Rule 908.b Supplemental Narrative

Piceance Energy LLC
Harrison Creek Water Treatment Facility – DAF Unit

OA Project No. 014-0465

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COGCC FORM 28
CENTRALIZED E&P WASTE MANAGEMENT FACILITY
SUPPLEMENTAL INFORMATION

HARRISON CREEK WATER TREATMENT FACILITY DAF UNIT (Facility ID 413056)
PICEANCE ENERGY, LLC (Operator Number 10433)

This supplement to the COGCC Form 28 for Piceance Energy's (Piceance's) proposed Harrison Creek Water Treatment Facility (HCWTF) provides additional information required by COGCC Rules 704 and 908. This facility has been permitted via a Conditional Use Permit (CUP) with Mesa County. Piceance is in the process of obtaining an Amendment to the CUP. In addition, a COGCC Form 2A has been approved and is being amended for this facility. As noted below, information required by Mesa County for the CUP has been provided with this application, where appropriate. The CUP Amendment and the Form 2A amendment are required because the original use for this site has changed from a water distillation facility to a dissolved air floatation water treatment facility.

Some of the documents in this submittal refer to Laramie Energy II, LLC. Piceance Energy, LLC, is a subsidiary of Laramie Energy II.

The purpose of the Harrison Creek Water Treatment Facility is to receive, treat, and recycle water produced or recovered in Piceance Energy's operations for re-use in the drilling and completion of natural gas wells Current development plans will require the availability of large volumes of water. Due to the high cost of trucking and the limited availability of water in the area, recovery and recycling of water for re-use will be critical for the success of Piceance Energy's development plans as well as reducing the impact to the Plateau Valley for traffic and limited freshwater supplies. The proposed facility will incorporate the latest proven technology available in the industry to receive, process, store, and re-use the high volumes of water needed to economically proceed with the field development.

Natural gas wells are to be drilled on parcels of land owned or leased by Piceance Energy in the Plateau Valley, outside of Grand Junction, Colorado. Wells will be drilled on multi-well pads and the production will be sent to 2-phase separators on location where the gas will be separated out and sent to the existing Mega Vega Compressor Facility (430003) in NE4 Sec. 22, T9S, R93W, 6th PM. The oil and water emulsion from the separators will be sent to production tanks on location and allowed to gravity separate. The produced water will then be transferred via buried water lines or trucking to the Harrison Creek Water Treatment Facility. The main water transfer will enter the facility via pipeline. However, water may be trucked in, if required, to ensure adequate storage space is available to support the active frac job. It is estimated that less than 14% of the water influent to the facility will arrive via trucking, and will be most prevalent in the early stages of the development program as the infrastructure for the HCWTF is being installed.

During completion operations, the treated water from the HCWTF will be pumped to those locations where completions are taking place and be used for hydraulic stimulation (fracturing) of

the wells. Once the wells are fractured, the flowback water will be used repeatedly on location until no longer needed and then re-transferred to HCWTF for treatment and re-cycling.

The water treatment facility itself utilizes a combination of residence time and chemical treatment to cleanse the water of residual oil and remove both suspended and settled solids. The oil recovered is to be sold as condensate, while the solids will be concentrated and sent to a licensed disposal site. Equipment used to facilitate this separation includes: surge tanks, patented HWSB gunbarrel tanks, flow stabilizing tanks, dissolved air floatation (DAF) units and a belt filter press. The treated water exits the facility and is routed to one of three holding ponds. High capacity pumps move the water from these ponds to support active frac sites.

The facility will utilize high efficiency phase separation vessels for maximum removal of free oil, high capacity surge tanks to accumulate inflows and to optimize treatment rates, dissolved air flotation equipment for removal of suspended solids and additional hydrocarbons in suspension and large holding ponds to capture the final treated water. In the event of large inflows, a covered storage pond will be utilized to control VOC emissions of untreated water waiting to be processed. Waste streams from the process will be treated further to recapture additional water and minimize final waste output volumes.

Hydrocarbon concentrations of inflows will be minimal since primary oil separation and recovery takes place at individual well pads. With the utilization of proven industry technology, VOC emissions are anticipated to be further reduced and kept minimal in the holding ponds.

HCWTF Applications for permits for air emissions from the facility have been submitted to the CDPHE Air Pollution Control Division (APCD).

Rule 704.

