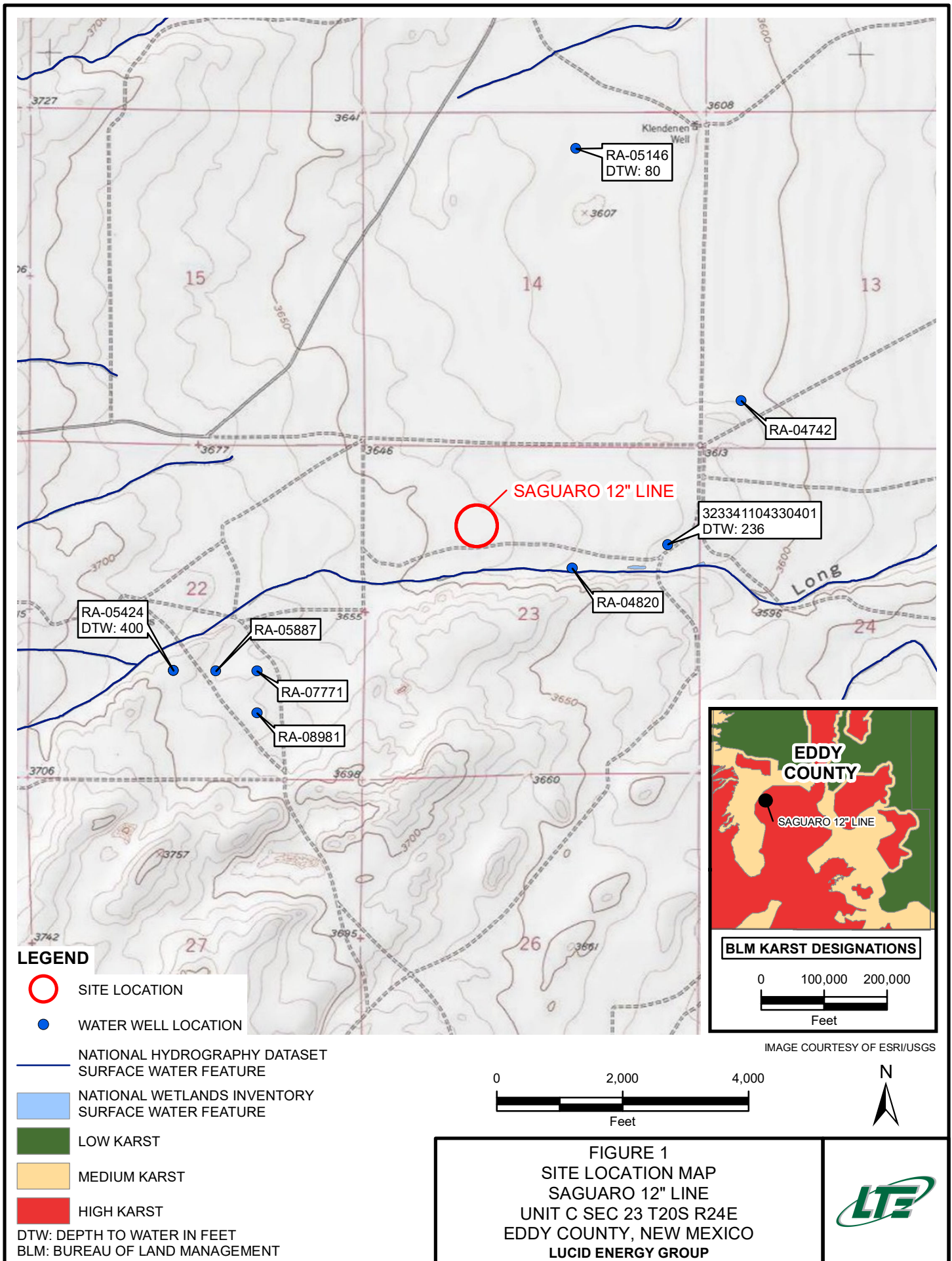
cc: Michael Gant, Lucid
Jim Amos, BLM
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

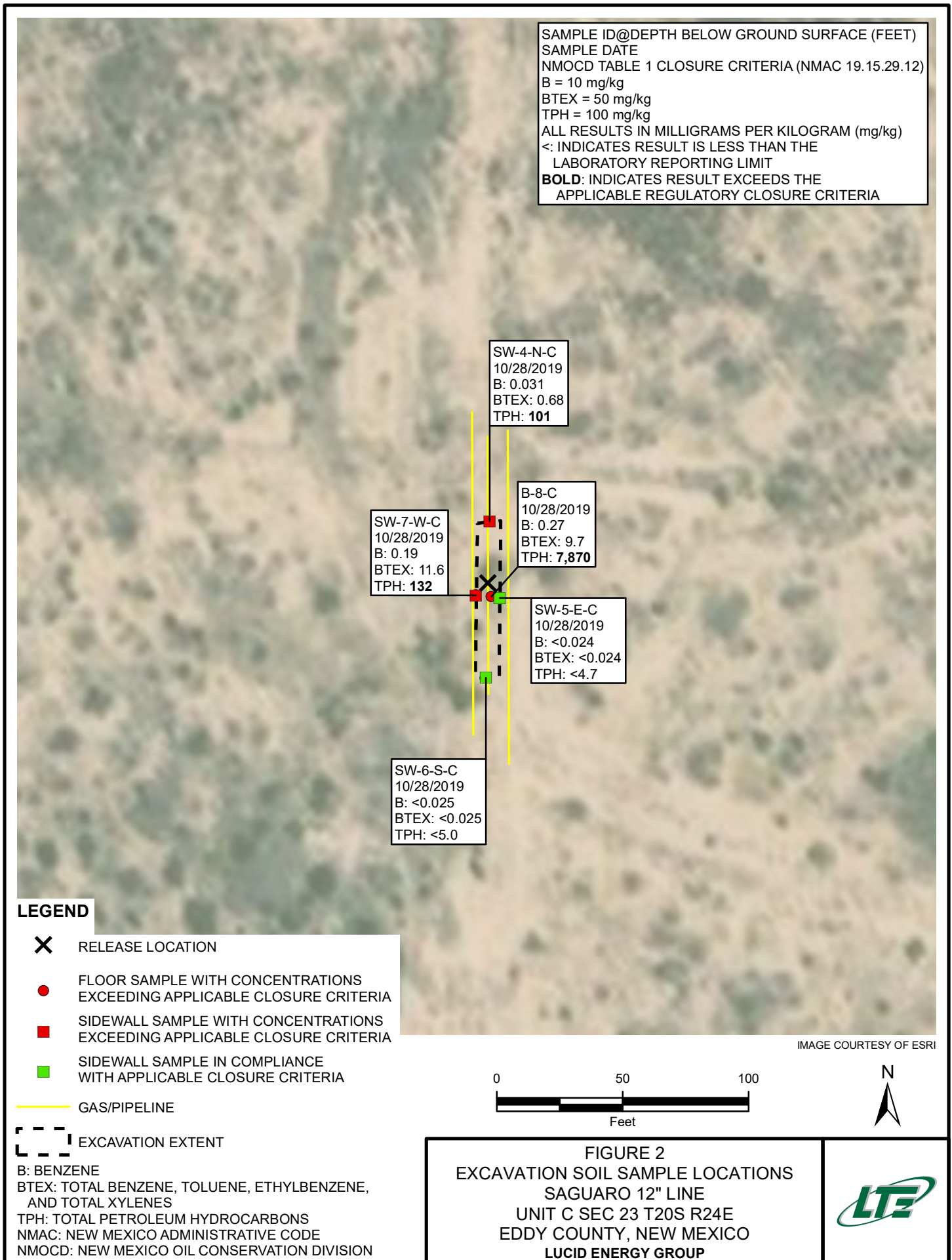
Appendices:

