

FORM
27
Rev 6/99



State of Colorado
Oil and Gas Conservation Commission



#7092

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

FOR OGCC USE ONLY

OGCC Employee:

Spill Complaint
 Inspection NOAV

Tracking No: 2224445

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: <u>10128</u>	Contact Name and Telephone: <u>Dan Bartling</u>
Name of Operator: <u>Bargath LLC</u>	No: <u>970-285-5460</u>
Address: <u>4289 County Road 215</u>	Fax: <u>970-285-7226</u>
City: <u>Parachute</u> State: <u>CO</u> Zip: <u>81635</u>	

API Number: <u>N/A</u>	County: <u>Garfield</u>
Facility Name: <u>West Rifle Station</u>	Facility Number: <u>To Be Assigned 428645</u>
Well Name: <u>N/A</u>	Well Number: <u>N/A</u>
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>NENE, Sec 13, T6S, R94W, 6th PM</u> Latitude: <u>39.5312</u> Longitude: <u>-107.8286</u>	

TECHNICAL CONDITIONS

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

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.): Range Land

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Arvada loam, 1 to 6% Slope

Potential receptors (water wells within 1/4 mi, surface waters, etc.): 745 feet to the unnamed intermitten drainage location to the west, no water wells located within 1/4 mile of the facility.

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

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	<u>Refer to previously Submitted Form 19</u>	<u>Visual confirmation and soil borings</u>
<input type="checkbox"/> Vegetation	_____	_____
<input type="checkbox"/> Groundwater	_____	_____
<input type="checkbox"/> Surface Water	_____	_____

REMEDIATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):
Refer to previously submitted Form 19

Describe how source is to be removed:
See Attachment A

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.:
See Attachment A

Submit Page 2 with Page 1

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Tracking Number: _____
Name of Operator: 10128
OGCC Operator No: 10128
Received Date: _____
Well Name & No: _____
Facility Name & No: 4128645 WEST PIPE

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REMEDIATION WORKPLAN (Cont.)

OGCC Employee: _____

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

See Attachment A

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.

See Attachment A

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:

See Attachment A

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

See Attachment A

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 12/27/2011 Date Site Investigation Completed: 2/29/2012 Date Remediation Plan Submitted: TBD
Remediation Start Date: TBD Anticipated Completion Date: TBD Actual Completion Date: TBD

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

Print Name: Daniel Bartling Signed: Daniel Bartling
Title: Environmental Specialist Date: 2-9-2012

OGCC Approved: [Signature] Title: EPS IV Date: 2/12/12

Facility: West Rifle Facility
Field: North Rulison
Spill # 2224445

Name of Operator: Williams Bargath LLC
Latitude: 39.5312 Longitude -107.8286
Location (QtrQty, Sec, Twp, Rng, Meridian): NENE, Sec 13, T6S, R94W, 6th PM

COGCC Operator # 10128
County: Garfield



Form 27 - Attachment A

Describe how source is to be removed

- The upright tank was taken off line and removed from service.
- All fluids were drained from the upright tank and the leaking hatch was repaired.

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, in-situ bioremediation, burning of oil vegetation, etc.:

The impacted area will be delineated and remediated in accordance with COGCC Rules 906e, 909, and 910. Depending on the volume of impacted soil, Bargath, LLC (Bargath) will either excavate the impacted soils or remediate the impacted area utilizing in-situ bioremediation techniques as follows:

Delineation

- Impacted soils will be delineated utilizing a track mounted auger rig unit to determine the full vertical and horizontal extent of impacts.
- Approximately eighteen (18) boreholes will be drilled at designated locations outside the perimeter of the suspected area of contamination in order to determine an accurate extent of impacted soil. Refer to Attachment B for proposed borehole locations.
- Boreholes will be advanced to a depth necessary to accurately determine the vertical extent of contamination.

Remediation

In-Situ Bioremediation

- Install 1 or 2-inch PVC injection ports at a depth that will allow bioremediation product to evenly disperse throughout the impacted zone.
- Inject a 3% bio-remediation solution into the hydrocarbon impacted area at depth.
- Monitor and maintain appropriate nutrient and moisture content within the treated area by dispatching a water truck to the site and injecting water and nutrients in to the vertical injection ports.
- Connect a positive pressure air pump to the vertical injection pipes in order to keep the treated areas in an aerobic environment.