An estimate of the cost for proper reclamation, closure and abandonment of the proposed facility is provided with submittal. Prior to commencing construction of the facility, Piceance will provide the required financial assurance to the COGCC. Surety ID 2012-0085 is an active Waste Management Facility Bond held by the COGCC for this facility.

Rule 908.a.

The proposed facility is a non-commercial, centralized E&P waste management facility for the treatment, recycling, and beneficial reuse of E&P waste and will serve only Piceance's operations in Mesa County, Colorado.

Rule 908.b.(1)

This facility will be operated by Piceance staff. The information required by this rule is as follows:

Operator Name:	Piceance Energy LLC
Address:	1512 Larimer Street, Suite 1000, Denver, CO 80202
Phone:	(303) 339-4337
Fax:	(303) 339-4399
Contact Person:	Matthew Hall

Rule 908.b.(2)

Piceance is the owner of the surface where this facility is located; therefore, no additional surface-owner authorization is required.

Rule 908.b.(3)

The project is located on Mesa County parcel 2661-221-00-145. The legal description of the site is as follows:

Mesa County Parcel 2661-221-00-145:
E2NE4 SEC 22 9S 93W EXC BEG AT STONE SEC COR SET FOR COMMON COR OF SECS 14, 15, 22 & 23 9S 93W S 86DEG47' E 900FT ALG N LI SD SEC 23 TO A LI DESC IN B-1139 P-718 S 50DEG46' E ALG SD LI 1353FT N 86DEG47' W PARALLEL TO N LI SD SEC 23 1949.66FT TO W LI SD SEC 23 S 89DEG32' W PARALLEL TO N LI SD SEC 22 694FT N 10DEG00' W 807.98FT TO N LI SD SEC 22 N 89DEG32' E ALG SD N LI 834.31FT NE COR SD SEC 22 MESA CO RECDS - 66.00AC PER AUTOCAD CALC

Rule 908.b.(4)

An aerial map of the location is provided in Figure H-1. The geology and hydrology of the site are described in further detail below. The average annual precipitation in the area of the facility is approximately 14.85 inches (Western Regional Climate Center records from Collbran, CO, station number 051741). The average annual evaporation rate in the area of the facility is approximately 50 inches (National Weather Service Evaporation Map of the United States). Evaporation is not a component of this facility. The intent of the facility is to maximize conservation of the water without covering the impoundments. Any evaporation that occurs will be incidental.

Rule 908.b.(5).A.

The site plan identifies all of the features of the facility, including all proposed equipment. Construction and drainage details are also provided in the grading plans and drainage report.

Refer to Figure AR-1 for access road information. The access road is a private road designed and maintained by Piceance or their designee. The snow will be removed from the road during the winter as needed. The design of the roadway is to allow stormwater to sheet flow across the surface, therefore, roadside ditches are not appropriate for this application.

Rule 908.b.(5).B.

A Location Drawing is included in this submittal. The distance at the surface to the nearest section lines are approximately 1306 feet from the north section line and approximately 367 feet from the east section line.

Rule 908.b.(5).C.

Public access to the facility will be controlled by a locked gate at the entrance of Harrison Creek Road.

Piceance's contract staff will have at least one person on site 24/7 and one to four people on site during the work week. All storage for water and other liquids at this facility will be in closed-top tanks, and all of the treatment equipment is enclosed so that access to the facility by wildlife or domestic animals will not be a concern. The entire facility is surrounded by a 6-foot fence.

Rule 908.b.(5).D.

As noted on the site plan, the facility will be encircled by a 24-30-foot wide gravel access road which will also serve as a fire lane for the facility.

Rule 908.b.(5).E.

The drainage report and associated grading plans included in this submittal provide for surface water diversion structures designed to accommodate the precipitation events prescribed by this rule.

Rule 908.b.(6).

Analytical data establishing a waste profile for the produced water anticipated to be treated by this facility is included in this submittal. The documentation is as follows:

- A mass balance diagram.
- Analytical data reflecting constituent levels of the water sources. These tables include data for produced water from Piceance's natural gas wells in the area.

As noted on the site plan, the facility is being proposed to be constructed and operated in phases. As new wells come online, it is expected that the nominal flowrate of the facility will increase to 30,000 BPD. As such, it is imperative that efforts be made to ensure the seamless expansion from the initial design rate of 15,000 BPD.

Phase I encompasses the immediate design for 15,000 BPD. Phase II will bring the facility to 30,000 BPD.

The following is a summary of the equipment necessary to operate the proposed process. Future additions are highlighted in gray.

