



## COLORADO

### Oil & Gas Conservation Commission

Department of Natural Resources

1120 Lincoln Street, Suite 801  
Denver, CO 80203



01668617

November 26, 2014

Mr. Chris Clark  
OXY USA WTP LP  
760 Horizon Drive Suite 101  
Grand Junction, Colorado 81506

Re: Review of Form 28 Centralized E&P Waste Management Facility Permit  
Facility ID #436570, Pond 13 East and West  
Pit Facility ID: 414403 and 414404  
Location ID: 335849  
OXY USA WTP LPNESE and SESE, Section 4, T6S, R97W, 6<sup>th</sup> PM, Garfield County, Colorado

Dear Mr. Clark:

The Colorado Oil and Gas Conservation Commission (COGCC) has received and reviewed your submittal for the above referenced permit application for COGCC Facility ID #436570. At this time, the COGCC has the following comments:

Form 28 Centralized E&P Waste Management Facility Permit

1) Form 28, Attachment Checklist.

**COGCC Comment:** None.

2) Form 28, Question 1.

Is the site in a sensitive area? Answer: Yes

**COGCC Comment:** None.

3) Form 28, Question 2.

What are the average annual precipitation and evaporation rates for the site? Answer: Precipitation-29 inches/year. Evaporation – 10 inches/year.

**COGCC Comment:** None.

3) Form 28, Question 3.

Has a description of the site's general topography, geology, and hydrology been attached?  
Answer: Yes.

**COGCC Comment:** None.

4) Form 28, Question 4.

Has a description of the adjacent land use been attached? Answer: Yes.

**COGCC Comment:** None.

P 303.894.2100 F 303.894.2109 [www.colorado.gov/cogcc](http://www.colorado.gov/cogcc)

Commissioners: Thomas L. Compton - Chairman, Richard Alward, John H. Benton, DeAnn Craig,  
James W. Hawkins, Tommy Holton, Andrew L. Spielman, Mike King, Dr. Larry Wolk

John W. Hickenlooper, Governor | Mike King, Executive Director, DNR | Matthew J. Lepore, Director



5) Form 28, Question 5.

Has a 1:24,000 topographic map showing the site location been attached? Answer: Yes.

**COGCC Comment:** None.

6) Form 28, Question 6.

Has a site plan showing drainage patterns, diversion or containment structures, roads, fencing, tanks, pits, buildings and any other pertinent construction details been attached? Answer: Yes.

**COGCC Comment:** The Site Plan does not show existing grading in the existing pits or around the site. Please clarify.

7) Form 28, Question 7.

If site is not owned by the operator, is written authorization of the surface owner attached?

Answer: Site is owned by OXY USA Inc..

**COGCC Comment:** None.

8) Form 28, Question 8.

Has a scaled drawing and survey showing the entire section(s) containing the proposed facility been attached? Answer: Yes.

**COGCC Comment:** None.

9) Form 28, Question 9.

What measures have been implemented to limit access to the facility by wildlife, domestic animals or by members of the public? Answer: OXY's Pond 13 E/W complex has an eight foot tall wildlife fence around the Facility to limit access. The Facility is within OXY's Cascade Creek operational area which has a perimeter fence around the main road access along Conn Creek Road. OXY will install netting or equivalent deterrents to prevent birds from entering the Facility.

**COGCC Comment:** None.

10) Form 28, Question 10.

Is there a planned fire lane of at least 10 feet in width around the active treatment areas and within the perimeter fence? Answer: No.

**COGCC Comment:**

Rule 908.b.(5).D. Centralized facilities shall have a fire lane of at least ten (10) feet in width around the active treatment areas and within the perimeter fence. In addition, a buffer zone of at least ten (10) feet shall be maintained within the perimeter fire lane.

A copy of a letter provided by Nick Marx, Fire Chief of DeBeque Protection Fire District (DFPD), addressing the potential Pond 13 E/W Centralized E&P Waste Facility and it's deviance from COGCC Rule 908.b.(5)D has been provided as part of the Form 28 submittal. OXY has also stated "they have familiarized the DFPD with the location, terrain, and any access issues that may be associated with the facility. While the Facility does not provide the full ten (10) feet of fire lane and ten (10) feet of buffer zone, the letter stated that the Fire Chief is confident that all areas of the Facility will be accessible by the DFPD vehicles and or hoses during an emergency."

A Sundry Form 4 shall be provided detailing a Rule 502 variance request to Rule 908.b.(5).D. The variance request shall detail the specifics of why this Rule cannot be met in addition to documentation of approval from the local fire authority indicating adequate access is provided to the Centralized E&P Facility without installing the required fire lane.

11) Form 28, Question 11.

Is there an additional buffer zone of at least 10 feet in width within the perimeter fire lane? Answer: No.

