

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

RECEIVED  
6/7/2011

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:

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

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

OGCC Operator Number: 66571

Name of Operator: OXY USA WTP LP

Address: 760 Horizon Drive, Suite 101

City: Grand Junction State: CO Zip: 81506

Contact Name and Telephone:

Daniel I. Padilla

No: 970.263.3637

Fax: 970.263.3694

API Number: 05-045-06861-00

County: Garfield

Facility Name: Soils Pit

Facility Number: 620-1

Well Name: Cascade Creek

Well Number: 620-1

Location: (QtrQtr, Sec, Twp, Rng, Meridian): SWSE, Sec. 20, T6S, R97W, 6th

Latitude: 39.502937 Longitude: -108.239451

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): N/A; Soils pit closure

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: Haplo very channery sandy loam

Potential receptors (water wells within 1/4 mi, surface waters, etc.): ~190' South of Cascade Canyon; ~100' north of unnamed drainage

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

Impacted Media (check):

☐ Soils  
☐ Vegetation  
☐ Groundwater  
☐ Surface Water

Extent of Impact:

None  
No impact  
N/A  
N/A

How Determined:

See attached sample results  
Visual  
Visual inspection beneath pit liners  
Visual

REMEDIAL WORKPLAN

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

Oxy originally proposed to permit the facility as a special purpose pit, but the COGCC denied the request and stated that Oxy would need to permit the facility as a Centralized E&P Waste Management Facility or close the pit. Oxy has opted to close the pit and is providing this closure form/plan for COGCC review/approval.

Describe how source is to be removed:

Prior to pit closure, Oxy sampled the pit contents, which consisted of inert fine gravel (10"-12" thick, used to keep the liner in place) and a small soils pile described a pot-holing dirt (dirt excavated as part of a pipeline inspection). Oxy also characterized the pit liner and the soil beneath the pit liner; background samples were also taken prior to reclaiming the pit (final pit reclamation pending COGCC approval). Based on the sample results, (see attached Walsh Report and sample data) the pit contents will be mixed and buried with soil from the original excavation. The pit will be recontoured and capped with a minimum 3-feet of top soil and then reseeded. The pit liner will be hauled off-site for disposal at Rio Blanco County disposal facility.

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.:

The pit was not used to store liquids of any kind; only de minimus amounts of rain water were observed in the pit, (no sheen was observed in the puddles) and will not require disposal. Soils in the pit were sampled and characterized. The pit contents are above Table 910-1 standards but below background levels and will be mix/buried under 3-feet of topsoil. A Form 4 Sundry will seek approval to bury the pit contents (attached). The 60-mil HDPE primary liner and subliner has been characterized and disposed of at the Rio Blanco County landfill. The site will be recontoured and seeded.

Submit Page 2 with Page 1

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



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

Page 2

**REMEDIAL WORKPLAN (Cont.)**

OGCC Employee: \_\_\_\_\_

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

No ground water has been impacted. The pit was lined with a 60-mil HDPE primary liner and a geocomposite subliner. The pit was also never used to store any liquids. There was no evidence of staining below the liner.

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.

Currently the soils pit is constructed at grade of Oxy's existing 620-1 multi-well pad; the soils pit is approximately 9 feet deep. Soil and liner samples were taken, and pit contents were removed and stored on site to pull the liner. Based on the liner sample analysis, Rio Blanco County landfill accepted the liner for final disposal. Based on the soil sample results, the soils were returned to the pit. The soils in the pit will be mixed with native soil (stock piled dirt from the original excavation) and capped with 3-feet of top soil. The reclaimed pit will be recontoured to match the original surroundings and minimize stormwater runoff. The reclaimed pit area will also be seeded by the next growing season and later monitored to determine revegetation efforts.

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:

Oxy will monitor the site for stormwater compliance and will follow-up the next growing to determine if revegetation efforts have been successful.

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

Oxy is seeking approval to leave the soils in place and buried under a 3-foot topsoil cap. Sample results for soils collected within the pit exceed Table 910-1 standards for Arsenic, but do not exceed background Arsenic levels. pH levels for soils within the pit exceed Table 910-1 standards as well as background levels, but based on conversations with the COGCC, Oxy will mitigate through mixing the pit soils with native materials as well as bury the soil with 3-feet of native soil. Oxy has attached a Sundry (Form 4) seeking approval to implement the proposed reclamation plan, see attached. Included with the Form 4 Sundry is the Walsh report detailing the sampling procedure, location of samples collected and recommendations to close the pit; simple statistical analysis of the data was also performed by Walsh to support Oxy's proposal to leave the soils in place with a 3-foot native soil cap. Note that the pit liner was sent to the Rio Blanco County landfill.

**IMPLEMENTATION SCHEDULE**

Date Site Investigation Began: 10/13/09	Date Site Investigation Completed: 1/12/10	Date Remediation Plan Submitted: 10/21/09
Remediation Start Date: ~12/7/09	Anticipated Completion Date: 5/15/10	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: Daniel I. Padilla

Signed: \_\_\_\_\_

Title: Regulatory Advisor

Date: 3/10/10

OGCC Approved: \_\_\_\_\_

Title: FOR

Date: 06/07/2011

Chris Cumfield  
EPS NW Region