



1120 Lincoln Street, STE 801  
Denver, CO 80203

February 25, 2020

Ms. Heather Foor  
TEP Rocky Mountain LLC  
1058 County Road 215,  
Parachute, CO 81635

Re: Review of Form 28 Centralized E&P (CE&P) Waste Management Facility Permit  
CE&P Facility ID: 454686  
Pit Facility ID 414554, Starkey Gulch Pit 14-28-696  
Location ID: 335152  
TEP Rocky Mountain LLC  
SWSW Section 28, T6S, R96W, 6<sup>th</sup> PM, Garfield County, Colorado

Dear Ms. Foor

The Colorado Oil and Gas Conservation Commission (COGCC) has received and reviewed your submittal for the above referenced permit application for COGCC Centralized Exploration and Production (CE&P) Facility ID 414554 for previously permitted Pit Facility ID 414554. At this time, the COGCC has the following comments and conditions of approval (COAs).

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: No.

**COGCC Comment:** The COGCC does not agree with the March 13, 2014 "Sensitive Area Determination" performed by HRL Compliance Solutions, Inc. (Attachment 12) as it contradicts the 2009 sensitive area determination, provides incorrect information regarding whether the facility will contain hydrocarbons, and the statement "the potential for impacts to groundwater and actual flowing surface water being deemed as low", for reasons cited below.

The COGCC considers the facility as being located in a sensitive area. The facility is flanked by Starkey Gulch and another intermittent stream, alluvial groundwater has been documented to be at approximately 40 feet below ground surface (bgs) at MH-50796, Parachute Creek is less than 800 feet away, and the 2009 pit permit sensitive area review determined that the facility is in a sensitive area.



COA: *Within 90 days of the Form 28 approval, the operator shall install a minimum of three (3) groundwater monitoring wells (MWs). One well shall be located up gradient of the facility and at least two (2) MWs down gradient. The MWs shall be constructed such that the screened interval intersects the shallow alluvial groundwater taking into account seasonal groundwater fluctuations.*

3) Form 28, Question 2.

What are the average annual precipitation and evaporation rates for the site? Answer: Precipitation-11.62 inches/year. Evaporation - 45.3 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.

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: None.

7) Form 28, Question 7.

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

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: The Pit is covered by netting to prevent

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wildlife access. The site is manned 24/7 during active operations to prevent from illegal dumping of waste.

**COGCC Comment:** The proposed facility does not limit access by wildlife, domestic animals or by members of the public the location itself. There appears to be open access around the entire facility with one (1) combined ingress and egress. Only the pit facility is fenced and netted. The facility will need to be fenced to prevent unauthorized access.

*COA: Within 90 days of the Form 28 approval, the operator shall install or institute measures to limit access to the facility by wildlife, domestic animals or by members of the public.*

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.

*COA: The Operator shall submit a Rule 502.b.(1) variance request to the requirement set forth in 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. If the variance is not granted, the Facility shall immediately be closed per Rule 908.g.*

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:** Please see the previous comment.

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:** None.

14) Form 28, Question 14.

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

**COGCC Comment:** The required information has not been provided. See comments below regarding Rule 908.b.7.C.

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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: The COGCC does not agree that ground water for the site has been provided. Section 6.6 "Existing Quality of Shallow Groundwater - 908.b.(7).B.vi" discusses that sampling of Parachute Creek, a surface water, both up gradient and down gradient of the site providing the results as Attachment 19.

17) Form 28, Question 17.

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

COGCC Comment: A Financial Assurance of \$600,000 has been provided. An independent closure cost estimate by the COGCC's third party reviewer is being prepared. 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: *Within 45-days of the date of this letter, provide documentation from Garfield County that the operator has complied with local government requirements for zoning and construction with the conversion of this facility to a CE&P Waste Management Facility.*

20) Form 28, Question 20.

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

COGCC Comment: Are there any permit requirements by the Colorado Department of Public Health and Environment (CDPHE)?

### Supplemental Narrative

See previous comments

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908.a: Pit Description:

COGCC Comment: None.

908.b.1: Contact Information:

COGCC Comment: None.

908.b.2.: Surface Owner & Legal Site Description:

COGCC Comment: None.

908.b.3 and b.5.B.: Legal Site Description:

COGCC Comment: None.

908.b.4. General topographic, geologic, and hydrologic description:

COGCC Comment: None.

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

COGCC Comment: Provide a site plan tht includes the requirements of Rule 908.b.5.

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

COGCC Comment: None.

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

COGCC Comment: See Previous comments.

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

COGCC Comment: See previous comments.

908.b.5.E.: Surface Water Diversion Structures:

COGCC Comment: Statements are made that the Pit is not subject to Colorado Division of Water Resources Dam Safety regulations and that storm water runoff/detention will be subject to the requirements of Colorado Senate Bill 15-212 and subject to administration by the Colorado Division of Water Resources.

A statement is made that the pit was constructed to manage water from 377 well pads and now services 1396 wells. Provide the number of well pads the 1396 wells represent?

908.b.6.: Waste Profile:

COGCC Comment: None.

908.b.7.A.: Geological Data:

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**COGCC Comment:** None.

908.b.7.B.: Hydrologic Data:

**COGCC Comment:** Streamflow data for Parachute Creek is provided from 1921 through 1982. Is an updated version of this table available showing modern data?

908.b.7.C.: Engineering Data:

**COGCC Comment:** The Liner Specification and Installation Report (Attachment 4) indicates that lining system consists of a primary 60 mil polypropylene liner and secondary 40 mil polypropylene liner separated by a 200 mil geonet drain mat utilized for as a leak detection system. The engineer states that the lining system meets or exceeds the requirements of Rule 904.d. Rule 904.d "Liners shall have a minimum thickness of sixty (60) mils." Quantity of material required for use as a liner is not included. Please clarify.