**COGCC Comment:**

See response to Item 10 above.

12) Form 28, Question 12.

Have surface water diversion structures been constructed to accommodate a 100-year, 24-hour event?

Answer: Yes.

**COGCC Comment:** No design details were provided in this submittal. Please clarify.

13) Form 28, Question 13.

Has a waste profile been calculated according to Rule 908.b.6? Answer: Yes.

**COGCC Comment:** None

14) Form 28, Question 14.

Has facility design and engineering been provided as required by Rule 908.b.7? Answer: Yes.

**COGCC Comment:** This Facility is constructed and operational, please submit Civil Construction Documents, of the entire site, showing "As-Constructed" (plan view and cross-sections, of the pits), signed and stamped by a Colorado Licensed Professional Engineer (P.E.).

As-constructed details of the pit including liner(s), Geo-Net Conduction liner, leak detection and sump, and geo-synthetic clay liner shall be provided for review. Theses shall be signed and stamped by a Colorado P.E.

15) Form 28, Question 15.

Has an operating plan been completed as required by Rule 908.b.8? Answer: Yes.

**COGCC Comment:** The Operating Plan references a Figure 3 as being the proposed water sampling locations, yet Figure 3, in the Figures tab is the Sensitive Wildlife Habitat Map, please clarify.

16) Form 28, Question 16.

Has ground water monitoring for the site been provided? Answer: Yes.

**COGCC Comment:** Please clarify and provide ground water monitoring results and the location(s) of where the ground water monitoring occurred.

17) Form 28, Question 17.

Has financial assurance been provided as required by Rule 704? Answer: Yes.

**COGCC Comment:** A Financial Assurance Cost Estimate of \$443,000.00 was provided with the submittal. Prior to approval, financial assurance shall be provided. OXY can provide the estimated \$443,00.00 financial assurance, however, the COGCC is having a third party review the closure of the facility and prepare an independent closure cost estimate. Based on the third party review, the

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Review of Form 28 Centralized E&P Waste Management Facility Permit Application

Facility ID #436570, Pond 13 East and West

Pit Facility ID: 414403 and 414404

Location ID: 335849

OXY USA WTP LPNESE and SESE Section 4, T6, R97W, 6<sup>th</sup> PM, Garfield County, Colorado

financial assurance may be less than the estimated \$443,000.00 or more than the estimated \$443,000.00.

18) Form 28, Question 18.

Has a closure plan been provided? Answer: Yes.

**COGCC Comment:** The COGCC is having a third party review the closure of the facility and prepare an independent closure cost estimate. Based on the third party review, the financial assurance may be less than the estimated \$443,000.00 or more than the estimated \$443,000.00.

19) Form 28, Question 19.

Have local government requirements for zoning and construction been complied with? Answer: Yes.

**COGCC Comment:** Could not find documentation, please submit a copy of the recorded Garfield County Limited Impact Review.

20) Form 28, Question 20.

Have permits and notifications required by local governments and other agencies been provided? Answer: Yes.

**COGCC Comment:** Could not find documentation, please submit a copy of the recorded Garfield County Limited Impact Review.

Pond East and West

1. 908.a: Applicability:

**COGCC Comment:** Please provide the historic timeline of use of the Pit Facility including: construction date, expected life of liner(s), maintenance (liner repairs, leak detection functionality, pit and leak detection integrity testing, etc.), netting issues and repairs, spills releases, inspections, etc. A Sundry (Document ID: 2221569) was approved on March 30, 2012 extending the use of the pits. The Sundry provided an inspection plan that OXY would implement in addition to annual hydro testing as part of the pit use extension. Please provide a summary detail of those inspections and the annual hydro testing results. Additionally, a brief discussion of any produced/flowback water reuse and waste minimization water sharing between OXY and other operators should be included as part of the Form 28 submittal. This discussion should include a summary of transfers (volume) of production and flow-back fluids (both as the supplier and receiver) during the calendar year(s) including laboratory analytical results for representative sample(s) of the production and flow-back water. Subsequent produced/flowback water reuse and waste minimization water sharing between OXY and other operators shall be provided in the annual CE&P report under Rule 908.f. It should be noted that the produced/flowback water reuse and waste minimization plans shall not be construed as a means for collection, treatment, temporary storage, and/or disposal of produced water, drilling fluids, completion fluids, and E&P waste from other Operators other than OXY.

2. 908.b.(1), (2), &(3): Contact Information Surface Owner & Legal Site Description:

**COGCC Comment:** None.

3. 908.b.(4) Figures, Maps, Precipitation and Evaporation Rates:

**COGCC Comment:** No Precipitation and Evaporation figure was in the submittal.

It is stated that "At the time of construction, Ponds 13 East and 13 West complied with all conditions of approval associated with wildlife best management practices required by the Director of the COGCC." Does the Facility currently comply with all conditions of approval associated with wildlife best management practices required by the Director of the COGCC?