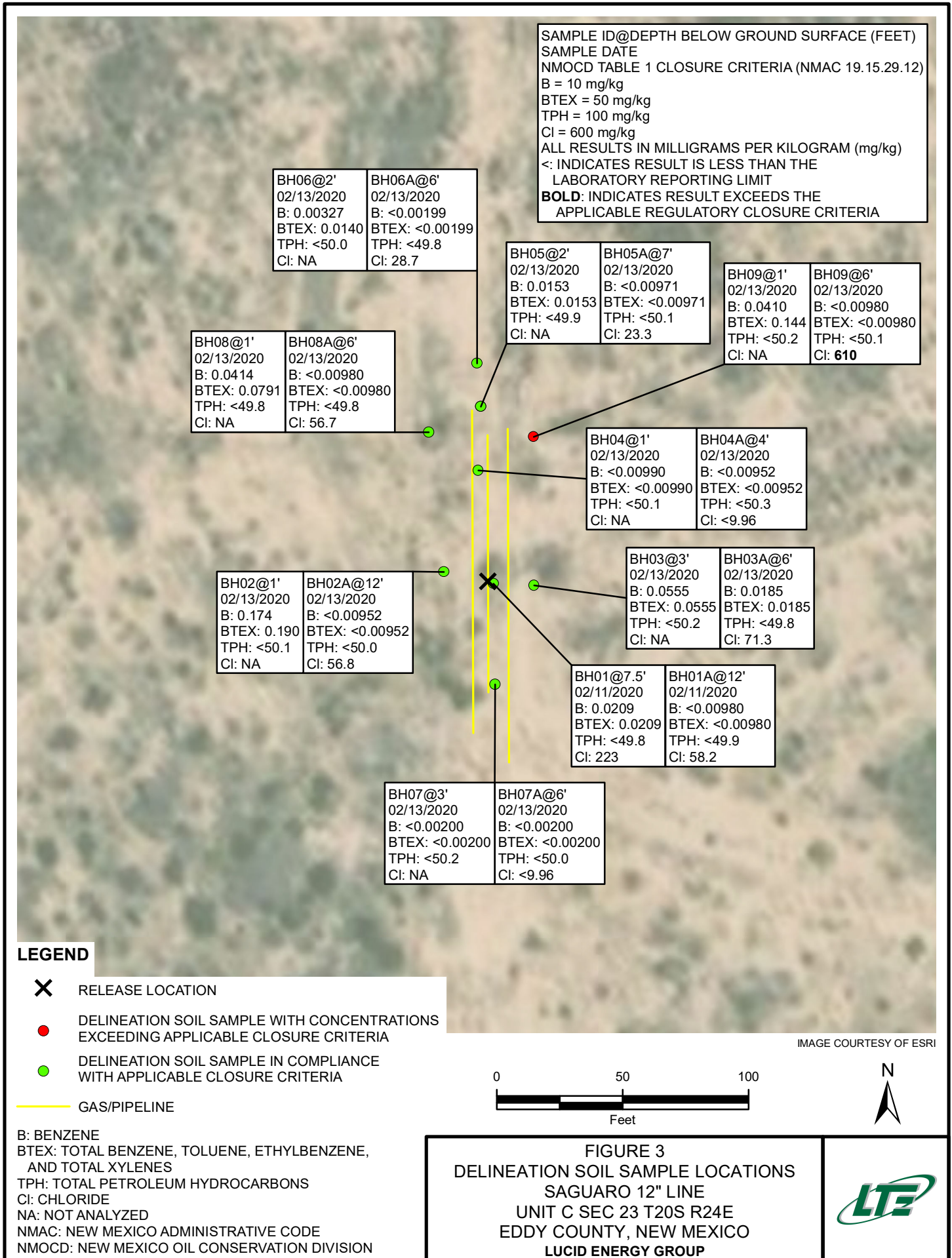
Figure 1 Site Receptor Map
Figure 2 Excavation Soil Sample Locations
Figure 3 Delineation Soil Sample Locations
Table 1 Soil Analytical Results
Attachment 1 Form C-141
Attachment 2 Photographic Log
Attachment 3 Lithologic/Soil Sampling Logs
Attachment 4 Laboratory Analytical Reports

FIGURES









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)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	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	101	101	NA
SW-5-E-C	-	10/28/2019	<0.024	0.059	<0.047	<0.094	<0.024	<4.7	<9.8	<49	<4.7	<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	<5.0	<5.0	NA
SW-7-W-C	-	10/28/2019	0.19	3.4	1.8	6.2	11.6	94	38	<46	132	132	NA
B-8-C	-	10/28/2019	0.27	3.9	1.5	4.0	9.7	65	5,000	2,800	5,070	7,870	NA
SP-3-C	-	10/28/2019	0.21	4.3	1.7	6.1	12.3	100	250	<450	350	350	NA
BH01	7.5	02/11/2020	0.0209	<0.00990	<0.00990	<0.00990	0.0209	<49.8	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<49.8	28.7
BH07	3	02/13/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<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	<50.0	<9.96

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)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCDC Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	NE	100	600
BH08	1	02/13/2020	0.0414	0.0241	<0.0100	0.0136	0.0791	<49.8	<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	<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	<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	<50.1	610

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCDC - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

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

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)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☒ Natural Gas	Volume Released (Mcf) 8 Mmcf	Volume Recovered (Mcf)
☐ 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.**

State of New Mexico
Oil Conservation Division

Incident ID	NRM1935234977
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Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ 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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <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?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas not on an exploration, development, production, or storage site?	☒ Yes ☐ No

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

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

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ 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
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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
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Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

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

- ☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☒ Extents of contamination must be fully delineated.
- ☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

