

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

X Initial Report

Final Report

Name of Company: Lucid Energy Delaware	Contact Kerry Egan
Address 326 West Quay Artesia, NM 88210	Telephone No. 575 513-8988
Facility Name: Grace 8" Poly Line	Facility Type: Pipeline ROW

Surface Owner: BLM	Mineral Owner BLM	API No.
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LOCATION OF RELEASE

Unit Letter B	Section 29	Township 22S	Range 32E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
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Latitude 32.368724 Longitude -103.696726

NATURE OF RELEASE

Type of Release: Natural Gas	Volume of Release: Unknown MCF of gas	Volume Recovered: None
Source of Release: Pinhole leak on 8" Poly line	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: 1-11-2017 9:00AM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume	

RECEIVED

By Olivia Yu at 12:35 pm, Mar 03, 2017

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* The release was caused by a small leak in an 8" poly gas gathering line. Upon identification, the line was shut in and blown down to prevent further release. Lucid personnel excavated the line as soon as possible to verify the cause of the leak, and to ensure that no further release of gas or liquids occurred.

Describe Area Affected and Cleanup Action Taken.* There are signs of surface contamination within an area approximately 30' W x 45' L along the ROW. After exposing the line, it appears that the contamination is primarily isolated to the top 18-24" of the soil. This further indicates a gas leak, with little to no liquids contamination.

Lucid personnel have begun to excavate the apparently contaminated material and stockpile it on site. Depending on the results of the soil sampling conducted on 1/12/17, Lucid may propose remediation on site or disposal at an NMOCD landfill.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: <i>Kerry Egan</i>	OIL CONSERVATION DIVISION	
Printed Name: Kerry Egan	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Environmental Tech	Approval Date: 3/3/2017	Expiration Date:
E-mail Address: KEgan@agaveenergy.com	Conditions of Approval:	Attached <input checked="" type="checkbox"/>
Date: 1/16/2017 Phone: 575 810-6021	see attached directive	

* Attach Additional Sheets If Necessary

1RP-4627

fOY1706247922

nOY1706246315

pOY1706246820



Lucid Energy Delaware

Grace 8" Poly Line

Sec 29, T22S, R32E

Lea County, New Mexico

January 16, 2017

Location

The leak occurred on an 8" Poly gas line in the north half of Sec 29, T22S, R32E. The leak is located along the pipeline ROW and is not associated with any individual facility. The nearest facility to the leak is the Grace Federal #1 Well (EOG-Y owned). From the Grace Fed #1 you must access the leak by traveling south along the ROW for ¾ of a mile.

Introduction

On January 11, 2017, Lucid Energy Delaware, L.L.C. (Lucid) personnel were conducting a leak survey of the "Bootleg Ridge" gas system. During the survey, they became aware of a release of hydrocarbons along the 8" poly line south of the Grace Fed #1. The suspected cause of the release was the buried 8" poly gas line. This line was immediately shut in, and blown down to prevent further release of gas and/or liquids. As soon as we could, Lucid had contractors on site to excavate the line to verify the cause of the release and to ensure that no residual material was being lost to the soil. Upon excavation, it was discovered that a pinhole leak in the 8" line was the source of the release. The responsible section of line was replaced.

During the excavation of the line it appeared that the resulting contamination was localized to the top 18"-24" of the soil profile. Below this depth, including around and below the pipe itself, there was no indication of contamination (i.e. no free liquids, no staining, no detectable odor). We take this as evidence that the release was primarily gas, with little to no liquids. Otherwise we would expect to see contamination below the pipe as the liquids migrated through the soil profile. The leak occurred in a depression along the ROW that apparently kept the contamination from migrating horizontally by following site topography. This depression is free of vegetation, but we believe this was naturally occurring and not a case where the leak killed off vegetation. There is no dead grass, no dead shrub brush, no dead mesquite or any other plants that indicate vegetation had been growing and was killed by the leak.

Samples have been collected at the point of the rupture to characterize the level and type of contamination.

Site Ranking

Based on the *Guidelines for Remediation of Leaks, Spills and Releases* (NMOCD, August 13, 1993), hereafter referred to as "the Guidelines", the site ranking criteria are as follows.

Depth to Ground Water: The nearest well on record is C-02939 does not record any information regarding the depth to groundwater. Well records for this township show an average depth to groundwater of 350'. Exhibiting a depth to groundwater of greater than 100' results in a site ranking of 0.

Wellhead Protection Area: The nearest water well is C-02939, is located 8,600' to the northwest of the site. According to the *Guidelines*, not being within 1000 feet of a water source results in a site ranking of 0.

Distance to Surface Water Body: The nearest surface water body is the Salt Lake, located 17 miles to the west of the site, resulting in a site ranking of 0.

Total Site Ranking:

Depth to Ground water	0
Wellhead Protection Area	0
Distance to Surface Water Body	<u>0</u>
Total:	0

Recommended Remediation Action Level

According to the *Guidelines*, a location with a site ranking of 0 is subject to the following Recommended Remediation Action Level (RRAL).

Benzene	10 ppm
BTEX	50 ppm
TPH	5000 ppm

There are no standards set for chloride contamination set within the *Guidelines*. If chlorides are determined to be present, Lucid will work with the District I Oil Conservation office to determine an appropriate action level, and will attempt to delineate to 1000 ppm chlorides in accordance with standard Bureau of Land Management work practice.

Proposed Remediation Work

Given the nature of the release, and the inaccessibility of the location, Lucid believes excavation and disposal of the soil may prove unnecessary. If soil samples show contamination levels to be below the RRAL for this site, no further work will be conducted at this site.

If the samples show levels greater than the RRAL, Lucid is requesting approval to remediate in place by excavating and aerating the top 2' of soil affected by contamination. Being allowed to

remediate in place would negate the need to bring dump trucks into the location to be loaded and unloaded. Being in the sand hills east of Carlsbad, the location can be very difficult to get to with any motorized vehicle without tracks. A fully loaded dump truck would not be able to get from the location to a drivable road, and trying to do so would result in greater damage to existing vegetation. Given that the leak does not pose a threat to either ground or surface waters, remediation on site would be the least detrimental strategy to the surrounding vegetation and wildlife.

The proposed means of remediation on site would be to have a single backhoe aerate the affected material onsite once every 2-4 weeks. Soil samples would be collected to determine the effectiveness of this strategy. If after three months no discernable effect on contamination levels is documented, Lucid may accept excavation and disposal as the necessary route to remediate this site.

Lucid will inform the NMOCD and BLM offices of the results of the soil samples as soon as is practicable, and will confirm with them our plan for remediation at the location.

Any questions regarding this notification and proposed remediation plan can be directed to:

Kerry Egan

Environmental Technician

Lucid Energy Delaware

Office: (575) 810-6021

Cell: (575) 513-8988

Kegan@agaveenergy.com



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

(R=POD has been replaced,
O=orphaned,
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 02096		ED		2	3	14	22S	32E		627204	3584464*	435	360	75
C 02821	C	LE		2	2	3	14	22S	32E	627303	3584563*	540	340	200
C 02939	C	LE		3	3	1	19	22S	32E	620234	3583042*	280		
C 03717 POD1	C	LE		4	4	1	09	22S	32E	624094	3586365	650		

Average Depth to Water: **350 feet**

Minimum Depth: **340 feet**

Maximum Depth: **360 feet**

Record Count: 4

PLSS Search:

Section(s): 1-36

Township: 22S

Range: 32E

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 01/18/2017_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number __1R-4627_ has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _1_ office in __Hobbs__ on or before _4/3/2017_. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold

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