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FORM
27
Rev 6/99State of Colorado
Oil and Gas Conservation Commission

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



#7068

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.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

☐ Spill or Release ☐ Plug & Abandon ☐ Central Facility Closure ☐ Site/Facility Closure ☒ Other (describe): Produced Water Tank Removal

OGCC Operator Number: 75027

Name of Operator: Rosewood Resources, Inc

Address: 2101 Cedar Springs RD., Suite 1500

City: Dallas State: TX Zip: 75201

Contact Name and Telephone:

Terrell Roddy

No: 970-848-8311

Fax: 970-848-8313

API Number: 05-125-07063

County: Yuma

Facility Name:

Facility Number:

Well Name: Kiltzmilller 11-32 (South tank)

Well Number:

Location: (QtrQtr, Sec, Twp, Rng, Meridian): SWSE Sec 32, T4N, R45W Latitude: N40.26685 Longitude: W102.42059

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.): Agricultural

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Valent Sand

Potential receptors (water wells within 1/4 mi, surface waters, etc.):

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

Impacted Media (check):

- ☒ Soils
☐ Vegetation
☐ Groundwater
☐ Surface Water

Extent of Impact:

Slightly elevated PH/ SAR

How Determined:

Analysis

REMEDIALATION WORKPLAN

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

Bottom soil sample shows slightly high PH/SAR from the analytical report. The soil was blended at the bottom of the excavation where the sample was taken at a ratio of 3-1 with verifiable fill at approximately 3 feet lower than the sample point. The top 3 ft was backfilled with verifiable fill which has not been blended from the Bloch pit. See attached analyticals.

Describe how source is to be removed:

Backhoe and dump truck

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.:

Land treatment on site

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REMEDIAL WORKPLAN (Cont.)

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.):

N/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.

Reclamation will be conducted using COGCC rules and regulations.

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:

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

Soil was blended on site, no waste to remove, reuse of soil at site.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 9/4/2010 Date Site Investigation Completed: 9/24/2010 Date Remediation Plan Submitted: 10/6/2011
Remediation Start Date: _____ Anticipated Completion Date: _____ 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: Terrell Roddy

Signed: Terrell Roddy

Title: HSE Advisor

Date: 2-7-12

OGCC Approved: [Signature]

Title: OGCC

Date: 6/1/12

ALS Environmental

Date: 31-Jan-12

Client: Rosewood Resources, Inc.

Project: Table 910 - Halde Pit - Block Pit

Sample ID: Block Top Soil

Collection Date: 1/19/2012 01:00 PM

Work Order: 1201644

Lab ID: 1201644-03

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
DRO (>C10 - C28)	ND		1.8	mg/Kg-dry	1	1/24/2012 05:00 PM
Surr: 2-Fluorobiphenyl	76.1		70-130	%REC	1	1/24/2012 05:00 PM
GASOLINE RANGE ORGANICS - SW8015C						
Gasoline Range Organics	ND		0.052	mg/Kg-dry	1	1/26/2012 12:54 AM
Surr: 4-Bromofluorobenzene	85.7		70-130	%REC	1	1/26/2012 12:54 AM
TRIVALENT CHROMIUM						
Chromium, Trivalent	ND		5.20	mg/Kg-dry	1	1/30/2012
MERCURY - SW7471B						
Mercury	ND		0.00370	mg/Kg-dry	1	1/26/2012 06:40 PM
METALS						
Arsenic	0.994		0.486	mg/Kg-dry	1	1/27/2012 10:24 PM
Barium	90.8		0.486	mg/Kg-dry	1	1/27/2012 10:24 PM
Cadmium	ND		0.486	mg/Kg-dry	1	1/27/2012 10:24 PM
Chromium	3.30		0.486	mg/Kg-dry	1	1/27/2012 10:24 PM
Copper	3.47		0.486	mg/Kg-dry	1	1/27/2012 10:24 PM
Lead	4.65		0.486	mg/Kg-dry	1	1/27/2012 10:24 PM
Nickel	3.25		0.486	mg/Kg-dry	1	1/27/2012 10:24 PM
Selenium	0.632		0.486	mg/Kg-dry	1	1/27/2012 10:24 PM
Silver	ND		0.486	mg/Kg-dry	1	1/27/2012 10:24 PM
Zinc	12.6		0.486	mg/Kg-dry	1	1/27/2012 10:24 PM
LA29B SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	0.116		0.0100	meq/meq	1	1/27/2012
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR						
Calcium	117		0.996	mg/L	2	1/26/2012 09:33 AM
Magnesium	9.52		0.996	mg/L	2	1/26/2012 09:33 AM
Sodium	4.86		0.996	mg/L	2	1/26/2012 09:33 AM
LOW-LEVEL PAHS						
Acenaphthene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Anthracene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Benz(a)anthracene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Benzo(a)pyrene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Benzo(b)fluoranthene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Benzo(k)fluoranthene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Chrysene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Dibenz(a,h)anthracene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 31-Jan-12

