

**State of Colorado**  
**Oil and Gas Conservation Commission**



FOR OGCC USE ONLY

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.

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): Produced Water Releases

OGCC Operator Number: <u>66571</u>	Contact Name and Telephone: <u>Tyson Ertel</u>
Name of Operator: <u>OXY USA WTP LP</u>	No: <u>970-263-3645</u>
Address: <u>760 Horizon Drive, Suite 101</u>	Fax: <u>970-263-3694</u>
City: <u>Grand Junction</u> State: <u>CO</u> Zip: <u>81506</u>	

API Number: _____	County: <u>Garfield</u>
Facility Name: <u>Central Water Handling Facility</u>	Facility Number: <u>417559</u>
Well Name: _____	Well Number: <u>NA</u>
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>SESW 29 6S 97W 6</u>	Latitude: <u>39.489163</u> Longitude: <u>-108.248747</u>

**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.): Rangeland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Happle very channery sandy loams, 3-12% slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Conn Creek, ~480 feet southeast & Ground Water, ~80-90' BGS

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

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	<u>Approximately 50' x 80' and maximum depth between 24-31 feet</u>	<u>Bore Hole Drilling with soil sample analysis</u>
<input type="checkbox"/> Vegetation	_____	_____
<input type="checkbox"/> Groundwater	_____	_____
<input type="checkbox"/> Surface Water	_____	_____

**REMEDIALTION WORKPLAN**

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

On June 7, 2012, a soil gas survey was completed at the CWH facility. The soils were assessed for Volatile Organic Compounds (VOCs) using soil gas survey techniques. The PID readings were evaluated and areas with measurements above 20 ppm were considered to be elevated and further evaluation through subsurface sampling was recommended. On July 5, 2012, a soil boring study was conducted at the site in those areas identified as impacted during the soil gas study. Using a CME 55 with eight inch outer diameter hollow stem augers, boreholes were placed in areas identified during the soil gas survey as having elevated PID readings. See attachment for additional information. Please reference Form 19 Spill/Release Tracking Number 2223854 as well as the Form 19 (attached) that was submitted on 6/7/2012 (no Spill/Release Tracking Number given to reference) for a 15 bbl release in the same proximity to the release associated with Spill/Release Tracking Number 2223854. An investigation into both releases was included as part of the investigation.

**Describe how source is to be removed:**  
The produced water pipelines that lost integrity were upgraded to flexpipe.

**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.:**  
Based on analytical results and existing site geology, no additional remediation activities are recommended at this time, see attached report. Oxy will continue to monitor the three existing on site ground water monitoring wells and upon receipt of four consecutive quarters of analytical data showing no groundwater impacts, will request no further action.



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.):

Groundwater is not believed to be impacted. Based on data from existing monitoring wells in the area, the depth to groundwater has been estimated at approximately 100 feet below ground surface (bgs) and a confining layer appears to be situated at 25 to 31 feet bgs. Continued quarterly sampling of ground water will be conducted as part of Oxy's CWHF Centralized E&P approval.

See attached for quarterly analytical summary of the three (3) existing monitoring wells.

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.

See Attached.

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? [X] Y [ ] N If yes, describe:

Oxy will continue the scheduled monitoring of the three existing groundwater wells as part of the CWHF Centralized E&P approval. Upon receipt of four consecutive quarters of data showing no groundwater impacts, Oxy will request no further action for the release associated with Spill/Release Tracking Number 2223854 and for the release on 5/28/2012, Form 19 (attached) submittal date of 6/7/2012, Oxy was not issued a Spill/Release Tracking Number for that release.

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

No E&P waste anticipated. If, however, E&P waste is generated it will be disposed of in conformance with applicable COGCC regulations.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 06/07/2012 Date Site Investigation Completed: 07/11/2012 Date Remediation Plan Submitted: N/A Remediation Start Date: N/A Anticipated Completion Date: N/A Actual Completion Date: N/A

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Tyson Ertel Signed: [Signature] Title: HES Advisor Date: 4-1-13

OGCC Approved: Title: Date: