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

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: 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: 05-045-10675 County: Garfield
Facility Name: CC Pond 6 / 697-08-53 Facility Number: 291971
Well Name: Cascade Creek Well Number: 697-08-53
Location: (QtrQtr, Sec, Twp, Rng, Meridian): SWSE, Sec 8, T6S, R97W, 6th PM Latitude: 39.5332 Longitude: -108.242

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Not Applicable

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.): Non-crop land rangeland

Soil type, if not previously identified on (Form 2A) or Federal Surface Use Plan: Parachute-Irigul complex 5-30% slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): A natural drainage is ~ 150' south of pit and flows into the intermittent unnamed drainage located ~ 1,110' to the southeast. The unnamed drainage connects with Conn Creek ~ 6760' southwest of pit.

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

Impacted Media (check):	Extent of Impact:	How Determined:
☐ Soils	N/A	Laboratory analytical results
☐ Vegetation	N/A	Visual
☐ Groundwater	N/A	Visual inspection below pit liner
☐ Surface Water	N/A	Visual

REMEDIATION WORKPLAN

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

Oxy permitted the pit as a production pit in August of 2007. Oxy closed this pit in 2011 and is providing this pit closure form/plan for COGCC review/approval.

Describe how source is to be removed:
Oxy removed liquids from inside the production pit; no solids were encountered. Liquids removed from the production pit were redistributed into Oxy's water system for reuse. Oxy disposed of the pit liner at ECDC, a commercially licenced disposal facility located in Utah. Based on the sampling results of the pit bottom, all analytes are found to be below allowable concentration levels except for arsenic and sodium adsorption ratio (SAR). Although the arsenic concentrations are above the COGCC regulated concentration, Oxy collected background samples in undisturbed locations which identified elevated concentrations of arsenic to be above concentrations found in the pit bottom. The pit bottom will be buried below a cap of two feet to ensure a sufficient agronomic zone is achieved.

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.:
Liquids were removed from the production pit and no solids were encountered. Liquids present in the production pit were redistributed into Oxy's water system for reuse. The 60-mil high-density polyethylene liner was disposed of at ECDC, a commercially licensed disposal facility located in Utah. Analytical concentrations found in the pit bottom are below the COGCC's Table 910-1 concentrations, except for arsenic and SAR. Oxy collected background samples in undisturbed locations which identified elevated concentrations of arsenic to be above concentrations found in the pit bottom. To address the high concentration of SAR, Oxy will ensure the pit bottom will be buried below a cap of at least two feet to provide a sufficient agronomic zone for revegetation efforts. The site will be contoured to be level with the existing pad grade.

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Page 2

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Tracking Number: _____
Name of Operator: _____
OGCC Operator No: _____
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.):

No groundwater was impacted by the pit. The pit was lined with a 60-mil HDPE liner. This pit was used as a production pit and no solids were encountered in the pit during closure activities. During excavation of the production pit liner, an Oxy contractor was present to observe the soil below the liner. The Oxy contractor collected soil samples from below the pit liner to ensure environmental impacts were not present. Laboratory analytical results are included which identify the approximate sampling location within the pit at depth and compliance with the COGCC Table 910-1 allowable concentrations, except for arsenic and SAR. Oxy collected background samples in undisturbed locations which identified elevated concentrations of arsenic to be above concentrations found in the pit bottom. To address elevated concentrations of SAR, Oxy will bury and cap the pit bottom below at least two feet of native material to ensure a sufficient agronomic zone.

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 production pit was constructed at grade with Oxy's Cascade Creek 697-08-53 well pad, and was approximately 12 feet deep. The pit liner was sent to ECDC, a commercially licenced disposal facility located in Utah. The reclaimed pit was contoured to be level with the pad grade to minimize stormwater runoff. Final pad reclamation will occur at the end of the life of the pad.

