

State of Colorado
Oil and Gas Conservation Commission



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

#8398

FOR OGCC USE ONLY

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.

OGCC Employee:
 Spill Complaint
 Inspection NOAV
 Tracking No: 2147561

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

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

OGCC Operator Number: <u>10386</u>	Contact Name and Telephone: <u>Jerry Smothermon</u>
Name of Operator: <u>POC_I LLC</u>	No: <u>(720)382-2690</u>
Address: <u>1888 Sherman Street, Suite 500</u>	Fax: <u>(303)296-0329</u>
City: <u>Denver</u> State: <u>CO</u> Zip: <u>80203</u>	
API Number: _____ County: <u>Moffat</u>	
Facility Name: <u>ILES DOME UNIT 64N92W</u> Facility Number: <u>Location ID 312756</u>	
Well Name: _____ Well Number: _____	
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>SWNW, Sec. 23, T4N, R92W, 6th</u> Latitude: _____ Longitude: _____	

TECHNICAL CONDITIONS

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

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: Kemmerer-Yamo Complex, 5 to 30 percent slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): The nearest surface water is located approximately 180 ft. to the SE but is currently dry.

The nearest well is located ~ 1200 ft. to the NE and is a privately owned domestic water well.

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>TBD</u>	<u>Visually; Field Instrumentation; Laboratory analytical</u>
<input type="checkbox"/> Vegetation	_____	<u>Visually</u>
<input checked="" type="checkbox"/> Groundwater	<u>TBD</u>	<u>If encountered through Laboratory analytical.</u>
<input type="checkbox"/> Surface Water	_____	<u>Visually</u>

REMEDIATION WORKPLAN

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

Describe how source is to be removed:
See attached narrative.

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 attached narrative.



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

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 attached narrative.

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 attached narrative.

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? [X] Y [] N If yes, describe:

See attached narrative.

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

See attached narrative.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 12/19/2013 Date Site Investigation Completed: TBD Date Remediation Plan Submitted: 4/16/2014 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: Blair Rollins Signed: [Signature] Title: Environmental Contractor Date: 4/16/2014

OGCC Approved: [Signature] Title: Environmental Protection Specialist Date: 5/5/2014

See Data entered Form 27 for COA'S

PRE Resources (POC_I LLC)
Operator # 10386
ILES DOME UNIT 64N92W (Location ID # 312756)

Form 27 Closure Narrative

Describe initial action taken:

PRE Resources (PRE) submitted a Form 19 on December 27, 2013 to address an oil spill located at the hose connection of tank 4 at the facility. The release resulted from improper disconnection of the vacuum truck line between the tank and the truck. Please reference spill #2147561. It is assumed that the spill was contained entirely on the concrete pad, and if any oil was left on the pad it would have drained into the trough that runs along the edge of the concrete pad and into the retention pond located east of the storage tanks. In addition to this spill, environmental concerns associated with the entire tank battery will be assessed as requested by the Colorado Oil and Gas Conservation Commission (COGCC). Please reference the attached Figure 1 for a Site Map depicting all operational equipment in the area of the tank battery. PRE will steam clean the concrete pad and visually assess the pad integrity to determine that no cracks or anomalies exist on the pad that might lead to soil impacts beneath the concrete. All of the rinsate will be diverted via the trough into the concrete pond to the north. In addition to the pad cleaning, PRE will remove all of the pea gravel within the containment in order to visually assess the soil below, and identify any spills or releases that may have previously occurred.

Please reference the attached Figure 2 for the Potential Sampling Location Map. Areas of visual surficial soil impact included within the Sample Assessment Zone and will be hand augured to characterize vertical extent of contamination. Field screening will be completed using a Photoionization Detector (PID) and a PetroFlag – hydrocarbon soil test kit. Utilizing both the PID and PetroFlag will ensure gasoline, diesel and oil range organics are characterized during field screening. Hand auger locations within the area of the Sample Assessment Zone will be organized around the tank battery to characterize soil immediately adjacent to the concrete pad, and an area on the west side of the Discharge Pit, identified in an inspection (document # 669300798) conducted by Kris Neidel on March 26, 2014. Samples of surficial soil contamination and confirmation samples below contamination zones will be collected and analyzed for COGCC Table 910-1 standards.

Based on hand auger assessment results within the Sample Assessment Zone, PRE will advance up to seven soil borings/monitoring wells to an estimated depth of 40 feet below ground surface, groundwater, or drill refusal (whichever is encountered first), see Figure 2. Sampling equipment and drill augers will be cleaned between borings using detergent and potable water. The wash water will be discharged onsite.

An Olsson geologist will document the site lithology, examine the soils for suspected environmental impact (i.e. chemical staining and/or odors), and the soils will be field screened using the PID and PetroFlag as the borings are advanced. Soil samples will be collected continuously for the first 20 feet of the soil profile at each boring location. All borings will be advanced at least 5 feet past the observed groundwater level. The PID and PetroFlag measurements will be recorded on the field boring logs. One soil sample from each boring exhibiting either indications of suspected environmental impact (staining or odor) or elevated field screening readings will be submitted for laboratory analysis following COGCC Table 910-1 soil standards. In the event suspected environmental impact or elevated field screening readings are not observed, a soil sample will be collected from the capillary fringe above the groundwater table and analyzed for COGCC Table 910-1 soil standards.

