

State of Colorado
Oil and Gas Conservation Commission



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

FOR OGCC USE ONLY
Date received
7/25/2014
REM #8583
Doc #1733798

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.

Spill Complaint
 Inspection NOAV
Tracking No: **2147945**

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

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

OGCC Operator Number: <u>96155</u>	Contact Name and Telephone: <u>Jeanette Liang; Jeanette.liang@whiting.com</u>
Name of Operator: <u>Whiting Oil and Gas Corporation</u>	No: <u>303-802-8290</u>
Address: <u>1700 Broadway, Suite 2300</u>	Fax: <u>303-357-4006</u>
City: <u>Denver</u> State: <u>CO</u> Zip: <u>80290</u>	
API Number: <u>05-103-11021</u> County: <u>Rio Blanco - #103</u>	
Facility Name: _____ Facility Number: <u>335628</u>	
Well Name: <u>Boies</u> Well Number: <u>C-27A-H3</u>	
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>NE/4 NE/4 Sec. 27-T2S-R98W, 6th</u> Latitude: <u>39.851620</u> Longitude: <u>-108.373124</u>	

TECHNICAL CONDITIONS

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

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Barcus Channery loamy sand

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Surface water 270 feet, livestock, Wetlands

Description of Impact (if previously provided, refer to that form or document): Form 19

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	<u>Estimated 100' x 50' x 4-8' bgl</u>	<u>soil sampling</u>
<input type="checkbox"/> Vegetation	_____	_____
<input type="checkbox"/> Groundwater	_____	_____
<input type="checkbox"/> Surface Water	_____	_____

REMEDATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):
The release was investigated, soil samples were collected and the pit was closed. (refer to previously provided Form 19)

Describe how source is to be removed:
Impacted material will be treated for hydrocarbon removal on site and the pit will be permanently closed.

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.:
A Screen Machine 621T (Shredder) with an internal spray system delivering hydrogen peroxide for the purpose of chemical oxidation will be used to accomplish soil remediation of hydrocarbons on

FORM
27
Rev 6/99

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Tracking Number: _____
Name of Operator: Whiting Oil and Gas Corporation
OGCC Operator No: 96155
Received Date: _____
Well Name & No: Boies C-27A-H3
Facility Name & No: 335628

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REMEDIATION WORKPLAN (Cont.)

OGCC Employee: Stan Spencer

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):
Groundwater has not been impacted.

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.
Treated soils will be reused and backfilled to grade. Any further revegetation activities will be performed by Whiting Oil and Gas Corporation.

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:
Three background samples will be collected per site. One composite soil sample will be collected from the clean and treated stockpiles for every 1,000 cubic yards of material. One sample will be taken from each side wall of the pit. Two samples will be taken from the floor of each pit. Samples will be analyzed for TPHGRO/DRO/ORO (TX1005), BTEX (SW846-8021), RCRA 8 metals (6010B/200.7, 7471A/245.1), PH (9040B, 9045B, 4500B), SAR (calculation), EC (direct reading).

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):
Material will be treated and reused on site.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 11-2013 Date Site Investigation Completed: 11-2013 Date Remediation Plan Submitted: 7-2014
Remediation Start Date: 8-9/2014 Anticipated Completion Date: est. 8-9/2014 Actual Completion Date: _____

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.
Print Name: Jeanette Liang Signed: [Signature]
Title: Environmental Professional Date: 07/23/2014

OGCC Approved: _____ Title: EPS Northwest Date: 7/25/14

Provide 72 hour notice to COGCC prior to remediation operations



Whiting Petroleum Corporation

Boies C-27A-H3 Pad 27A & H Form 19 Map Sec 27, T2S R98W

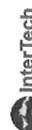
March 10, 2014

Explanation:

-  Whiting Well Location
-  Sample Location



1:2,000



InterTech, LLC
 10000 W. 10th Avenue, Suite 100
 Greenwood Village, CO 80111
 Project: C-27A-H3 Form 19 Detail Map