As-built drawings reviewed and stamped by a P.E. licensed in Colorado have been provided.

8.2 Leak Detection states "Two monitoring sumps provide for observation of water levels, if present, in the interstitial space..." Is the observation method electronic or manual? If manual, what is the schedule?

908.b.8.: Operating Plan:

**COGCC Comment:** The operating plan states that records will be maintained for a period of 5 years.

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

**COGCC Comment:** None.

908.b.9.B.: Ground Water Monitoring:

**COGCC Comment:** Attachment numbers are incorrect. Please clarify.

908.b.10.: Surface Water Monitoring:

**COGCC Comment:** Attachment numbers are incorrect. Please clarify.

908.b.11.: Contingency Plan:

**COGCC Comment:** None.

908.c.: Permit Approval:

**COGCC Comment:** None.

908.d: Financial Assurance:

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**COGCC Comment:** See previous comment on Form 28, Question 17.

908.e: Facility Modifications:

**COGCC Comment:** None.

908.f: Annual Permit Review:

**COGCC Comment:** None.

908.g.: Closure:

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

908.h: Local Requirements:

**COGCC Comment:** See previous comments.

Form 28 Attachments:

Attachment 1: Form 2A

- **COGCC Comment:** None.

Attachment 2: Form 15

- **COGCC Comment:** Operator appears to be in compliance with Conditions of Approval on the pit permit.

Attachment 3: Pit Operation Start Date, Form 4

- **COGCC Comment:** None.

Attachment 4: Liner Specification and Installation Report

- **COGCC Comment:** The Liner Specification and Installation Report (Attachment 4) indicates that lining system consists of a primary 60 mil polypropylene liner and secondary 40 mil polypropylene liner separated by a 200 mil geonet drain mat utilized as a leak detection system. The engineer states that the lining system meets or exceeds the requirements of Rule 904.d. Rule 904.d "Liners shall have a minimum thickness of sixty (60) mils." Quantity of material required for use as a liner is not included. Please clarify.

Attachment 5: Netting and Fencing Drawings

- **COGCC Comment:** See previous comments.

Attachment 6: Hydrotest Results

- **COGCC Comment:** None.

Attachment 7: Pit Inspection Reports

- **COGCC Comment:** Please clarify why the depth of water in the leak detection tube went from 37" to dry in September 2017.

Attachment 8: Parcel Map

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- **COGCC Comment:** None.
- Attachment 9: Topo and Access Map
- **COGCC Comment:** None.
- Attachment 10: Water Share
- **COGCC Comment:** None.
- Attachment 11: Adjacent Land Use
- **COGCC Comment:** None.
- Attachment 12: Sensitive Area Determination Checklist
- **COGCC Comment:** See previous comments.
- Attachment 13: NRCS Report
- **COGCC Comment:** None.
- Attachment 14: Surface Water Features Within 2 Mile Radius
- **COGCC Comment:** None.
- Attachment 15: Water Wells Within 1 Mile Radius
- **COGCC Comment:** None.
- Attachment 16: Stormwater Permit, BMP Map, and Water Control Analysis
- **COGCC Comment:** None.
- Attachment 17: Flood Plain Map
- **COGCC Comment:** None.
- Attachment 18: SPCC Site Specific Details
- **COGCC Comment:** None.
- Attachment 19: Parachute Creek Water Quality Test Results
- **COGCC Comment:** None.
- Attachment 20: Planning Distance and Substantial Harm Determination
- **COGCC Comment:** None.
- Attachment 21: Produced Water Profile and SDS
- **COGCC Comment:** None.
- Attachment 22: Form 26
- **COGCC Comment:** None.
- Attachment 23: Service Area Map
- **COGCC Comment:** None.
- Attachment 24: Water Line System
- **COGCC Comment:** None.
- Attachment 25: Pipeline Specifications
- **COGCC Comment:** None.
- Attachment 26: Produced Water Laboratory Report
- **COGCC Comment:** None.
- Attachment 27: Condensate Profile and SDS
- **COGCC Comment:** None.

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Attachment 28: Down Joint Diagram

- **COGCC Comment:** None.

Attachment 29: Certified As-Constructed Drawings

- **COGCC Comment:** Quantity of material required for use as a liner is not included, see Rule 908.b.(7).C. Please clarify.

Attachment 30: Pipeline Pressure Test Report

- **COGCC Comment:** None.

Attachment 31: Pipeline Pressure Test Procedure

- **COGCC Comment:** None.

Attachment 32: Liner Maintenance

- **COGCC Comment:** Quality assurance manuals are included but are not related to liner maintenance. Please clarify.

Attachment 33: Operating Plan

- **COGCC Comment:** None.

Attachment 34: BWQ

- **COGCC Comment:** None.

Attachment 35: Fire Buffer Variance

- **COGCC Comment:** See previous comments.

Attachment 36: Emergency Response Plan

- **COGCC Comment:** None.

Attachment 37: Spill Prevention and Response Plan

- **COGCC Comment:** None.

Attachment 38: Financial Assurance Cost Estimate

- **COGCC Comment:** An independent closure cost estimate by the COGCC's third party reviewer is being prepared. Additional financial assurance may be required.

Attachment 39: COGCC Performance Bond

- **COGCC Comment:** Bond amount is \$600,000.

Attachment 40: Reclamation Plan

- **COGCC Comment:** None.

*Ms. Heather Foor*  
*February 25, 2020*  
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Should you have any questions, please contact me at 303-894-2100 extension 5138.

Sincerely,

Alex Fischer, P.G.  
Environmental Supervisor-Western Colorado

Cc: Craig Burger, P.E., North West Area Engineer  
John Heil, Environmental Protection Specialist - NW

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