FORM 27 Rev 6/99

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
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REM 9077

OGCC Employee:
☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV
Tracking No:

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: 10311
Name of Operator: Synergy Resources Corporation
Address: 20203 Highway 60
City: Platteville State: CO Zip: 80651

Contact Name and Telephone:
Jerry Brian
No: 970-737-1073
Fax: 970-737-1045

API Number: 05-123-13882
Facility Name: Brownwood
Well Name: Brownwood

County: Weld
Facility Number: 11-2
Well Number: 11-2

Location: (QtrQtr, Sec, Twp, Rng, Meridian): NESW, 11, 4N, 67W, 6PM Latitude: 40.323818 Longitude: -104.860202

TECHNICAL CONDITIONS

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

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Olney Fine Sandy Loam, 1-3% slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): 10 DWR registered water wells within 1/4 mile radius; No surface waters within 1/4 mile radius.

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

Impacted Media (check):		Extent of Impact:	How Determined:
☑	Soils	60' N-S x 40' E-W x 13' Total Depth	Excavation confirmation and borehole soil samples
☐	Vegetation		
☑	Groundwater	60' N-S x 120' E-W x Upper 5' of the static groundwater table elevation	Monitoring Well Installation and GW Sampling
☐	Surface Water		

REMEDIATION WORKPLAN

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

All production equipment was shut in. Please refer to Form 19 submitted December 11, 2014

Describe how source is to be removed:

Approximately 400 cubic yards of impacted soil was excavated. Approximately 3,000 barrels of groundwater were removed from the excavation. Please refer to the remediation Action Summary, Brownwood 11-1, 11-2 Flow Line Report, attached , for further details.

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 total of 300 pounds of a carbon-based amendment (BOS 200) was appied to the floor of the excavation prior to backfilling. The impacted soil was transported to Waste Management, North Weld County Landfill, for final dosposal. The impacted groundwater was disposed of at a licensed facility. An infiltration gallery was installed at the floor of the excavation prior to backfilling for future remediation. The extent of impact was delineated by advancing 17 boreholes, completed with groundwater monitoring wells. Confirmation Soil samples were collected from the boreholes and analyzed for BTEX and TPH. Groundwater samples were collected from the groundwater monitoring wells and analyzed for BTEX. Please refer to the Remediation Action Summary, Brownwood 11-1, 11-2 Flow Line Report, attached for further details.

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Page 2

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Name of Operator: _____
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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.):

Groundwater was encountered in the excavation at approximately 13' below ground surface. Seventeen groundwater monitoring wells were advanced to delineate the extent of impacts to soils and groundwater. The monitoring wells were advanced to 20-25 feet below groundsurface and encountered groundwater at approximately 14' below ground surface. Soil samples were collected from the monitoring well boreholes and submitted for BTEX and TPH analysis. Groundwater samples were collected from the monitoring wells and submitted for analysis of BTEX. Groundwater samples will be collected from the monitoring wells on a quarterly basis until concentrations are below COGCC Table 910-1 standards for four consecutive quarters. Please refer to the Remediation Action Summary, Brownwood 11-1, 11-2 Flow Line Report, attached, for further details.

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.

The excavation was backfilled with clean fill to re-establish the pre-existing grade. The site is in an active agricultural field planted in corn crop. Upon remediation completion, the site will be reseeded using tilling methods and seed mix similar to that being used on the remaining, unaffected field.

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:

The analytical results of three of the four soil samples collected from the excavation sidewalls reported concentrations that exceeded COGCC Tabl 910-1 standards. Confirmation soil samples will be collected from these areas after in-situ remediation has occured.

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

The impacted soil was transported to the Waste Management North Weld Landfill for final disposal. The impacted groundwater was disposed of at a licensed facility.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 12/1/2014	Date Site Investigation Completed: TBD	Date Remediation Plan Submitted: 5/14/2015
Remediation Start Date: 12/2/2014	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: Jerry Brian Signed: Jerry Brian

Title: Director of EHS Date: 5/14/15

OGCC Approved: Chris Canfield, P.G. Title: _____ Date: _____

Digitally signed by Chris Canfield, P.G.
DN: cn=Chris Canfield, P.G., o=Colorado Oil & Gas Conservation Commission, ou=Environmental Protection Specialists, email=chris.canfield@state.co.us, c=US
Date: 2015.05.14 12:17:23 -06'00'