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. Oxy anticipates drilling will occur between now and 2012, and oce drilling is completed Oxy will proceed with interim reclamation for the pad.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):
Oxy removed all liquids within the production pit and redistributed them into Oxy's water system for reuse. No solids were encountered during removal of the liquids from the production pit. Note that the production pit liner was disposed of at ECDC, a commercially licenced disposal facility located in Utah.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 12/13/2010	Date Site Investigation Completed: 02/03/11	Date Remediation Plan Submitted: 02/02/11
Remediation Start Date: 01/13/11	Anticipated Completion Date: 02/28/11	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: 2/7/11

OGCC Approved: _____ Title: For Chris Canfield Date: 02/11/2011

EPS NW Region

Pit Reclaims - Cascade Creek	
Pad #:	Pond 6
Sample Date:	01/13/2011
Clearance Achieved Date:	

	MCL (mg/kg)	Pond 6 LP 0-6"	Pond 6 Bottom 0-6"	South Background 12/13/10	West Background 12/13/10	North Background 12/13/10	Northwest Background 12/13/10	Excavation Background (1) 10-12' 1/27/11	Excavation Background (2) 10-12' 1/27/11	South Background 1/27/11	Southeast Background 1/27/11	East Background 1/27/11	Northeast Background 1/27/11
Organics in Soil													
TPH (GRO and DRO)	500	3.1	4.3					BDL	BDL	1.9	1.6	0.9	3.2
Benzene	0.17	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Toluene	85	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Ethylbenzene	100	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Xylenes	175	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Organics in Soil (PAH's)													
Acenaphthene	1000	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Anthracene	1000	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Benzo(A)anthracene	0.22	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Benzo(B)fluoranthene	0.22	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Benzo(K)fluoranthene	2.2	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Benzo(A)pyrene	0.022	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Chrysene	22	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Dibenzo(A,H)anthracene	0.022	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Fluoranthene	1000	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Flourene	1000	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Indeno(1,2,3,C,D)pyrene	0.22	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Napthalene	23	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Pyrene	1000	BDL	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Inorganics in Soil													
EC	<4 mmhos/cm or 2X background	2.4	1.1	0.05	0.031	0.066	0.31	0.098	0.1	0.051	0.059	0.065	0.064
SAR	<12	18	12	0.68	0.4	1.1	0.5	1.4	1.1	0.61	0.41	0.41	0.44
pH	6-9	8.3	8.5	7	6.6	6.8	6.5	8.3	8.4	6.2	6.6	6.6	6.6
Metals in Soils													
Arsenic	0.39	7.2	5.9	1.5	1.6	1.8	2.1	17	18	4.9	17	13	10
Barium	15000	260	380					310	260	280	420	320	280
Boron	2 (mg/L)	7.9	7.5					BDL	3.3	5.4	3.5	3.7	1.8
Cadmium	70	0.2	0.29					BDL	BDL	0.068	BDL	BDL	BDL
Chromium	12000	42	40					71	63	33	61	50	43
Chromium VI	23	0.75	1					BDL	BDL	7.2	8.4	8.6	7.8
Copper	3100	20	22					17	18	14	14	12	9.2
Lead	400	14	15					13	13	12	12	9.8	8.5
Mercury	23	0.024	0.016					0.017	0.019	0.0089	0.012	0.0069	0.0097
Nickel	1600	28	26					43	32	16	29	22	19
Selenium	390	5	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Silver	390	2.5	BDL					BDL	BDL	BDL	BDL	BDL	BDL
Zinc	23000	48	47					47	49	45	42	35	29

BDL = Below Detection Limit


OXY USA WTP LP
760 Horizon Drive, Suite 101
Grand Junction, CO 81506
Pond 6 Sampling Figure
Map Revised: February 4, 2011
Garfield County, Colorado
0 0.007 0.014 0.021 0.028 0.035
Miles
Background Samples
Low Point (LP) Sample
Pit Bottom (composite) Sample