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

OCD Only

Received by: _____ Date: _____

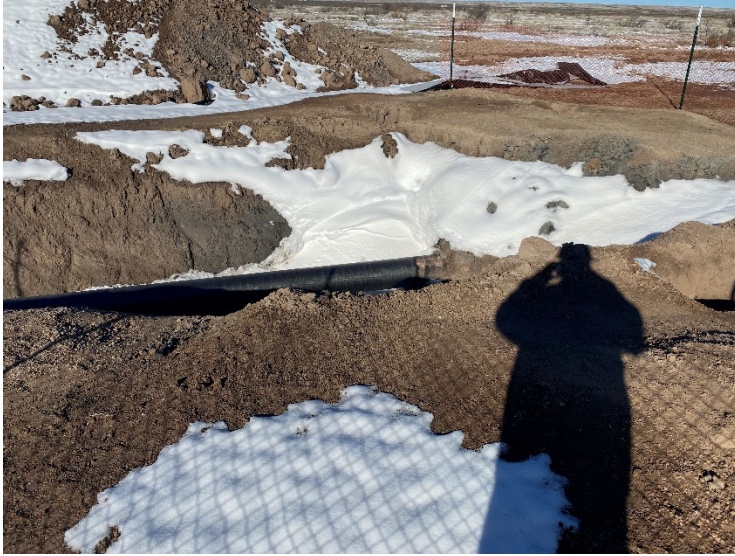
☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

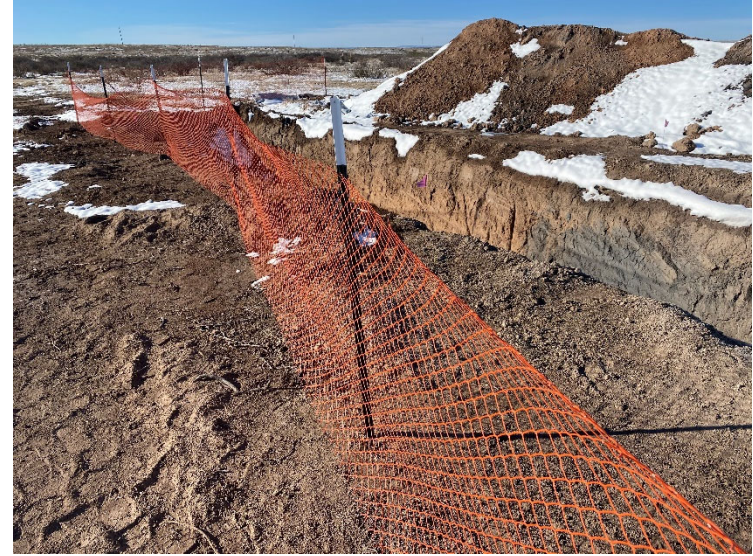
ATTACHMENT 2: PHOTOGRAPHIC LOG



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 February 13, 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.

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:

Logged By: Robert M.

Method:

Hole Diameter:

3"

Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

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		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'



Compliance · Engineering · Remediation

BH03

02/13/20

RP or Incident Number:

LTE Job Number:

Logged By:

Method:

Lat/Long:

Field Screening:

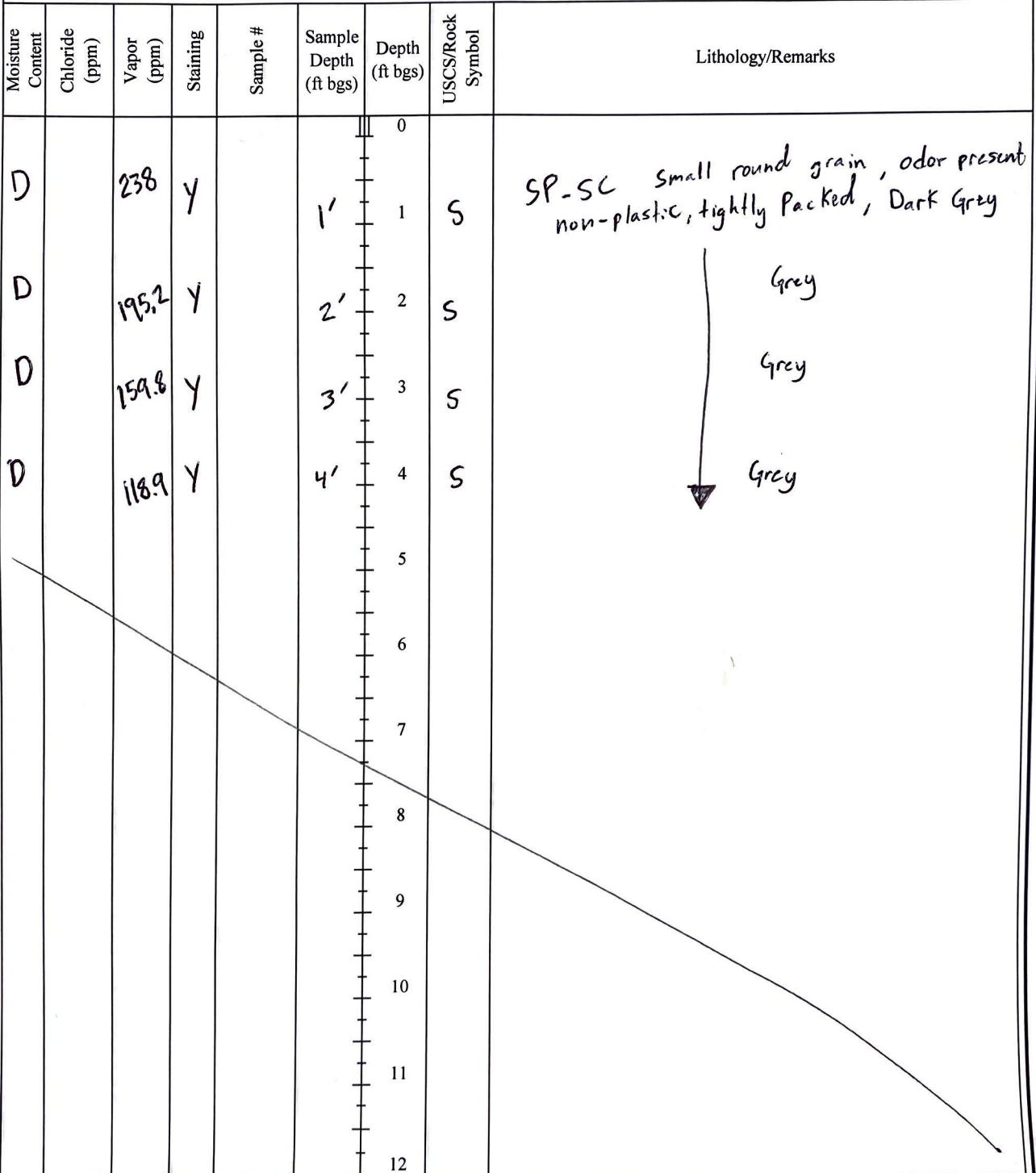
Hole Diameter:	
----------------	--

Total Depth:	
--------------	--

Chloride, PID

Comments:

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





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Carlsbad, New Mexico 88220

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BH or PH Name:

BH05

Date:

02/13/20

Site Name:

RP or Incident Number:

LTE Job Number:

Logged By:

Method:

Hole Diameter:

Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Chloride, PID

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 stone ✓ Refusal
						9		
						10		
						11		
						12		



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BH or PH Name:

ВНОБ

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:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
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	
					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
D		115.7	N		1'	1	S
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		

SP-SC tightly packed Brown
non-plastic, odor Present





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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:

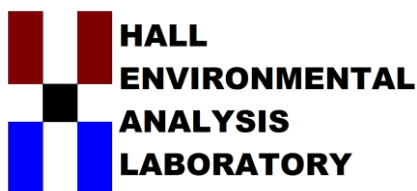
Total Depth:

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			SP-SC, tightly Packed, non-plastic Brown, odor Present ↓
					1'	1	S	
D		104.9	N		2'	2	S	
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		

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		

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		

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		

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		

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		

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			

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			

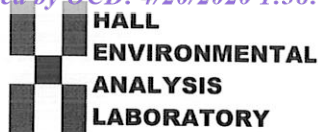
Sample ID: 1910E99-002AMS	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: SW-4-N-C	Batch ID: 48491	RunNo: 64127								
Prep Date: 10/30/2019	Analysis Date: 10/31/2019	SeqNo: 2194660 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	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 CantOn 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.

