



1120 Lincoln Street, Suite 801
Denver, CO 80203

May 18, 2015

Mr. Wayne Bankert
Piceance Energy LLC
1512 Larimer Street, Suite 1000
Denver, CO 80202

Re: Review of Form 28 Centralized E&P Waste Management Facility Permit
Facility ID #441237, Harrison Creek Water Treatment Facility DAF Unit
Piceance Energy LLC
NENE Section 22, T9S, R93W, 6th PM, Mesa County, Colorado

Dear Mr. Bankert:

The Colorado Oil and Gas Conservation Commission (COGCC) has received and reviewed Piceance Energy LLC (Piceance Energy) submittal for the above referenced permit application for COGCC Facility ID 441237. 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: No

COGCC Comment: None.

3) Form 28, Question 2.

What are the average annual precipitation and evaporation rates for the site? Answer: Precipitation- 14.85 inches/year. Evaporation – 50 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.

P 303.894.2100 F 303.894.2109 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



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: No, Operator is the surface owner.

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 facility is fenced with a wildlife fence to keep wildlife and domestic animals out. The general public is prevented from accessing the facility via a locked gate on Harrison Creek Road where it comes off of Hwy 330.

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: Yes.

COGCC Comment: None.

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: None.

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: None.

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: None.

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 \$1,602,260.90 was provided with the submittal. Prior to approval, financial assurance shall be provided. Piceance Energy can provide the estimated \$1,602,260.90 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 \$1,602,260.90 or more than the estimated \$1,602,260.90.

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: A recorded copy of the Mesa County, Amended Conditional Use Permit (CUP) shall be submitted to the COGCC prior to the Form 28 approval.

20) Form 28, Question 20.

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

COGCC Comment: Please see the previous comment above. Additionally, are there any permit requirements by the Colorado Department of Public Health and Environment (CDPHE)?

Supplemental Narrative

It is stated that "This facility has been permitted via a Conditional Use Permit (CUP) with Mesa County." Is this statement accurate? As the facility that was permitted and has since been dismantled was formerly Delta Petroleum's Harrison Creek Water Treatment Facility. Provide conditions of the CUP Resolution MCM 2009-096.

Rule 704.

COGCC Comment: A Financial Assurance Cost Estimate of \$1,602,260.90 was provided with the submittal. Prior to approval, financial assurance shall be provided. Piceance Energy can provide the estimated \$1,602,260.90 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 \$1,602,260.90 or more than the estimated \$1,602,260.90.

The \$362,000.00 Surety bond for the former Delta Petroleum's Harrison Creek Water Treatment Facility could possibly be transferred to partially cover the proposed new Facility. Contact Martha Ramos at the COGCC regarding this.

Rule 908.a:

COGCC Comment: None.

Rule 908.b.(1):

COGCC Comment: None.

Rule 908.b.(2).:

COGCC Comment: None.

Rule 908.b.(3).:

COGCC Comment: None.

Rule 908.b.(4).:

COGCC Comment: None.

Rule 908.b.(5).A.:

COGCC Comment: None.

Rule 908.b.(5).B.:

COGCC Comment: None.

Rule 908.b.(5).C.:

COGCC Comment: None.

Rule 908.b.(5).D.:

COGCC Comment: None.

Rule 908.b.(5).E.:

COGCC Comment: None.

Rule 908.b.(6).:

COGCC Comment: None.

Rule 908.b.(7).:

COGCC Comment: None.

Rule 908.b.(7).A.:

COGCC Comment: None.

Rule 908.b.(7).B.:

COGCC Comment: It is stated that "Groundwater was not encountered in any of the borings drilled for the geotechnical investigation." Kumar & Associates, Inc. (Kumar) July 15, 2009 state the groundwater was encountered from about 14-17 feet below existing ground surface. Please clarify.

Rule 908.b.(7).C.:

COGCC Comment: What is the thickness and hydraulic conductivity values for the compacted clay liner?