PRE Resources (POC_I LLC)
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ILES DOME UNIT 64N92W (Location ID # 312756)

Monitoring wells will be constructed using 2-inch diameter Schedule 40 PVC well materials. Well casing and screen connections will be flush threaded. The well screens will be 10 feet to 15 feet long with 0.01-inch factory-cut slots. The annular space around the well screens will be backfilled with clean, well-sorted, 10-20 mesh silica sand as a filter pack between the formation material and the well screen. The filter pack will extend approximately two feet above the top of the well screen intervals. The top of the filter pack will be measured with a weighted measuring tape for depth confirmation. A hydrated bentonite seal, approximately two feet thick, will be placed in the annular space above the filter pack. The finished bentonite seal surface will be measured with a weighted measuring tape for depth confirmation. The annular space above the bentonite seal will be filled with bentonite chips and hydrated with potable water. A locking expandable well cap plug will be installed at the top of the casing.

The monitoring wells will be developed by removing groundwater until it appears relatively clear and free of sediment. Development will be performed by pumping, surging, and extracting the groundwater in the well to help remove sediment, to develop the sand filter pack, and to help restore the natural conductivity of the aquifer. Well development will be performed using a single-use polyethylene bailer. One groundwater sample from each boring will be collected for laboratory analysis following COGCC Table 910-1 groundwater standards.

Describe how source is to be removed:

Based on laboratory analytical results, all impacted material will be excavated or remediated in-place depending on proximity to the concrete pad and available engineering controls. If impacted soil excavation is feasible, samples will be collected from the excavation base and sidewalls to assure that Table 910-1 soil standards have been achieved. Excavated material will be remediated on-site or disposed of at a commercial off-site disposal facility.

If in-situ remediation is the feasible option due to onsite conditions, PRE will prepare an amended Form 27 detailing the plans for remediation for review and approval by the COGCC. The effectiveness of remediation activities will be verified through sample collection and laboratory analysis conducted in accordance with the COGCC Table 910-1 standards.

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.:

Impacted soil will be remediated on-site (in-situ or temporarily land-treated) or disposed of at a commercial off-site disposal facility. If temporary land-treatment occurs, the material will be returned to the excavation following compliance with Table 910-1 standards. In the event that groundwater contamination is identified during excavation or subsurface characterization (e.g. hand auger, drilling, etc.), the extent of contamination will be determined and an appropriate remediation plan will be developed and submitted to the COGCC for review and approval.

PRE Resources (POC_I LLC)
Operator # 10386
ILES DOME UNIT 64N92W (Location ID # 312756)

If Ground water has been impacted, describe proposed monitoring plan:

If impacts to groundwater are identified in the soil boring/monitoring well locations, PRE will collect quarterly groundwater samples from the monitoring wells to assess groundwater contamination and possible remediation options. PRE will prepare an amended Form 27 to address groundwater contamination and remediation plans for COGCC review and approval.

Describe reclamation plan:

PRE plans on the continued use of the location and tank battery. After remediation activities are complete, excavated areas will be backfilled with native clean soil or remediated soil and returned to the active pad grade.

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?

No samples have been collected to date. However, further investigation is necessary and future submittal will include analytical data and an investigation report prepared by Olsson Associates.

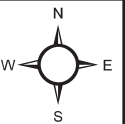
Final Disposition for E&P waste (land treated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

PRE will notify the COGCC of the final disposition of the E&P waste within a final Form 27 to document closure activities and will maintain all records of waste disposal including haul tickets.



Pits
 Drain Trough
 Tank (by number)
 Secondary containment

0 0.01 0.02 0.03 0.04 Miles



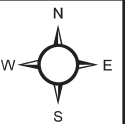
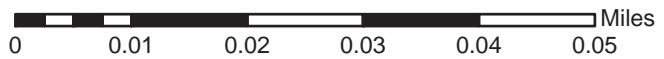
PROJECT NO:	013-3182	Site Map Iles Dome Sundance Tank Battery POC-1, LLC (Operator #10386) Moffat County, Colorado		FIGURE
DRAWN BY:	BKR		760 HORIZON DRIVE, SUITE 102 GRAND JUNCTION, CO 81506 TEL 970.263.7800 FAX 970.263.7456	1
DATE:	04/08/2014			



⊗ Proposed Soil Boring/Monitoring Well Location

🔗 Hand Auger Assessment Zone

○ Tank (by number)



PROJECT NO:	013-3182
DRAWN BY:	BKR
DATE:	04/08/2014

Potential Sampling Location Map
 Iles Dome Sundance Tank Battery
 POC-1, LLC (Operator #10386)
 Moffat County, Colorado

OLSSON ASSOCIATES
 760 HORIZON DRIVE, SUITE 102
 GRAND JUNCTION, CO 81506
 TEL 970.263.7800
 FAX 970.263.7456

FIGURE	2
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