0.5 + 0.2 = 0.7
10/10/2019

Date

10/28/19

Time

1300

Sample Name

SP-3-C

Matrix

S

Date

10/28/19

Time

1305

Sample Name

SW-4-N-C

Matrix

S

Date

10/28/19

Time

1310

Sample Name

SW-5-E-C

Matrix

S

Date

10/28/19

Time

1315

Sample Name

SW-6-S-C

Matrix

S

Date

10/28/19

Time

1320

Sample Name

SW-7-W-C

Matrix

S

Date

10/28/19

Time

1325

Sample Name

SW-8-B-C

Matrix

S

Date

10/28/19

Time

1400

Sample Name

SW-8-B-C

Matrix

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Date

10/28/19

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Analytical Report 652519

for
LT Environmental, Inc.

Project Manager: Christa Leibli

Saguaro #2

10122001

18-FEB-20

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



18-FEB-20

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'. The signature is written in a cursive, flowing style.

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	02-11-20 11:03	7.5 ft	652519-001
BH01A	S	02-11-20 12:20	12 ft	652519-002
BH02	S	02-13-20 08:35	1 ft	652519-003
BH02A	S	02-13-20 14:55	12 ft	652519-004
BH03	S	02-13-20 10:35	3 ft	652519-005
BH03A	S	02-13-20 10:55	6 ft	652519-006
BH04	S	02-13-20 11:15	1 ft	652519-007
BH04A	S	02-13-20 11:30	4 ft	652519-008
BH05	S	02-13-20 11:40	2 ft	652519-009
BH05A	S	02-13-20 12:15	7 ft	652519-010
BH06	S	02-13-20 12:30	2 ft	652519-011
BH06A	S	02-13-20 16:40	6 ft	652519-012
BH07	S	02-13-20 13:05	3 ft	652519-013
BH07A	S	02-13-20 13:20	6 ft	652519-014
BH08	S	02-13-20 15:40	1 ft	652519-015
BH08A	S	02-13-20 16:25	6 ft	652519-016
BH09	S	02-13-20 16:00	1 ft	652519-017
BH09A	S	02-13-20 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: 18-FEB-20
Date Received: 02/14/2020

Sample receipt non conformances and comments:

Company name Lucid Energy
V1.001 - Revision Corrected project name

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 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 Feb-14-20 05:50 pm
Report Date: 18-FEB-20
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>	Feb-11-20 11:03	Feb-11-20 12:20	Feb-13-20 08:35	Feb-13-20 14:55	Feb-13-20 10:35	Feb-13-20 10:55
BTEX by EPA 8021B	<i>Extracted:</i>	Feb-17-20 11:00	Feb-17-20 11:00	Feb-17-20 11:00	Feb-17-20 11:00	Feb-17-20 11:00	Feb-17-20 11:00
	<i>Analyzed:</i>	Feb-18-20 10:14	Feb-18-20 10:34	Feb-18-20 10:55	Feb-17-20 18:16	Feb-17-20 18:36	Feb-17-20 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>	Feb-17-20 11:00	Feb-17-20 11:00		Feb-17-20 11:00		Feb-17-20 11:00
	<i>Analyzed:</i>	Feb-17-20 12:54	Feb-17-20 13:00		Feb-17-20 13:05		Feb-17-20 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>	Feb-17-20 12:15	Feb-17-20 12:15	Feb-17-20 12:15	Feb-17-20 12:15	Feb-17-20 12:15	Feb-17-20 12:15
	<i>Analyzed:</i>	Feb-17-20 15:38	Feb-17-20 15:17	Feb-17-20 15:58	Feb-17-20 15:58	Feb-17-20 16:19	Feb-17-20 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

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Jessica Kramer
Project Assistant



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 Feb-14-20 05:50 pm
Report Date: 18-FEB-20
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>	Feb-13-20 11:15	Feb-13-20 11:30	Feb-13-20 11:40	Feb-13-20 12:15	Feb-13-20 12:30	Feb-13-20 16:40
BTEX by EPA 8021B	<i>Extracted:</i>	Feb-17-20 11:00	Feb-17-20 11:00	Feb-17-20 11:00	Feb-17-20 11:00	Feb-17-20 11:00	Feb-17-20 11:00
	<i>Analyzed:</i>	Feb-17-20 19:17	Feb-17-20 19:38	Feb-17-20 20:59	Feb-17-20 21:20	Feb-18-20 09:13	Feb-18-20 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>		Feb-17-20 11:00		Feb-17-20 11:00		Feb-17-20 11:00
	<i>Analyzed:</i>		Feb-17-20 13:16		Feb-17-20 13:22		Feb-17-20 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>	Feb-17-20 12:15	Feb-17-20 12:15	Feb-17-20 12:15	Feb-17-20 12:15	Feb-17-20 12:15	Feb-17-20 17:00
	<i>Analyzed:</i>	Feb-17-20 16:39	Feb-17-20 16:39	Feb-17-20 16:59	Feb-17-20 16:59	Feb-17-20 17:20	Feb-17-20 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>	Feb-17-20 12:15	Feb-17-20 12:15	Feb-17-20 12:15	Feb-17-20 12:15	Feb-17-20 12:15	
	<i>Analyzed:</i>	Feb-17-20 16:39	Feb-17-20 16:39	Feb-17-20 16:59	Feb-17-20 16:59	Feb-17-20 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	

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Jessica Kramer

Jessica Kramer
Project Assistant



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 Feb-14-20 05:50 pm
Report Date: 18-FEB-20
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>	Feb-13-20 13:05	Feb-13-20 13:20	Feb-13-20 15:40	Feb-13-20 16:25	Feb-13-20 16:00	Feb-13-20 16:35
BTEX by EPA 8021B	<i>Extracted:</i>	Feb-17-20 11:00	Feb-17-20 11:00	Feb-17-20 11:00	Feb-17-20 11:00	Feb-17-20 11:00	Feb-17-20 11:00
	<i>Analyzed:</i>	Feb-17-20 22:21	Feb-17-20 22:41	Feb-18-20 09:33	Feb-17-20 23:22	Feb-18-20 09:54	Feb-18-20 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>		Feb-17-20 11:00		Feb-17-20 11:00		Feb-17-20 11:00
	<i>Analyzed:</i>		Feb-17-20 14:00		Feb-17-20 14:06		Feb-17-20 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>	Feb-17-20 17:00	Feb-17-20 17:00	Feb-17-20 17:00	Feb-17-20 17:00	Feb-17-20 17:00	Feb-17-20 17:00
	<i>Analyzed:</i>	Feb-17-20 19:22	Feb-17-20 19:42	Feb-17-20 19:42	Feb-17-20 20:02	Feb-17-20 20:22	Feb-17-20 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