Facility: West Rifle Facility
Field: North Rulison
Spill # ZZZ4445

Name of Operator: Williams Bargath LLC
Latitude: 39.5312 Longitude -107.8286
Location (QtrQty, Sec, Twp, Rng, Meridian): NENE, Sec 13, T6S, R94W, 6th PM

COGCC Operator # 10128
County: Garfield

- Hydrocarbon concentrations within the impacted area will be monitored via soil gas, a Photo Ionization Detector (PID) unit, and PetroFlag Hydrocarbon Detection unit.
- A second treatment of 3% bio-remediation solution will be applied to the affected area after one month of initial treatment if required.
- Collection of confirmation soil samples will be collected to satisfy all constituents outlined in Table 910-1 from the treated area once field screen results indicate hydrocarbon concentrations below COGCC allowable standards.
- A track mounted auger rig will be utilized to collect confirmation samples using a split spoon sampler. The split spoon sampler will ensure samples are collected at discrete sample intervals within the treated area. It is anticipated that samples will be collected at 5 to 10-foot intervals. The confirmation samples will be submitted to an accredited analytical laboratory for confirmation.
- Issuance a Notice of Completion (NOC) report to the COGCC upon successful completion of remediation.
- A Sundry Notice Form 4 will be attached to the NOC report for arsenic consideration.

Excavation

If after the delineation, it is determined by Bargath that excavation is the a more feasible option, the following steps will be implemented to remove the impacted soils as outlined below;

- Impacted area will be outlined and potholed utilizing Badger Trucks to locate all gas lines within the impacted area.
- An eathered bermed containment cell will be constructed within the property lease boundary for treatment or disposal of the impacted soils.
- A trackhoe will be utilized to excavate the impacted soil.
- Field screening instruments will be utilized to evaluate hydrocarbon concentrations throughout the excavation footprint.
- When the field screening reveals that soil within the excavation footprint is below hydrocarbon standards set forth in the COGCC Table 910-1, confirmation grab samples will be collected from various locations and submitted to an accredited lab for analysis.
- If the confirmation samples indicate the excavation footprint meets COGCC Table 910-1 criteria, a notice of completion report Form 27 report will be drafted and submitted to Bargath for review prior to submittal to the COGCC.

Ex-Situ Remediation of Excavated Soil

- Soil within the eathered bermed containment cell will be placed to the appropriate pre-determined thickness for optimal bioremediation production application.

Facility: West Rifle Facility
Field: North Rulison
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COGCC Operator # 10128
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- The cell will be allowed to sit for two weeks. At the end of the two week period, a baseline sample will be collected to determine hydrocarbon concentrations.
- Product will then be applied at a calculated rate based on hydrocarbon concentrations and volume of impacted soil present.
- Soil will be maintained weekly to ensure proper nutrients and moisture levels are obtained for the successful bioremediation of the impacted soils.
- Upon successful bioremediation of the soil, samples will be collected from the treated soils and submitted to an accredited lab for constituents outlined in COGCC Table 910-1.

If groundwater has been impacted, describe proposed monitoring plan

Based on the topographical setting of the facility, it is not anticipated groundwater has been impacted by this release. If it is determined there are groundwater impacts, a separate groundwater monitoring plan will be submitted to the COGCC.

Describe reclamation plan

As this is a working facility, there are currently no plans for any reclamation on the facility.

