



May 26, 2015

Alex Fischer
Colorado Oil & Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, CO 80203

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. Fischer:

Olsson Associates has received and reviewed the comments of the Colorado Oil & Gas Commission (COGCC) for the above referenced permit application for COGCC Facility ID 441237. Following are Piceance Energy LLC's (Piceance) responses to your comments.

Form 28 Centralized E&P Waste Management Facility Permit

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.

Response: *Piceance has prepared the Financial Assurance Cost Estimate of \$1,602,260.90 based on a model developed from previous COGCC bonding requirements for E&P Waste Facilities. Piceance also intends to make use of the \$362,000.00 Surety bond for the former Delta Petroleum's Harrison Creek Water Treatment Facility (HCWTF) in the form of a transfer to partially cover the proposed new Facility. Piceance looks forward to receipt of the information from the third party review for closure of the facility.*

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.

Response: *Piceance has been granted approval of the Mesa County Amendment to CUP MCM 2009-096 in the form of a Minor Site Plan (Please see attached Mesa County Project Review dated April 15, 2015). A copy of the final approved Mesa County Minor Site Plan and Commercial Site Plan approval accompanies this submittal.*

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)?

Response: *Because the land use for the facility was originally approved via CUP Resolution MCM 2009-096, the Mesa County Planning Department determined that an amendment would be sufficient for this land use. A recorded copy of the original Mesa County Conditional Use Permit (CUP) was included in the Form 28 application submittal in the Other Permits section. Piceance has been granted approval of the Mesa County Amendment to CUP MCM 2009-096 in the form of a Minor Site Plan (Please see attached Mesa County Project Review dated April 15, 2015). A copy of the final approved Mesa County Minor Site Plan and Commercial Site Plan approval accompanies this submittal.*

CDPHE requires an Air Quality Permit and a Stormwater Construction Permit. The Air Quality Permit Application was submitted January 20, 2015, and is in the public comment and review period. A copy of the Stormwater Construction Permit that covers this area is included in the original submittal in the Other Permits section.

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.

Response: *The land use for the facility was previously approved via the Mesa County CUP process (Resolution MCM-2009-096). Equipment associated with the former Delta Petroleum facility was dismantled but the CUP did not expire nor was it withdrawn. The new facility will essentially occupy the same land use role, so the Mesa County Planning Department determined that an amendment would be sufficient. Please see Piceance's response to Item 20 above for additional information.*

A copy of the CUP Resolution MCM 2009-096 with the Conditions of Approval (page 2 of 6) was included in the Other Permits section with the original Form 28 application submittal.

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.

Response: Please Piceance's response to Item 17) Form 28, Question 17 above.

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.

Response: The comment "Groundwater was not encountered in any of the borings drilled for the geotechnical investigation." was related to the impoundment location associated with this facility and thus was an editorial error. The corrected paragraph should read:

"Very little data is available regarding the hydrogeologic conditions in the vicinity of the facility. It is assumed that the general direction of flow for shallow groundwater beneath the facility is to the north-northeast toward the Harrison Creek and Buzzard Creek drainages; however, as noted in the geotechnical report provided, the low-permeability soils and bedrock that occur in this area may preclude the formation of an aquifer beneath the facility. It is common for bedrock aquifers in the Wasatch Formation to be discontinuous and possibly not connected to alluvial aquifers along streams and rivers."

An updated version of the Supplemental Narrative section accompanies this submittal.

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

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

Response: Since the original submittal of the Form 28 application for Facility ID #441237, Piceance has determined that concrete containment would best serve the Spill Prevention Control and Countermeasure (SPCC) and COGCC requirements. Each tank battery will be installed on a concrete foundation that has a perimeter concrete wall to contain spills. The concrete wall containments will be sized to accommodate the appropriate SPCC criteria. In the event that Piceance chooses to utilize a poly liner/clay system for containment, the clay thickness would be one to three inches and the material will be compacted so that hydraulic conductivity shall not exceed 1.0×10^{-7} cm/sec.

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.

Response: The cost estimate submitted with the original Form 28 application accounts for the demolition of all planned site features including existing concrete pads and structures as well as reclamation of the

entire site. A set of engineering drawings detailing the current (and to be constructed) base structures accompanies this submittal.

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.

Response: *Because the land use for the facility was originally approved via CUP Resolution MCM 2009-096, the Mesa County Planning Department determined that an amendment would be sufficient. A recorded copy of the original Mesa County Conditional Use Permit (CUP) was included in the Form 28 application submittal in the Other Permits section. Piceance has been granted approval of the Mesa County Amendment to CUP MCM 2009-096 in the form of a Minor Site Plan (Please see attached Mesa County Project Review dated April 15, 2015). A copy of the final approved Mesa County Minor Site Plan and Commercial Site Plan approval accompanies this submittal.*

Form 28 Attachments

Rule 908.b.: Figures: Figure PL-1

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

Response: *Yes, the full extent of the pipeline serving this facility is on Figure PL-1. A revised GIS pipeline map that provides additional information related to the pipeline is included with this response.*

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

COGCC Comment: See previous comments.

Response: *Please Piceance's response to Rule 908.b.(7).B above.*

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.

Response: *A revised pipeline map detailing pipe sizes and all appurtenant equipment is included with this response.*

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.

Response: *No impoundments are included in the proposed Site Plan for the DAF facility. Because operation of the DAF Facility will be the precursor to storage and reuse of water pumped to the HCWTF*

Impoundments, the Operating Plan was prepared to accommodate operation of the entire facility—DAF Unit and Impoundments. The discussion of the leak detection system referenced above is for the impoundments only. The water level monitor is also for the impoundments only.

K. Leak Detection Actions and Annual Reporting:

COGCC Comment: Clarify the leak detection system and containments.

Response: Please Piceance's response to Rule 908.b.(8): Operating Plan above.

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

COGCC Comment: See previous comments.

Response: Please Piceance's response to Item 17) Form 28, Question 17 and Rule 704 above.

Rule 908.h Other Permits and Consultations

COGCC Comment: See previous comments.

Response: Piceance has been granted approval of the Mesa County, Amended CUP (Please see attached Mesa County Project Review dated April 15, 2015). A copy of the final approved Mesa County Amendment Resolution and Commercial Site Plan approval accompanies this submittal.

CDPHE requires an Air Quality Permit and a Stormwater Construction Permit. The Air Quality Permit Application was submitted January 20, 2015, and is in the public comment and review period. A copy of the Stormwater Construction Permit that covers this area is included in the original submittal in the Other Permits section.

Please contact us if you have any further questions.

Sincerely,



Lorne Prescott
Senior Scientist

Cc: Wayne Bankert, Piceance Energy
Matthew Hall, Piceance Energy

Attachments: Mesa County Project Review dated April 15, 2015
Revised Supplemental Narrative
Concrete Drawings
Revised Pipeline Map