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Jessica Kramer
Project Assistant



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

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

Matrix: Soil
Date Collected: 02.11.20 11.03

Date Received: 02.14.20 17.50
Sample Depth: 7.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3116743

Date Prep: 02.17.20 11.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	223	49.6	mg/kg	02.17.20 12.54		5

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3116742

Date Prep: 02.17.20 12.15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.17.20 15.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.17.20 15.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.17.20 15.38	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.17.20 15.38	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.17.20 15.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	02.17.20 15.38	
o-Terphenyl	84-15-1	103	%	70-135	02.17.20 15.38	



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LT Environmental, Inc., Arvada, CO

Saguaro #2

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

Matrix: Soil
 Date Collected: 02.11.20 11.03

Date Received: 02.14.20 17.50
 Sample Depth: 7.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Date Prep: 02.17.20 11.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0209	0.00990	mg/kg	02.18.20 10.14		1
Toluene	108-88-3	<0.00990	0.00990	mg/kg	02.18.20 10.14	U	1
Ethylbenzene	100-41-4	<0.00990	0.00990	mg/kg	02.18.20 10.14	U	1
m,p-Xylenes	179601-23-1	<0.0198	0.0198	mg/kg	02.18.20 10.14	U	1
o-Xylene	95-47-6	<0.00990	0.00990	mg/kg	02.18.20 10.14	U	1
Xylenes, Total	1330-20-7	<0.00990	0.00990	mg/kg	02.18.20 10.14	U	1
Total BTEX		0.0209	0.00990	mg/kg	02.18.20 10.14		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.18.20 10.14		
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.18.20 10.14		



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Saguaro #2

Sample Id: **BH01A** Matrix: Soil Date Received: 02.14.20 17.50
 Lab Sample Id: 652519-002 Date Collected: 02.11.20 12.20 Sample Depth: 12 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.20 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	02.17.20 13.00		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.20 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	02.17.20 15.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.17.20 15.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.17.20 15.17	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	02.17.20 15.17	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.17.20 15.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	02.17.20 15.17	
o-Terphenyl	84-15-1	105	%	70-135	02.17.20 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: 02.11.20 12.20

Date Received: 02.14.20 17.50
 Sample Depth: 12 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.17.20 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	02.18.20 10.34	U	1
Toluene	108-88-3	<0.00980	0.00980	mg/kg	02.18.20 10.34	U	1
Ethylbenzene	100-41-4	<0.00980	0.00980	mg/kg	02.18.20 10.34	U	1
m,p-Xylenes	179601-23-1	<0.0196	0.0196	mg/kg	02.18.20 10.34	U	1
o-Xylene	95-47-6	<0.00980	0.00980	mg/kg	02.18.20 10.34	U	1
Xylenes, Total	1330-20-7	<0.00980	0.00980	mg/kg	02.18.20 10.34	U	1
Total BTEX		<0.00980	0.00980	mg/kg	02.18.20 10.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.18.20 10.34		
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.18.20 10.34		



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LT Environmental, Inc., Arvada, CO

Saguaro #2

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

Matrix: Soil
Date Collected: 02.13.20 08.35

Date Received: 02.14.20 17.50
Sample Depth: 1 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3116742

Date Prep: 02.17.20 12.15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.17.20 15.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.17.20 15.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.17.20 15.58	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.17.20 15.58	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.17.20 15.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	02.17.20 15.58	
o-Terphenyl	84-15-1	105	%	70-135	02.17.20 15.58	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Date Prep: 02.17.20 11.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.174	0.00962	mg/kg	02.18.20 10.55		1
Toluene	108-88-3	0.0156	0.00962	mg/kg	02.18.20 10.55		1
Ethylbenzene	100-41-4	<0.00962	0.00962	mg/kg	02.18.20 10.55	U	1
m,p-Xylenes	179601-23-1	<0.0192	0.0192	mg/kg	02.18.20 10.55	U	1
o-Xylene	95-47-6	<0.00962	0.00962	mg/kg	02.18.20 10.55	U	1
Xylenes, Total	1330-20-7	<0.00962	0.00962	mg/kg	02.18.20 10.55	U	1
Total BTEX		0.190	0.00962	mg/kg	02.18.20 10.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.18.20 10.55	
1,4-Difluorobenzene	540-36-3	99	%	70-130	02.18.20 10.55	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH02A** Matrix: Soil Date Received: 02.14.20 17.50
 Lab Sample Id: 652519-004 Date Collected: 02.13.20 14.55 Sample Depth: 12 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.20 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	02.17.20 13.05		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.20 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	02.17.20 15.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.17.20 15.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.17.20 15.58	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.17.20 15.58	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.17.20 15.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.17.20 15.58	
o-Terphenyl	84-15-1	106	%	70-135	02.17.20 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: 02.13.20 14.55

Date Received: 02.14.20 17.50
 Sample Depth: 12 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.17.20 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	02.17.20 18.16	U	1
Toluene	108-88-3	<0.00952	0.00952	mg/kg	02.17.20 18.16	U	1
Ethylbenzene	100-41-4	<0.00952	0.00952	mg/kg	02.17.20 18.16	U	1
m,p-Xylenes	179601-23-1	<0.0190	0.0190	mg/kg	02.17.20 18.16	U	1
o-Xylene	95-47-6	<0.00952	0.00952	mg/kg	02.17.20 18.16	U	1
Xylenes, Total	1330-20-7	<0.00952	0.00952	mg/kg	02.17.20 18.16	U	1
Total BTEX		<0.00952	0.00952	mg/kg	02.17.20 18.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.17.20 18.16		
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.17.20 18.16		



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LT Environmental, Inc., Arvada, CO

Saguaro #2

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

Matrix: Soil
Date Collected: 02.13.20 10.35

Date Received: 02.14.20 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: 02.17.20 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	02.17.20 16.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.17.20 16.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.17.20 16.19	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.17.20 16.19	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.17.20 16.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.17.20 16.19	
o-Terphenyl	84-15-1	117	%	70-135	02.17.20 16.19	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Prep Method: SW5030B

% Moisture:

Date Prep: 02.17.20 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	02.17.20 18.36		1
Toluene	108-88-3	<0.00952	0.00952	mg/kg	02.17.20 18.36	U	1
Ethylbenzene	100-41-4	<0.00952	0.00952	mg/kg	02.17.20 18.36	U	1
m,p-Xylenes	179601-23-1	<0.0190	0.0190	mg/kg	02.17.20 18.36	U	1
o-Xylene	95-47-6	<0.00952	0.00952	mg/kg	02.17.20 18.36	U	1
Xylenes, Total	1330-20-7	<0.00952	0.00952	mg/kg	02.17.20 18.36	U	1
Total BTEX		0.0555	0.00952	mg/kg	02.17.20 18.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	02.17.20 18.36	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.17.20 18.36	