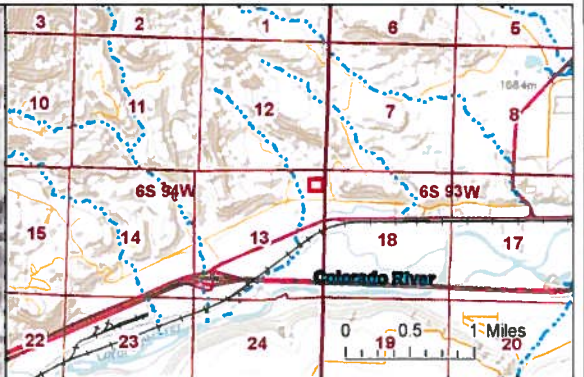
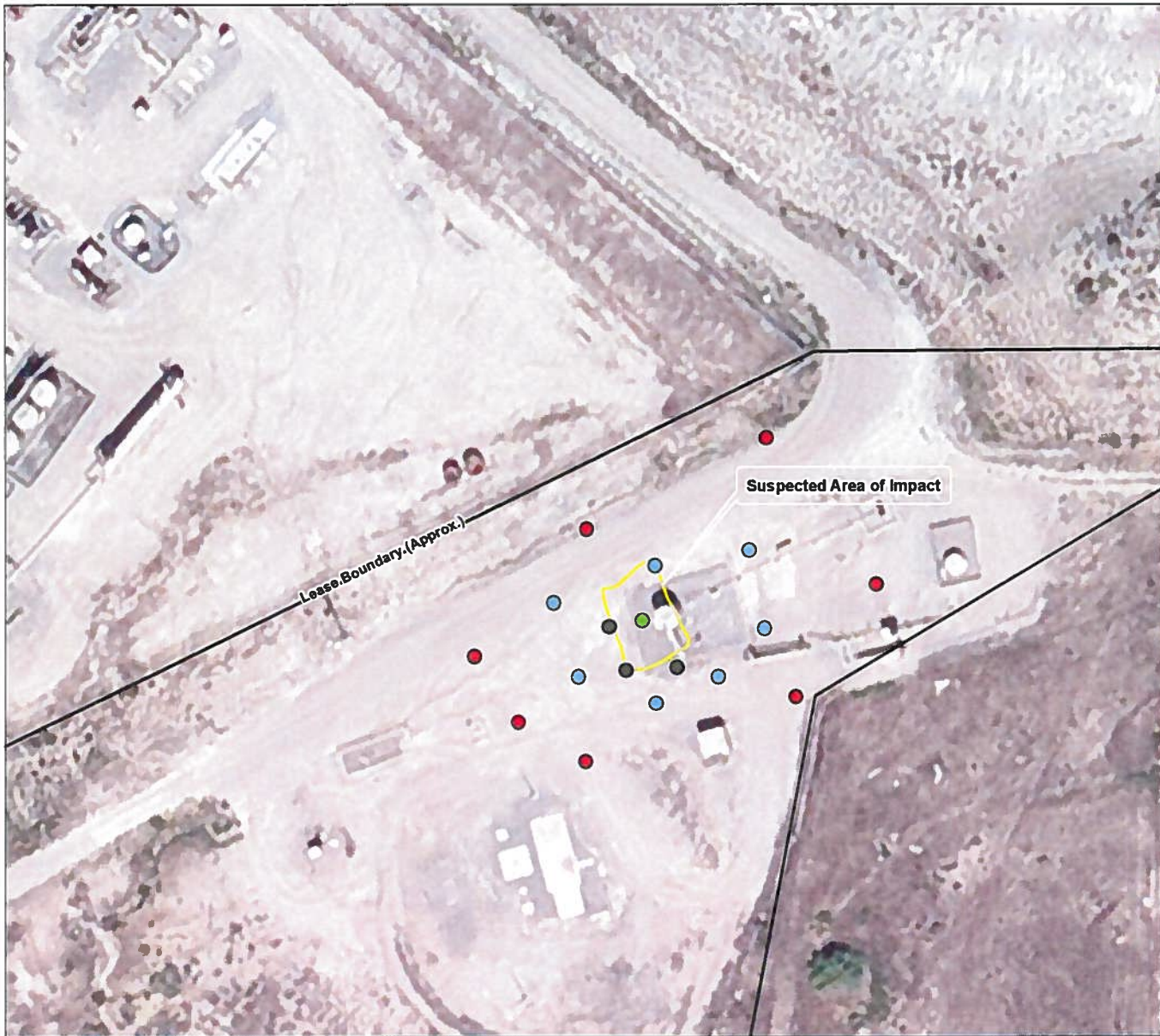
Attach Samples and analytical results taken to verify remediation of impacts

At this point, no analytical samples have been collected from the site.

Final disposition of E&P waste

Any soil stockpiled on the location from the delineation and remediation, will either be treated on-site to levels below COGCC Table 910-1 standards for organic constituents or profiled and disposed of at a properly permitted and approved TSD facility.

If bioremediation is utilized to remediate the excavated soils, and when confirmation analysis indicates soils are below COGCC Table 910-1 standards, the final disposition of the treated soil will be determined.



Comments:

West Rifle Remediation Site

- Legend**
- | | |
|--------------------------------------|---------------------------------|
| Proposed Boreholes | PLSS |
| ● Depth Delineation Point | ▭ Township |
| ● Initial Borehole Location | ▭ Section |
| ● Contingent on Red Borehole Result | — Perennial Stream |
| ● Contingent on Blue Borehole Result | — Intermittent/Ephemeral Stream |
| Transportation Features | |
| — Road | |
| — Highways | |
| — Railroads | |

DISCLAIMER The Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorder's office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.

