

#7096

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

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): Skim pit abandonment

RECEIVED
FOR COGCC USE ONLY
APR 25 2012
COGCC
OGCC Employee: _____
☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV
Tracking No: _____

OGCC Operator Number: 24320Name of Operator: Diamond Operating, Inc.Address: 6666 Gunpark Drive, Suite 200City: Boulder State: CO Zip: 80301

Contact Name and Telephone:

Dave PetersonNo: 303-494-4420Fax: 303-494-3941API Number: 05-121-6946 00County: WashingtonFacility Name: Walters tank batteryFacility Number: 102634Well Name: WaltersWell Number: #1Location: (QtrQtr, Sec, Twp, Rng, Meridian): SE NW 21-T2N-R49W Latitude: 40.12835 Longitude: 102.86318

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Produced waterSite 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.): Dry land farming

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

Potential receptors (water wells within 1/4 mi, surface waters, etc.): None

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

Impacted Media (check):

☒ Soils☐ Vegetation☐ Groundwater☐ Surface Water

Extent of Impact:

Minimal to no impact

How Determined:

Soil sample analysis from base of pit after soil removal.

REMEDATION WORKPLAN

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

Removed soil [approx. 35 square yards] from the old skim pit and stock-piled it location for land treatment on site. Took soil sample from the base of the skim pit after the soil was removed and had the soil analyzed per COGCC instruction.

Describe how source is to be removed:

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.:

FORM 27 #1 pit closure

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



Page 2

REMEDIAL WORKPLAN (Cont.)

Tracking Number: _____
Name of Operator: _____
OGCC Operator No: _____
Received Date: _____
Well Name & No: Walters Tank Battery
Facility Name & No: Pit ID # 102634

OGCC Employee: _____

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

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.

Will back fill skim pit using clean fill
dirt.

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.):

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: March 15, 2012 Date Site Investigation Completed: April 10, 2012 Date Remediation Plan Submitted: April 23, 2012
Remediation Start Date: _____ Anticipated Completion Date: Est. May 15, 2012 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: David C. Peterson

Signed: [Signature]

Title: President

Date: April 23, 2012

OGCC Approved: [Signature]

Title: FOR

Date: 06/19/2012

John Axelsson
EPS NE Region

RECEIVED

APR 25 2012

COGCC

Sample Summary

Diamond Operating Inc.

Walters-Skim Pit Closure

Job No: D33655

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
------------------	-------------------	---------	----------	---------------------	---------------------

~~D33655-1 04/10/12 10:00 SG 04/13/12 SO Soil SOIL FROM PIT~~

D33655-2 04/10/12 10:00 SG 04/13/12 SO Soil BASE OF PIT AFTER SOIL REMOVED

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Report of Analysis

Client Sample ID: BASE OF PIT AFTER SOIL REMOVED
Lab Sample ID: D33655-2
Matrix: SO - Soil
Method: SW846 8015B
Project: Walters-Skim Pit Closure

Date Sampled: 04/10/12
Date Received: 04/13/12
Percent Solids: 99.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15759.D	1	04/17/12	SK	n/a	n/a	GGB878
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	10	5.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	98%		60-140%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BASE OF PIT AFTER SOIL REMOVED				
Lab Sample ID:	D33655-2			Date Sampled:	04/10/12
Matrix:	SO - Soil			Date Received:	04/13/12
Method:	SW846 8021B			Percent Solids:	99.0
Project:	Walters-Skim Pit Closure				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB15759.D	1	04/17/12	SK	n/a	n/a	GTB878
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	51	16	ug/kg	
108-88-3	Toluene	ND	100	51	ug/kg	
100-41-4	Ethylbenzene	ND	100	51	ug/kg	
1330-20-7	Xylenes (total)	ND	100	100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	98%		60-140%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BASE OF PIT AFTER SOIL REMOVED			Date Sampled:	04/10/12
Lab Sample ID:	D33655-2			Date Received:	04/13/12
Matrix:	SO - Soil			Percent Solids:	99.0
Method:	SW846-8015B SW846 3546				
Project:	Walters-Skim Pit Closure				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH003459.D	1	04/19/12	AV	04/16/12	OP5724	GFH186
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	22.6	13	8.8	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	96%		43-136%		

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: BASE OF PIT AFTER SOIL REMOVED

Lab Sample ID: D33655-2

Matrix: SO - Soil

Project: Walters-Skim Pit Closure

Date Sampled: 04/10/12

Date Received: 04/13/12

Percent Solids: 99.0

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	54.7	2.0	mg/l	1	04/17/12	04/17/12 JB	SW846 6010C ¹	EPA 200.7 ²
Magnesium	17.2	1.0	mg/l	1	04/17/12	04/17/12 JB	SW846 6010C ¹	EPA 200.7 ²
Sodium	70.5	2.0	mg/l	1	04/17/12	04/17/12 JB	SW846 6010C ¹	EPA 200.7 ²

(1) Instrument QC Batch: MA2344

(2) Prep QC Batch: MP7311

Report of Analysis

Client Sample ID: BASE OF PIT AFTER SOIL REMOVED

Lab Sample ID: D33655-2

Matrix: SO - Soil

Project: Walters-Skim Pit Closure

Date Sampled: 04/10/12

Date Received: 04/13/12

Percent Solids: 99.0

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	2.13		ratio	1	04/17/12 15:30	JB	USDA HANDBOOK 60
Solids, Percent	99		%	1	04/17/12	SWT	SM19 2540B M
Specific Conductivity	671	1.0	umhos/cm	1	04/18/12	CJ	DEPT.OF AG, BOOK N9
pH	8.07		su	1	04/13/12 14:30	CT	SW846 9045C

(a) Calculated as: $(\text{Na meq/L}) / \sqrt{[(\text{Ca meq/L}) + (\text{Mg meq/L})/2]}$