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LT Environmental, Inc., Arvada, CO

Saguaro #2

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

Matrix: Soil
Date Collected: 02.13.20 10.55

Date Received: 02.14.20 17.50
Sample Depth: 6 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3116743

Date Prep: 02.17.20 11.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	71.3	9.98	mg/kg	02.17.20 13.11		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3116742

Date Prep: 02.17.20 12.15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.17.20 16.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.17.20 16.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.17.20 16.19	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.17.20 16.19	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.17.20 16.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.17.20 16.19	
o-Terphenyl	84-15-1	111	%	70-135	02.17.20 16.19	



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LT Environmental, Inc., Arvada, CO

Saguaro #2

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

Matrix: Soil
 Date Collected: 02.13.20 10.55

Date Received: 02.14.20 17.50
 Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.17.20 11.00

Basis: Wet Weight

Seq Number: 3116796

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0185	0.0100	mg/kg	02.17.20 18.57		1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	02.17.20 18.57	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	02.17.20 18.57	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	02.17.20 18.57	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	02.17.20 18.57	U	1
Xylenes, Total	1330-20-7	<0.0100	0.0100	mg/kg	02.17.20 18.57	U	1
Total BTEX		0.0185	0.0100	mg/kg	02.17.20 18.57		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.17.20 18.57		
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.17.20 18.57		



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LT Environmental, Inc., Arvada, CO

Saguaro #2

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

Matrix: Soil
Date Collected: 02.13.20 11.15

Date Received: 02.14.20 17.50
Sample Depth: 1 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3116742

Date Prep: 02.17.20 12.15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.17.20 16.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.17.20 16.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.17.20 16.39	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.17.20 16.39	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.17.20 16.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	98	%	70-135	02.17.20 16.39		
o-Terphenyl	84-15-1	110	%	70-135	02.17.20 16.39		

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Date Prep: 02.17.20 11.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00990	0.00990	mg/kg	02.17.20 19.17	U	1
Toluene	108-88-3	<0.00990	0.00990	mg/kg	02.17.20 19.17	U	1
Ethylbenzene	100-41-4	<0.00990	0.00990	mg/kg	02.17.20 19.17	U	1
m,p-Xylenes	179601-23-1	<0.0198	0.0198	mg/kg	02.17.20 19.17	U	1
o-Xylene	95-47-6	<0.00990	0.00990	mg/kg	02.17.20 19.17	U	1
Xylenes, Total	1330-20-7	<0.00990	0.00990	mg/kg	02.17.20 19.17	U	1
Total BTEX		<0.00990	0.00990	mg/kg	02.17.20 19.17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.17.20 19.17		
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.17.20 19.17		



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Saguaro #2

Sample Id: **BH04A** Matrix: Soil Date Received: 02.14.20 17.50
 Lab Sample Id: 652519-008 Date Collected: 02.13.20 11.30 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.20 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	02.17.20 13.16	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.20 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	02.17.20 16.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.17.20 16.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.17.20 16.39	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	02.17.20 16.39	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.17.20 16.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	02.17.20 16.39	
o-Terphenyl	84-15-1	111	%	70-135	02.17.20 16.39	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

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

Matrix: Soil
 Date Collected: 02.13.20 11.30

Date Received: 02.14.20 17.50
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Date Prep: 02.17.20 11.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00952	0.00952	mg/kg	02.17.20 19.38	U	1
Toluene	108-88-3	<0.00952	0.00952	mg/kg	02.17.20 19.38	U	1
Ethylbenzene	100-41-4	<0.00952	0.00952	mg/kg	02.17.20 19.38	U	1
m,p-Xylenes	179601-23-1	<0.0190	0.0190	mg/kg	02.17.20 19.38	U	1
o-Xylene	95-47-6	<0.00952	0.00952	mg/kg	02.17.20 19.38	U	1
Xylenes, Total	1330-20-7	<0.00952	0.00952	mg/kg	02.17.20 19.38	U	1
Total BTEX		<0.00952	0.00952	mg/kg	02.17.20 19.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.17.20 19.38		
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.17.20 19.38		



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LT Environmental, Inc., Arvada, CO

Saguaro #2

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

Matrix: Soil
Date Collected: 02.13.20 11.40

Date Received: 02.14.20 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: 02.17.20 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	02.17.20 16.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.17.20 16.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.17.20 16.59	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	02.17.20 16.59	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.17.20 16.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	02.17.20 16.59	
o-Terphenyl	84-15-1	108	%	70-135	02.17.20 16.59	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Prep Method: SW5030B

% Moisture:

Date Prep: 02.17.20 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	02.17.20 20.59		1
Toluene	108-88-3	<0.00935	0.00935	mg/kg	02.17.20 20.59	U	1
Ethylbenzene	100-41-4	<0.00935	0.00935	mg/kg	02.17.20 20.59	U	1
m,p-Xylenes	179601-23-1	<0.0187	0.0187	mg/kg	02.17.20 20.59	U	1
o-Xylene	95-47-6	<0.00935	0.00935	mg/kg	02.17.20 20.59	U	1
Xylenes, Total	1330-20-7	<0.00935	0.00935	mg/kg	02.17.20 20.59	U	1
Total BTEX		0.0153	0.00935	mg/kg	02.17.20 20.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.17.20 20.59	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.17.20 20.59	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH05A** Matrix: Soil Date Received: 02.14.20 17.50
 Lab Sample Id: 652519-010 Date Collected: 02.13.20 12.15 Sample Depth: 7 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.20 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	02.17.20 13.22		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.20 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	02.17.20 16.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.17.20 16.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.17.20 16.59	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.17.20 16.59	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.17.20 16.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	02.17.20 16.59	
o-Terphenyl	84-15-1	113	%	70-135	02.17.20 16.59	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

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

Matrix: Soil
 Date Collected: 02.13.20 12.15

Date Received: 02.14.20 17.50
 Sample Depth: 7 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Prep Method: SW5030B

% Moisture:

Date Prep: 02.17.20 11.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00971	0.00971	mg/kg	02.17.20 21.20	U	1
Toluene	108-88-3	<0.00971	0.00971	mg/kg	02.17.20 21.20	U	1
Ethylbenzene	100-41-4	<0.00971	0.00971	mg/kg	02.17.20 21.20	U	1
m,p-Xylenes	179601-23-1	<0.0194	0.0194	mg/kg	02.17.20 21.20	U	1
o-Xylene	95-47-6	<0.00971	0.00971	mg/kg	02.17.20 21.20	U	1
Xylenes, Total	1330-20-7	<0.00971	0.00971	mg/kg	02.17.20 21.20	U	1
Total BTEX		<0.00971	0.00971	mg/kg	02.17.20 21.20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.17.20 21.20		
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.17.20 21.20		



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

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

Matrix: Soil
Date Collected: 02.13.20 12.30

Date Received: 02.14.20 17.50
Sample Depth: 2 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3116742