Client: Rosewood Resources, Inc.

Project: Table 910 - Halde Pit - Block Pit

Work Order: 1201644

Sample ID: Block Top Soil

Lab ID: 1201644-03

Collection Date: 1/19/2012 01:00 PM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Fluorene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Indeno(1,2,3-cd)pyrene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Naphthalene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Pyrene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Surr: 2-Fluorobiphenyl	72.9		43-125	%REC	1	1/24/2012 04:31 PM
Surr: 4-Terphenyl-d14	89.3		32-125	%REC	1	1/24/2012 04:31 PM
Surr: Nitrobenzene-d5	70.8		37-125	%REC	1	1/24/2012 04:31 PM
VOLATILES			SW8260			Analyst: WLR
Benzene	ND		0.0052	mg/Kg-dry	1	1/26/2012 01:05 PM
Ethylbenzene	ND		0.0052	mg/Kg-dry	1	1/26/2012 01:05 PM
m,p-Xylene	ND		0.010	mg/Kg-dry	1	1/26/2012 01:05 PM
o-Xylene	ND		0.0052	mg/Kg-dry	1	1/26/2012 01:05 PM
Toluene	ND		0.0052	mg/Kg-dry	1	1/26/2012 01:05 PM
Xylenes, Total	ND		0.016	mg/Kg-dry	1	1/26/2012 01:05 PM
Total BTEX	ND		0.021	mg/Kg-dry	1	1/26/2012 01:05 PM
Surr: 1,2-Dichloroethane-d4	89.8		70-128	%REC	1	1/26/2012 01:05 PM
Surr: 4-Bromofluorobenzene	98.4		73-126	%REC	1	1/26/2012 01:05 PM
Surr: Dibromofluoromethane	95.5		71-128	%REC	1	1/26/2012 01:05 PM
Surr: Toluene-d8	99.2		73-127	%REC	1	1/26/2012 01:05 PM
ANIONS			SW9056		Prep Date: 1/27/2012	Analyst: JKP
Chloride	ND		5.11	mg/Kg-dry	1	1/30/2012 04:15 PM
Sulfate	ND		5.11	mg/Kg-dry	1	1/30/2012 04:15 PM
Surr: Selenate (surr)	95.5		80-120	%REC	1	1/30/2012 04:15 PM
HEXAVALENT CHROMIUM			SW7196		Prep Date: 1/24/2012	Analyst: TDW
Chromium, Hexavalent	ND		2.07	mg/Kg-dry	1	1/25/2012 05:00 PM
LA29B ELECTRICAL CONDUCTIVITY			LADNR-29B EC			Analyst: TDW
Electrical Conductivity @ saturation	2.10		0.0100	mmhos/cm @25	1	1/25/2012 04:00 PM
Electrical Conductivity, 1:1 aqueous	0.694		0.0100	mmhos/cm @25	1	1/25/2012 04:00 PM
Saturation % as decimal	0.331			mmhos/cm @25	1	1/25/2012 04:00 PM
LA29B SATURATION POINT			LADNR-29B SP			Analyst: TDW
Saturation Point	0.331		0.100	% Saturation	1	1/26/2012 04:00 PM
MOISTURE			SW3550			Analyst: KAH
Percent Moisture	3.81		0.0100	wt%	1	1/27/2012 07:10 PM
PH			SW9045B			Analyst: RPM
pH	8.40		0.100	pH Units	1	1/27/2012 01:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.