Rule 908.b.(8).:

COGCC Comment: Provide pipeline testing results as part of the annual report submittal. Submit a GIS map with information in a suitable format showing the location of flowlines, type of pipe used in each segment, monitor points, valve locations, booster pump locations (if any) from Groundhog Valley and the Harrison Creek gravity fed pipeline routes. Provide and update as part of the annual report.

Rule 908.b.(9).A.:

COGCC Comment: Current baseline sampling of water wells should be sampled prior to startup of the Facility and the introduction of fluids into the proposed adjacent pit(s). At a minimum, water sampling shall be analyzed for the constituents provided in Rule 609.e.

Rule 908.b.(9).B:

COGCC Comment: Additional Site Specific Monitoring Wells maybe required at a later date.

Rule 908.b.(10).:

COGCC Comment: Current baseline sampling of surface water features should be sampled prior to startup of the Facility and the introduction of fluids into the proposed adjacent pit(s). At a minimum, water sampling shall be analyzed for the constituents provided in Rule 609.e.

Rule 908.b.(11).:

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

Rule 908.c.:

COGCC Comment: None.

Rule 908.d:

COGCC Comment: See previous comments. It will be assumed that “all operational support structures” include any existing concrete pads and structures. For accurate cost estimating, please provide as-constructed or construction plans of the existing concrete pads and structures.

Rule 908.e:

COGCC Comment: None.

Rule 908.f:

COGCC Comment: Include the “Contributing Wells” API numbers in the Annual Permit Review.

Rule 908.g.:

COGCC Comment: None.

Rule 908.h:

COGCC Comment: The Mesa County Development Application Check List is for the Harrison Creek Water Treatment Facility. Submit a copy of the recorded Mesa County Conditional Use Permit (CUP) for the Harrison Creek Water Treatment Facility DAF Unit.

Form 28 Attachments:

Rule 908.b. Figures:

Figure PL-1

COGCC Comment: Is this the extent of the pipeline network?

Rule 908.b(4) Climate Data:

COGCC Comment: None.

Rule 908.b(5) Site Plan:

COGCC Comment: None.

Rule 908.b(5) Site Plan: Waste Profile:

COGCC Comment: None.

Rule 908.b(7) A-B Geologic and Hydrologic Data:

COGCC Comment: See previous comments.

Rule 908.b(7)C Engineering Data:

COGCC Comment: Submit a GIS map with information in a suitable format showing the location of flowlines, type of pipe used in each segment, monitor points, valve locations, booster pump locations (if any) from Groundhog Valley and the Harrison creek gravity fed pipeline routes. Provide and update as part of the annual report.

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

COGCC Comment: **D. Inspection and Maintenance**, there is discussion of a leak detection system. Where will the leak detection system(s) be installed? Additionally, there is discussion of a "A water level monitor will be used to ensure a minimum of two feet of freeboard in the impoundment at all times." What is this impoundment? Please clarify.

K. Leak Detection Actions and Annual Reporting:

COGCC Comment: Clarify the leak detection system and containments.

Rule 908.b.(9-10) Groundwater and Surface Water Monitoring:

COGCC Comment: Current baseline sampling of water wells, monitoring wells, and surface water features should be sampled prior to startup of the Facility and the introduction of fluids into the proposed adjacent pit(s). At a minimum, water sampling shall be analyzed for the constituents provided in Rule 609.e. The last sampling event of Buzzard Creek appears to have been in 2009.

Rule 908.b.(11) Contingency Plan:

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

Rule 908.g.(1).A Closure Plan:

COGCC Comment: None.

Rule 908.g.(1).B Estimate of Cost to Close and Reclaim:

COGCC Comment: See previous comments.

Rule 908.h Other Permits and Consultations:

COGCC Comment: See previous comments.

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

Sincerely,

A handwritten signature in blue ink, appearing to read "Alex Fischer".

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

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