Date Prep: 02.17.20 12.15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.17.20 17.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.17.20 17.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.17.20 17.20	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.17.20 17.20	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.17.20 17.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	02.17.20 17.20	
o-Terphenyl	84-15-1	95	%	70-135	02.17.20 17.20	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Date Prep: 02.17.20 11.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00327	0.00200	mg/kg	02.18.20 09.13		1
Toluene	108-88-3	0.00546	0.00200	mg/kg	02.18.20 09.13		1
Ethylbenzene	100-41-4	0.00218	0.00200	mg/kg	02.18.20 09.13		1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.18.20 09.13	U	1
o-Xylene	95-47-6	0.00311	0.00200	mg/kg	02.18.20 09.13		1
Xylenes, Total	1330-20-7	0.00311	0.00200	mg/kg	02.18.20 09.13		1
Total BTEX		0.0140	0.00200	mg/kg	02.18.20 09.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.18.20 09.13	
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.18.20 09.13	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH06A** Matrix: Soil Date Received: 02.14.20 17.50
 Lab Sample Id: 652519-012 Date Collected: 02.13.20 16.40 Sample Depth: 6 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.20 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	02.17.20 13.39		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.20 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	02.17.20 19.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.17.20 19.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.17.20 19.22	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.17.20 19.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	02.17.20 19.22	
o-Terphenyl	84-15-1	100	%	70-135	02.17.20 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: 02.13.20 16.40

Date Received: 02.14.20 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: 02.17.20 11.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.18.20 11.15	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.18.20 11.15	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.18.20 11.15	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.18.20 11.15	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.18.20 11.15	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	02.18.20 11.15	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.18.20 11.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	02.18.20 11.15		
1,4-Difluorobenzene	540-36-3	95	%	70-130	02.18.20 11.15		



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH07** Matrix: Soil Date Received: 02.14.20 17.50
 Lab Sample Id: 652519-013 Date Collected: 02.13.20 13.05 Sample Depth: 3 ft
 Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.20 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	02.17.20 19.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.17.20 19.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.17.20 19.22	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.17.20 19.22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	97	%	70-135	02.17.20 19.22		
o-Terphenyl	84-15-1	104	%	70-135	02.17.20 19.22		

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.20 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	02.17.20 22.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.17.20 22.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.17.20 22.21	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.17.20 22.21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.17.20 22.21	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.17.20 22.21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.17.20 22.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.17.20 22.21		
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.17.20 22.21		



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH07A** Matrix: Soil Date Received: 02.14.20 17.50
 Lab Sample Id: 652519-014 Date Collected: 02.13.20 13.20 Sample Depth: 6 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.20 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	02.17.20 14.00	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.20 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	02.17.20 19.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.17.20 19.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.17.20 19.42	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.17.20 19.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	02.17.20 19.42	
o-Terphenyl	84-15-1	106	%	70-135	02.17.20 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: 02.13.20 13.20

Date Received: 02.14.20 17.50
 Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Date Prep: 02.17.20 11.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.17.20 22.41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.17.20 22.41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.17.20 22.41	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.17.20 22.41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.17.20 22.41	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.17.20 22.41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.17.20 22.41	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.17.20 22.41		
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.17.20 22.41		



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LT Environmental, Inc., Arvada, CO

Saguaro #2

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

Matrix: Soil
Date Collected: 02.13.20 15.40

Date Received: 02.14.20 17.50
Sample Depth: 1 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3116808

Date Prep: 02.17.20 17.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.17.20 19.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.17.20 19.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.17.20 19.42	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.17.20 19.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	02.17.20 19.42	
o-Terphenyl	84-15-1	107	%	70-135	02.17.20 19.42	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3116796

Date Prep: 02.17.20 11.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0414	0.0100	mg/kg	02.18.20 09.33		1
Toluene	108-88-3	0.0241	0.0100	mg/kg	02.18.20 09.33		1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	02.18.20 09.33	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	02.18.20 09.33	U	1
o-Xylene	95-47-6	0.0136	0.0100	mg/kg	02.18.20 09.33		1
Xylenes, Total	1330-20-7	0.0136	0.0100	mg/kg	02.18.20 09.33		1
Total BTEX		0.0791	0.0100	mg/kg	02.18.20 09.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.18.20 09.33	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.18.20 09.33	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

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

Matrix: Soil
Date Collected: 02.13.20 16.25

Date Received: 02.14.20 17.50
Sample Depth: 6 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3116743

Date Prep: 02.17.20 11.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	56.7	9.98	mg/kg	02.17.20 14.06		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3116808

Date Prep: 02.17.20 17.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.17.20 20.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.17.20 20.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.17.20 20.02	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.17.20 20.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.17.20 20.02	
o-Terphenyl	84-15-1	116	%	70-135	02.17.20 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: 02.13.20 16.25

Date Received: 02.14.20 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: 02.17.20 11.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00980	0.00980	mg/kg	02.17.20 23.22	U	1
Toluene	108-88-3	<0.00980	0.00980	mg/kg	02.17.20 23.22	U	1
Ethylbenzene	100-41-4	<0.00980	0.00980	mg/kg	02.17.20 23.22	U	1
m,p-Xylenes	179601-23-1	<0.0196	0.0196	mg/kg	02.17.20 23.22	U	1
o-Xylene	95-47-6	<0.00980	0.00980	mg/kg	02.17.20 23.22	U	1
Xylenes, Total	1330-20-7	<0.00980	0.00980	mg/kg	02.17.20 23.22	U	1
Total BTEX		<0.00980	0.00980	mg/kg	02.17.20 23.22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.17.20 23.22		
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.17.20 23.22		



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LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH09** Matrix: Soil Date Received: 02.14.20 17.50
 Lab Sample Id: 652519-017 Date Collected: 02.13.20 16.00 Sample Depth: 1 ft
 Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.20 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	02.17.20 20.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.17.20 20.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.17.20 20.22	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.17.20 20.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.17.20 20.22	
o-Terphenyl	84-15-1	105	%	70-135	02.17.20 20.22	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.20 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	02.18.20 09.54		1
Toluene	108-88-3	0.0142	0.00980	mg/kg	02.18.20 09.54		1
Ethylbenzene	100-41-4	<0.00980	0.00980	mg/kg	02.18.20 09.54	U	1
m,p-Xylenes	179601-23-1	<0.0196	0.0196	mg/kg	02.18.20 09.54	U	1
o-Xylene	95-47-6	0.0891	0.00980	mg/kg	02.18.20 09.54		1
Xylenes, Total	1330-20-7	0.0891	0.00980	mg/kg	02.18.20 09.54		1
Total BTEX		0.144	0.00980	mg/kg	02.18.20 09.54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.18.20 09.54	
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.18.20 09.54	



Certificate of Analytical Results 652519

LT Environmental, Inc., Arvada, CO

Saguaro #2

Sample Id: **BH09A** Matrix: Soil Date Received: 02.14.20 17.50
 Lab Sample Id: 652519-018 Date Collected: 02.13.20 16.35 Sample Depth: 6 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.17.20 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	02.17.20 14.12		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.17.20 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	02.17.20 20.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.17.20 20.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.17.20 20.22	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.17.20 20.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.17.20 20.22	
o-Terphenyl	84-15-1	102	%	70-135	02.17.20 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: 02.13.20 16.35

Date Received: 02.14.20 17.50
 Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.17.20 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	02.18.20 00.03	U	1
Toluene	108-88-3	<0.00980	0.00980	mg/kg	02.18.20 00.03	U	1
Ethylbenzene	100-41-4	<0.00980	0.00980	mg/kg	02.18.20 00.03	U	1
m,p-Xylenes	179601-23-1	<0.0196	0.0196	mg/kg	02.18.20 00.03	U	1
o-Xylene	95-47-6	<0.00980	0.00980	mg/kg	02.18.20 00.03	U	1
Xylenes, Total	1330-20-7	<0.00980	0.00980	mg/kg	02.18.20 00.03	U	1
Total BTEX		<0.00980	0.00980	mg/kg	02.18.20 00.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.18.20 00.03		
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.18.20 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.

