

State of Colorado
Oil and Gas Conservation Commission

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FOR OGCC USE ONLY

REM 9748
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Date 06/28/2016

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

☒ Spill or Release ☐ Plug & Abandon ☐ Central Facility Closure ☐ Site/Facility Closure ☐ Other (describe): _____

OGCC Operator Number: 100185

Name of Operator: Hunter Ridge Energy Services LLC

Address: 143 Diamond Avenue

City: Parachute State: CO Zip: 81635

Contact Name and Telephone:

Brett Middleton

No: 970.987.4650

Fax: 970.285.2705

API Number: 446199 [Spill/Release Point]

County: Garfield

Facility Name: Spill/Release Point/446199

Facility Number: -

Well Name: NA

Well Number: NA

Location: (QtrQtr, Sec, Twp, Rng, Meridian): SWSW, Sec. 14, T4S, R96W, 6th PM Latitude: 39.698 Longitude: -108.144

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Condensate

Site Conditions: Is location within a sensitive area (according to Rule 901e)? ☒ Y ☐ N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): rangeland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Irigul channery loam, 9 to 50 percent slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): According to the COGCC GIS OnLine mapping service there is one (1) surface water receptors and no water wells within 1/4 mile of the pad.

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):

- ☐ Soils
☐ Vegetation
☐ Groundwater
☐ Surface Water

Extent of Impact:

Any identified impacts will be detailed in Form 4 (Status Updates/Progress Reports)

How Determined:

Any identified impacts will be detailed in Form 4 (Status Updates/Progress Reports)

REMEDIATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

Refer to Form 19 401064094 & 401068217.

Describe how source is to be removed:

TBD - current oil skimming has been in place since discovery.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

TBD - current oil skimming has been in place since discovery.



Tracking Number:	_____
Name of Operator:	_____
OGCC Operator No:	_____
Received Date:	_____
Well Name & No:	_____
Facility Name & No:	_____

OGCC Employee:

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):
See Attached.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.
TBD.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? ☒ Y ☐ N **If yes, describe:**
TBD.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):
No E&P waste exists at this time. Oil recovery efforts in place since discovery.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: <u>06/27/16</u>	Date Site Investigation Completed: <u>TBD</u>	Date Remediation Plan Submitted: <u>06/28/16</u>
Remediation Start Date: <u>TBD</u>	Anticipated Completion Date: <u>TBD</u>	Actual Completion Date: <u>TBD</u>

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: <u>Brett Middleton</u>	Signed: <u>brett.middleton@encana.com</u>	<small>Digitally signed by brett.middleton@encana.com DN: cn=brett.middleton@encana.com Date: 2016.06.28 08:56:18 -06'00'</small>
Title: <u>Environmental Specialist</u>	Date: <u>06/28/16</u>	

OGCC Approved: _____ Title: _____ Date: _____



June 24, 2016

Mr. Brett Middleton
Environmental Specialist
Encana Oil & Gas (USA) Inc.
143 Diamond Avenue
Parachute, Colorado 81635

**RE: Scope of Work
A27 Flowline Release
Garfield and Rio Blanco Counties, Colorado**

Dear Mr. Middleton:

LT Environmental, Inc. (LTE) is submitting this scope of work for the planned site assessment activities scheduled to begin on the approximate date of June 27, 2016. These assessment activities are expected to take approximately five days to complete. The following outline describes the Scope of Work and scheduled site assessment activities.

Location and Assessment Objectives

- **A27 Flowline Release -**
 - Advance approximately eleven soil borings to an approximate depth of 30 feet below ground surface
 - Collect soil characterization samples and submit for laboratory analysis
 - Collect groundwater grab samples if encountered and submit for laboratory analysis
 - Submit soil and groundwater samples for laboratory analysis of constituents listed in the Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1
 - Install temporary monitoring points as deemed appropriate to characterize the release
 - Conduct additional borings if deemed necessary to characterize identified release

Drilling Activities

- Call in utility locates at least four days in advance through Utility Notification Center of Colorado (UNCC)
- Meet Encana representative onsite for ground disturbance permit and approval
- Collect soil and groundwater samples as appropriate to characterize identified release
- Decontaminate augers and sampling equipment between each soil boring
- Log and screen soil samples as necessary from two foot split spoon core
- GPS locations of all soil borings and sample locations



Soil and Groundwater Sampling

- Collect soil samples from each boring for visual observations and screening with a photoionization detector (PID)
- Submit soil samples with highest PID from each boring for laboratory analysis
- Collect grab groundwater sample from temporary casing and submit for laboratory analysis
- Submit select soil and groundwater samples to ESC Lab Sciences for constituents identified in COGCC Table 910-1
- Photo document all sampled material and the location of each boring

Reporting

- Produce an Assessment Findings Report which includes:
 - Summary of field activities and observations
 - Site map showing the locations of each boring and sample location
 - Tables of soil and groundwater analytical results
 - Lithologic drilling logs
 - Recommendations for future activities if necessary
- Assist Encana with any technical follow up and form submittals as needed or requested

Please contact Rob Fishburn at 970.285.9985 with any questions or concerns associated with this Scope of Work.

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in black ink that reads 'Wesley Toews'.

Wesley Toews
Staff Geologist

A handwritten signature in black ink that reads 'Robert D. Fishburn'.

Robert D. Fishburn, P.G.
Senior Hydrogeologist

Attachment:

A27 Flowline Release Area with Proposed Boring Locations



A27 Flowline Release



Hunter Ridge
A27 Centralized Distribution Point
Pipeline Release
Spill/Release Point ID #446199

Form 27 Site Assessment and Remediation Work Plan
Conditions of Approval

- 1) Submit by July 31, 2016, the Site Assessment report, including extent of the soil, surface and ground water impact and analytical results.
- 2) Submit by July 31, 2016, a comprehensive Remediation Work Plan (based on Site Assessment) that addresses the soil, surface and ground water impacts.
- 3) Updated Spill/Release Point Coordinates (as provided by Encana/Hunter Ridge) are Lat: 39.67943, Long: -108.14789