

1120 Lincoln Street, STE 801
Denver, CO 80203

December 17, 2019

Mr. Dwayne Knudson
Ursa Operating Company LLC
792 Buckhorn Drive
Rifle, CO 81650

Re: Review of Form 28 Centralized E&P Waste Management Facility Permit
Facility ID #466144, Boies Ranch Solidification Area
Ursa Operating Company LLC Operator #10447
NWNW Qtr. Section 29, T2S, R97W, Rio Blanco, Colorado

Dear Mr. Knudson:

The Colorado Oil and Gas Conservation Commission (COGCC) has received and reviewed Ursa Operating Company LLC (Ursa) submittal for the above referenced permit application for COGCC Facility ID #466144. At this time, the COGCC has the following comments:

Form 28 Centralized E&P Waste Management Facility Permit

Form 28, Attachment Checklist.
COGCC Comment: None.

1) Form 28, Question 1.

Is the site in a sensitive area? Answer: Yes, due to proximity to surface water. This area is also listed as sensitive wildlife habitat.

COGCC Comment: None.

2) What are the average annual precipitation and evaporation rates for the site?

Answer: Precipitation-13.91 inches/year. Evaporation - 0 inches/year. These values were indicated on the Form 28.

COGCC Comment: Provide accurate rates of evaporation. The operator shall correct the evaporation rate on Form 28 application. Precipitation tables submitted via Form 4 Document #402221347 do not list evaporation rates of proposed facility location.

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.

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: Facility drawing does not satisfy Rule 908.b.5.D. Fire lane as labeled on revised drawing submitted via Form 4 Document #402221347 is shown as being outside of perimeter fencing. Buffer zone is not depicted on revision. Prior to approval of the Form 28, a site plan including all of the requirements of Rule 908.b.5. shall be submitted. Steel bins proposed for this site shall also be indicated on site plans.

7) Form 28, Question 7.

If site is not owned by the operator, is written authorization of the surface owner attached? Answer: No.

COGCC Comment: Form 28 indicates parcel is owned by Ursa Operating Company LLC and XTO Energy. Written authorization by the surface owner is required as stated by Rule 908.b.2, prior to approval of the Form 28.

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: Ensure entire perimeter is fenced with a gate at the entrance.

COGCC Comment: Revised drawing label states "Perimeter Fence Entire Boundary"

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: Yes.

COGCC Comment: See comments below under 908.b.5.

11) Form 28, Question 11.

Is there an additional buffer zone of at least 10 feet in width within the perimeter fire lane? Answer: Yes.

COGCC Comment: See comments below under 908.b.5.

12) Form 28, Question 12.

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

COGCC Comment: None.

13) Form 28, Question 13.

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

COGCC Comment: Volume estimates have been provided via Form 4 document #402221347.

14) Form 28, Question 14.

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

Answer: Yes.

COGCC Comment: Ursa has indicated via email that steel bins will be used to contain the material treated on site. This information is not provided in the application narrative, nor depicted on the facility plans as required by Rule 908.b.5.A.

15) Form 28, Question 15.

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

COGCC Comment: None.

16) Form 28, Question 16.

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

COGCC Comment: Ursa has proposed three groundwater monitoring wells adjacent to the project area. These monitoring wells shall be installed prior to construction of the Facility. Once completed, the operator shall provide details including but not limited to: boring logs; monitoring well installation(s); depth to groundwater; and groundwater quality (i.e. sampling and analyses).

17) Form 28, Question 17.

Has financial assurance been provided as required by Rule 704? Answer: No.

COGCC Comment: A cost estimate for closure of the facility of \$91,377.00 is provided in the application. The financial assurance shall include costs to remove ALL equipment, remediate any potential impacts, and ensure proper reclamation. Ursa shall provide financial assurance including all of the equipment removal costs, etc. prior to approval of the Form 28. This cost is typically equivalent to the cost for constructing the Facility, including all equipment. Ursa shall provide their estimated facility closure costs, however, an independent closure cost estimate will be performed by the COGCC or the COGCC's third party reviewer. Additional financial assurance may be required.

18) Form 28, Question 18.

Has a closure plan been provided? Answer: Yes.

COGCC Comment: None.

19) Form 28, Question 19.

Have local government requirements for zoning and construction been complied with?

Answer: Yes.

COGCC Comment: None.

20) Form 28, Question 20.

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

COGCC Comment: None.

Rule 908.b. Supplemental Narrative

COGCC Comment: None.

Rule 908.b.1, 2 & 3: Contact Information & Legal Site Description

COGCC Comment: None.

Rule 908.b.4: Topography, Geology and Hydrology:

COGCC Comment: See response to Question 16 regarding groundwater monitoring at the site.

Rule 908.b.5.A: Site Plan:

COGCC Comment: Provide a proposed site plan that include the requirements of Rule 908.b.5.

Rule 908.b.5.B: Location Drawing:

COGCC Comment: None.