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: 02.17.20

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	02.17.20 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: 02.17.20

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	02.17.20 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: 02.17.20

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	02.17.20 12:12	

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: 02.17.20

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	02.17.20 12:52	
Diesel Range Organics (DRO)	<50.0	1000	870	87	920	92	70-135	6	35	mg/kg	02.17.20 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	%	02.17.20 12:52
o-Terphenyl	97		97		104		70-135	%	02.17.20 12:52

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: 3116808

MB Sample Id: 7696871-1-BLK

Matrix: Solid

LCS Sample Id: 7696871-1-BKS

Prep Method: SW8015P

Date Prep: 02.17.20

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	02.17.20 17:40	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	803	80	70-135	23	35	mg/kg	02.17.20 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	%	02.17.20 17:40
o-Terphenyl	77		113		93		70-135	%	02.17.20 17:40

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116742

Matrix: Solid

MB Sample Id: 7696815-1-BLK

Prep Method: SW8015P

Date Prep: 02.17.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.17.20 12:32	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116808

Matrix: Solid

MB Sample Id: 7696871-1-BLK

Prep Method: SW8015P

Date Prep: 02.17.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.17.20 17:40	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3116742

Matrix: Soil

Parent Sample Id: 652566-001

MS Sample Id: 652566-001 S

Prep Method: SW8015P

Date Prep: 02.17.20

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
Gasoline Range Hydrocarbons (GRO)	<49.9	998	846	85	809	81	70-135	4	35	mg/kg	02.17.20 13:12	
Diesel Range Organics (DRO)	<49.9	998	953	95	894	90	70-135	6	35	mg/kg	02.17.20 13:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		99		70-135	%	02.17.20 13:12
o-Terphenyl	106		100		70-135	%	02.17.20 13:12

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: 3116808

Parent Sample Id: 652644-002

Matrix: Soil

MS Sample Id: 652644-002 S

Prep Method: SW8015P

Date Prep: 02.17.20

MSD Sample Id: 652644-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	996	832	84	931	93	70-135	11	35	mg/kg	02.17.20 18:21	
Diesel Range Organics (DRO)	<49.8	996	883	89	992	99	70-135	12	35	mg/kg	02.17.20 18:21	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		114		70-135	%	02.17.20 18:21
o-Terphenyl	102		112		70-135	%	02.17.20 18:21

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: 02.17.20

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	02.17.20 14:32	
Toluene	<0.00200	0.100	0.102	102	0.104	104	70-130	2	35	mg/kg	02.17.20 14:32	
Ethylbenzene	<0.00200	0.100	0.0966	97	0.0976	98	71-129	1	35	mg/kg	02.17.20 14:32	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.199	100	70-135	1	35	mg/kg	02.17.20 14:32	
o-Xylene	<0.00200	0.100	0.100	100	0.101	101	71-133	1	35	mg/kg	02.17.20 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	%	02.17.20 14:32
4-Bromofluorobenzene	94		93		92		70-130	%	02.17.20 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: 02.17.20

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	02.17.20 15:53	
Toluene	<0.00200	0.0998	0.0734	74	0.0717	72	70-130	2	35	mg/kg	02.17.20 15:53	
Ethylbenzene	<0.00200	0.0998	0.0866	87	0.0796	80	71-129	8	35	mg/kg	02.17.20 15:53	
m,p-Xylenes	<0.00399	0.200	0.157	79	0.150	76	70-135	5	35	mg/kg	02.17.20 15:53	
o-Xylene	<0.00200	0.0998	0.0801	80	0.0818	82	71-133	2	35	mg/kg	02.17.20 15:53	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		70-130	%	02.17.20 15:53
4-Bromofluorobenzene	93		96		70-130	%	02.17.20 15:53

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

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

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



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)794-1296
Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

Work Order No: 652519

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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	☒ Routine ☐ Rush
Project Number:	101220001	Due Date:	
P. O. Number:			
Sampler's Name:	Robert McAfee		

SAMPLE RECEIPT			
Temperature (°C):	0.2	Temp Blank:	Yes ☒ No ☐
Received Intact:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
Cooler Custody Seals:	Yes ☒ No ☐	Thermometer ID	TNM007
Sample Custody Seals:	Yes ☒ No ☐	Correction Factor:	-0.2
		Total Containers:	18

06.30 PM

Sample Identification					Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 8022)	Sample Comments																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
BH01		S	2/11/2020	1103	7.5'	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 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
<i>Robert McAfee</i>	<i>[Signature]</i>	2/14/20 17:50			



Chain of Custody

Work Order No:

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)

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Page 12 of 12

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:	agager@ltenv.com cleibli@ltenv.com rmcafee@ltenv.com

Project: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐ State of Project: NM Reporting: Level II ☐ Level III ☐ UST/UST ☐ RRP ☐ Level IV ☐ Deliverables: EDD ☐ ☐ ADaPT ☐ Other:	
Work Order Comments	

www.xenco.com Page 2 of 2

Project Name:						Saguro								Turn Around						
Project Number:						101220001														
P.O. Number:														Routine ☒						
Sampler's Name:						Robert McAfee								Rush:						
														Due Date:						
SAMPLE RECEIPT						Temp Blank:		Yes		No		Wet Ice:		Yes		No				
Temperature (°C):						A98		Yes		No		Thermometer ID								
Received Intact:																				
Cooler Custody Seals:						Yes		No		N/A		Correction Factor:								
Sample Custody Seals:						Yes		No		N/A		Total Containers:								
Sample Identification						Matrix		Date Sampled		Time Sampled		Depth								
BH06						S		2/13/2020		1230		2'								
BH06A						S		2/13/2020		1640		6'								
BH07						S		2/13/2020		1305		3'								
BH07A						S		2/13/2020		1320		6'								
BH08						S		2/13/2020		1540		1'								
BH08A						S		2/13/2020		1625		6'								
BH09						S		2/13/2020		1600		1'								
BH09A						S		2/13/2020		1635		6'								

Total	200.7 / 6010	200.8 / 6020:
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[illegible]

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 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			8/14/20 7:30	2		
3				4		
5				6		