4. 908.b.(5).A: Site Plan:

**COGCC Comment:** The Site Plan included with the submittal is showing existing contours at 10' intervals, with no grading contours shown across the site. A typical Site Plan should show grading contours across the site at no greater than a 2' interval, 1' would be preferred

5. 908.b.(5).B: Scaled Drawings:

**COGCC Comment:** Since this is an existing Site, please submit Civil Construction Documents, of the entire site, showing "As-Constructed" (plan view and cross-sections, of the pits), signed and stamped by a Colorado Licensed P.E..

As-constructed details of the pit including liner(s), Geo-Net Conduction liner, leak detection and sump, and geo-synthetic clay liner shall be provided for review. Theses shall be signed and stamped by a Colorado P.E. Figure 8- Liner Configuration Diagram (For Double Lined Systems) has been provided, but this is a general schematic.

Proposed details of netting around the pit complex should be provided on the site diagram.

6. 908.b.(5).C: Access Control Measures:

**COGCC Comment:** Please provide a map depicting the location of the locked gate in relation to the pit complex.

7. 908.b.(5).D: Fire Access:

**COGCC Comment:**

Rule 908.b.(5).D. Centralized facilities shall have a fire lane of at least ten (10) feet in width around the active treatment areas and within the perimeter fence. In addition, a buffer zone of at least ten (10) feet shall be maintained within the perimeter fire lane.

A copy of a letter provided by Nick Marx, Fire Chief of DeBeque Protection Fire District (DFPD), addressing the potential Pond 13 E/W Centralized E&P Waste Facility and it's deviance from COGCC Rule 908.b.(5)D has been provided as part of the Form 28 submittal. OXY has also stated "they have familiarized the DFPD with the location, terrain, and any access issues that may be associated with the facility. While the Facility does not provide the full ten (10) feet of fire lane and ten (10) feet of buffer zone, Nick Marx is confident that all areas of the Facility will be accessible by the DFPD vehicles and or hoses during an emergency."

A Sundry Form 4 shall be provided detailing a Rule 502 variance request to Rule 908.b.(5).D. The variance request shall detail the specifics of why this Rule cannot be met in addition to documentation of approval from the local fire authority indicating adequate access is provided to the Centralized E&P Facility without installing the required fire lane.

8. 908.b.(5).E: Surface Water Diversion Structures:

**COGCC Comment:** The submittal indicates that OXY is in the process of gathering survey data to prepare a Drainage Report as required by Garfield county Limited Impact Review process. Please provide this document for inclusion to the Form 28 Permit Application.

9. 908.b.(6): Waste Profile:

**COGCC Comment:** None.

10. 908.b.(7): Facility Design and Engineering:

**COGCC Comment:** Provide specific pipeline integrity testing procedure, in accordance with COGCC 1100 Series Rules. Include frequency for the contributing well pads. Include a site vicinity map depicting the pipeline locations and routes.

This Facility is constructed and is stated to be upgraded. Please submit planned Civil Construction Documents, including all proposed pit construction details showing plan view and cross-sections, signed and stamped by a Colorado Licensed P.E..

As-constructed details of the pit including liner(s), Geo-Net Conduction liner, leak detection and sump, and geo-synthetic clay liner shall be provided for review. Theses shall be signed and stamped by a Colorado P.E. Figure 8- Liner Configuration Diagram (For Double Lined Systems) has been provided, but this is a general schematic.

11. 908.b.(7).A: Geological Data:

**COGCC Comment:** None

12. 908.b.(7).B: Hydrologic Data:

**COGCC Comment:** The Geo-Hydrology Report (OA Project No. 013-0655) states that "shallow groundwater is not expected to occur in close proximity to the site...". Question 16 of the Form 28 "Has ground water monitoring for the site been provided? Yes," Please provide ground water monitoring results and the location(s) of where the ground water monitoring occurred.

13. 908.b.(7).C: Engineering Data:

**COGCC Comment:**

The original pit permits for Facility IDs 414403 and 414404 were constructed with a single 60 mil liner and geo composite base liner. Please refer to the previous comments regarding as-constructed details and documents.

The southwest and southeast portions of the pits are constructed in fill. The Form 28 application will be conditioned with the following condition of approval (COA):

*No portion of any pit that will be used to hold liquids shall be constructed on fill material, unless the pit and fill slope are designed and certified by a Professional Engineer (P.E.), subject to review and approval by the Director prior to construction of the pit. The construction and lining of the pit shall be supervised by a P.E. or their agent.*

14. 908.b.(8): Operating Plan:

**COGCC Comment:** Submit a copy of OXYs' Flowline testing procedures for the pipelines associated with this facility. Submit a map of OXYs' existing and proposed pipelines associated with this facility and update in the annual report.