Rule 908.b.5.C: Access Control Measures:

COGCC Comment: Supplemental narrative mentions a proposed fence around the entire facility. Drawings and maps do not clearly identify access controls. The operator shall provide clear and concise perimeter and access points on an aerial image.

Rule 908.b.5.D: Fire Lane & Buffer:

COGCC Comment: The supplemental narrative describes a plan to include a fire lane at least ten (10) feet in width around the active treatment area and within the perimeter fence. The plan also describes a buffer zone of at least ten (10) feet in width within the perimeter fire lane. These proposed features are not illustrated on the maps or drawings. The operator shall provide a detailed map with these features illustrated and labeled.

Rule 908.b.5.E: Grading and Drainage Plans:

COGCC Comment: None.

Rule 908.b.6: Waste Profile:

COGCC Comment: Potential waste stream analytical characterization has been provided. Estimated volumes of material that this Facility is anticipated to process have been provided via Form 4 document #402221347.

Rule 908.b.7.A: Facility Design and Engineering-Geology:

COGCC Comment: None.

Rule 908.b.7.B: Facility Design and Engineering -Hydrology:

COGCC Comment: None.

Rule 908.b.7.C: Facility Design and Engineering -Engineering Data:

COGCC Comment: Submit "Final Stamped and Signed" Plans when available. All as constructed drawings must be stamped and signed by a Colorado P.E.

Rule 908.b.8: Operating Plan:

COGCC Comment: None.

Rule 908.b.9.A: Water Wells:

COGCC Comment: Ursa shall comply with Rule 908.b.9.A. Water wells within a 1 mile radius of the proposed facility shall be sampled to determine baseline water quality. Provide analytical results to the COGCC and the water well owner within three months of sample collection. Groundwater monitoring and sampling shall include the analytes required under Rule 609. The Operator shall upload the analytical results following the COGCC EDD Information Guidance.

Rule 908.b.9.B: Site Specific Monitoring Wells:

COGCC Comment: Ursa has proposed three groundwater monitoring wells as required by Rule 908.b.9.B.

Rule 908.b.10: Surface Water Monitoring:

COGCC Comment: Current baseline sampling of surface water features shall be conducted prior to construction of the Facility. At a minimum, water sampling shall be analyzed for the constituents provided in Rule 609.e.

Rule 908.b.11: Contingency Plan:

COGCC Comment: The Emergency Notification List shall be updated when changes in personnel are made.

Rule 908.c: Permit Approval:

COGCC Comment: None.

Rule 908.d: Financial Assurance:

COGCC Comment: See previous comments on financial assurance.

Rule 908.e: Facility Modifications:

COGCC Comment: Facility modifications shall be submitted via sundry prior implementing the modifications.

Rule 908.f: Annual Permit Review:

COGCC Comment: Include the "Contributing Wells" API numbers in the Annual Permit Review. Volumes of waste processed on a monthly basis at this facility will be tabulated and provided on the annual report. Additionally, all incidents including Spills/Releases, accidents, system upsets, corrective actions on inspections, major repairs, etc., shall be included in the annual report.

Rule 908.g: Closure:

COGCC Comment: All interim and final reclamation shall comply with the 1000 series Rules.

Rule 908.h: Local Permitting:

See response to Question 18.

COGCC Comment: Submit copies of all required and approved permits from the BLM, CDPHE, Rio Blanco County and any other entities.

Form 28 Figures and Attachments:

Appendix A:

Construction Detail - This map does not illustrate buffer zone, fire lane, or controlled access points.

Form 2A - Attachment D (Boies Ranch Solidification Area Location Drawing - Location drawing indicates surface is split 50/50 with XTO. Written authorization by surface owner(s) is required by Rule 908.b.2.

Appendix B:

Waste Profile - For each type of waste, the amounts to be received and managed by the facility shall be estimated, per Rule 908.b.6. Volume estimates have been provided via Form 4 document #402221347. Analytical results for B-19 tank bottom sample indicate elevated BTEX and TPH constituents. For each waste type to be treated, a characteristic waste profile shall be completed.

Appendix C:

Site Specific Stormwater Management Plan - Permeability of in-situ soil is classified as moderate to rapid. Will in-situ soil be used as subgrade material?

Boies Ranch Solidification Area Operating Plan - Location is co-owned, provide written authorization by surface owner(s). Operating plan states that solids will be mixed with waste material and disposed of. The operator shall provide type (i.e. fill dirt, etc.) and volumes in the annual operating report.

Mr. Dwayne Knudson

December 17, 2019

Page 7

Should you have any questions, please contact Alex Fischer at 303-894-2100 extension 5138, or Jim Hughes at 970-903-4072.

Sincerely,

A handwritten signature in black ink, appearing to be 'JH' with a stylized flourish.

Jim Hughes
Southwest Environmental Protection Specialist

Cc: Craig Burger, P.E.
North West Area Engineer Supervisor

Alex Fischer
Environmental Supervisor - Western Colorado

Steven Arauza
West Environmental Protection Specialist