Provide details how OXY remotely monitors the fluid level of the pits.

15. 908.b.(9).A: Water Wells:

**COGCC Comment:** None.

16. 908.b.(9).B: Site Specific Monitoring Wells:

**COGCC Comment:** The proposed up gradient monitoring well is located in the drainage of Little Creek, the westerly down gradient proposed monitoring well is located in the drainage of Cascade Canyon and the easterly proposed monitoring well in a drainage that flows into Cascade Canyon. Please provide the rational for proposing the monitoring well locations within these drainages and not within the area of the Facility. Please provide the proposed construction detail of the monitoring wells.

17. 908.b.(10): Surface Water Monitoring:

**COGCC Comment:** Baseline and periodic surface water monitoring shall be conducted. A location in Cascade Canyon shall be identified up gradient of the facility as well as down gradient, in addition locations shall be identified in the easterly drainage both up and down gradient. Water quality analysis shall include BTEX, TPH-DRO, TPH-GRO, TDS, chloride, sulfate, total suspended solids, and pH.

18. 908.b.(11): Contingency Plan:

**COGCC Comment:** The contingency plan shall be updated when contact information changes..

19. 908.c.: Permit Approval:

**COGCC Comment:** Provide financial assurance and approval notices, permits, or similar types of notifications for the facility from local governments or other agencies.

20. 908.d: Financial Assurance:

**COGCC Comment:** See previous comments.

21. 908.e: Facility Modifications:

**COGCC Comment:** None.

22. 908.f: Annual Permit Review:

**COGCC Comment:** Include the "Contributing Wells" API numbers have in the Annual Permit Review.

23. 908.g.: Closure:

**COGCC Comment:** Please see response to 908.d.

24. 908.h: Local Permitting:

**COGCC Comment:** Please provide a copy of the approved Garfield County Limited Impact Review in addition to any other notices, permits, or similar types of notifications for the facility from local governments or other agencies.

Figure Review:

Pond 13/W Stormwater Site Map:

**COGCC Comment:**

What to the letter notations in the yellow squares represent?

What does ECB mean in the Legend?

Are there steel containments around each of the pits as illustrated in the drawing?

Site Plan;

**COGCC Comment:**

There is a proposed storage area of 1.12 +/- acres south of the pits.. What is the purpose of this storage area and how does it relate to the Ponds East and West CE&P Facility.

There is a proposed storage area of 1.9 +/- acres northwest of western most pit. What is the purpose of this storage area and how does it relate to the Ponds East and West CE&P Facility.

Please define the entire extent of the Ponds East and West CE&P Facility. It is the COGCCs understanding that only pits and associated equipment (solar panels, pumps, etc.) comprise the CE&P Facility.

Figure 7 Process Flow Diagram:

**COGCC Comment:**

Please clarify the process flow process from one pit to the other pit.

Figure 8 – Liner Configuration Diagram

**COGCC Comment:**

As-constructed details of the pit including liner(s), Geo-Net Conduction liner, leak detection and sump, and geo-synthetic clay liner shall be provided for review.

Figure 9 – Pond 13E/W Proposed Monitoring Location Map

**COGCC Comment:**

See previous comment to 908.b.(9).B: Site Specific Monitoring Wells.

Attachment Review:

Attachment A:

**COGCC Comment:** None.

Attachment B:

**COGCC Comment:** None.

Attachment C:



**COGCC Comment:** Submit a copy of OXY' Flowline testing procedures for the pipelines associated with this facility. Submit a map of OXYs' existing and proposed pipelines associated with this facility and update in the annual report. Provide details how OXY remotely monitors the fluid level of the pits.

Attachment D:

**COGCC Comment:** None.

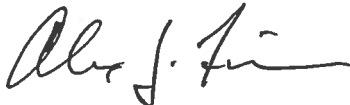
Attachment E:

**COGCC Comment:** A Financial Assurance Cost Estimate of \$443,000.00 was provided with the submittal. Prior to approval, financial assurance shall be provided. OXY can provide the estimated \$443,000.00 financial assurance, however, the COGCC is having a third party review the closure of the facility and prepare an independent closure cost estimate. Based on the third party review, the financial assurance may be less than the estimated \$443,000.00 or more than the estimated \$414,000.00. Attachment F:

**COGCC Comment:** None.

Should you have any questions, please contact me at 303-894-2100 extension 5138.

Sincerely,



Alex Fischer, P.G.

Environmental Supervisor-Western Colorado

Cc: Stephen C. Jenkins, P.E., C.P.E.S.C.  
North Central Area Engineer