Process Equipment				
Equipment	**Tag**	**Size**	**Capacity**	**Design**
Separation Equipment				
Surge Tank #1	T-110	30'-0" DIA X 24'-0" H	3,000 BBL	I
Surge Tank #2	T-115	30'-0" DIA X 24'-0" H	3,000 BBL	I
Surge Tank #3	T-120	30'-0" DIA X 24'-0" H	3,000 BBL	III
HWSB Gunbarrel #1	T-200	15'-6" DIA X 24'-0" H	750 BBL	I
HWSB Gunbarrel #2	T-205	15'-6" DIA X 24'-0" H	750 BBL	I
HWSB Gunbarrel #3	T-210	15'-6" DIA X 24'-0" H	750 BBL	II
DAF Unit #1	D-400	9'-6" H X 48'-0" L X 8'-	15,000 BPD	I
DAF Unit #2	D-450	9'-6" H X 48'-0" L X 8'-	15,000 BPD	II
DAF Unit #3	D-500	9'-6" H X 48'-0" L X 8'-	15,000 BPD	III
DAF Unit #4	D-550	9'-6" H X 48'-0" L X 8'-	15,000 BPD	III
Filter Press	FP-	Twin Wire	50 GPM	I

Process Equipment				
Equipment	**Tag**	**Size**	**Capacity**	**Design**
VCU Knockout Vessel	V-700			I
Material Transfer				
Condensate Skim Pump	P-130	Air Operated	15 GPM @ 20	I
Surge Tank Emulsion Pump	P-140	5 HP	50 GPM @ 30	I
Gunbarrel Feed Pump #1	P-155	15 HP	450 GPM @ 30	I
Gunbarrel Feed Pump #2	P-160	15 HP	450 GPM @ 30	I
Gunbarrel Feed Pump #3	P-165	15 HP	450 GPM @ 30	II
Gunbarrel Emulsion Pump	P-215	5 HP	50 GPM @ 30	I
DAF Feed Pump #1	P-260	15 HP	450 GPM @ 30	I
DAF Feed Pump #2	P-265	15 HP	450 GPM @ 30	I
DAF Feed Pump #3	P-270	15 HP	450 GPM @ 30	II
Emulsion Makedown Water	P-305	0.25 HP	1 GPM @ 50	I
Filter Press Makedown Water	P-310	0.5 HP	10 GPM @ 50	I
DAF Makedown Water Pump	P-315	0.5 HP	8 GPM @ 50	I
DAF Makedown Water Pump	P-316	0.5 HP	8 GPM @ 50	III
Emulsion Polymer Pump	P-320	0.25 HP	0.003 GPM @ 50	I
Filter Press Polymer Pump	P-330	0.25 HP	0.03 GPM @ 50	I
DAF Polymer Pump #1	P-340	0.25 HP	0.02 GPM @ 50	I
DAF Polymer Pump #2	P-350	0.25 HP	0.02 GPM @ 50	II
DAF Polymer Pump #3	P-360	0.25 HP	0.02 GPM @ 50	III
DAF Polymer Pump #4	P-370	0.25 HP	0.02 GPM @ 50	III
Coagulant Pump	P-395	0.25 HP	0.09 GPM @ 50	I
DAF Recycle Pump #1	P-410	30 HP	150 GPM @ 90	I
Bottom Emulsion Pump #1	P-420	Air Operated	15 GPM @ 30	I
Float Emulsion Pump #1	P-430	Air Operated	15 GPM @ 30	I
Treated Water Pump #1	P-435	15 HP	450 GPM @ 30	I
Treated Water Pump #2	P-440	15 HP	450 GPM @ 30	I
Treated Water Pump #3	P-445	15 HP	450 GPM @ 30	II
DAF Recycle Pump #2	P-460	30 HP	150 GPM @ 90	II
Bottom Emulsion Pump #2	P-470	Air Operated	15 GPM @ 30	II
Float Emulsion Pump #2	P-480	Air Operated	15 GPM @ 30	II
DAF Recycle Pump #3	P-510	30 HP	150 GPM @ 90	III
Bottom Emulsion Pump #3	P-520	Air Operated	15 GPM @ 30	III
Float Emulsion Pump #3	P-530	Air Operated	15 GPM @ 30	III
Treated Water Pump #4	P-535	15 HP	450 GPM @ 30	III
Treated Water Pump #5	P-540	15 HP	450 GPM @ 30	III
Treated Water Pump #6	P-545	15 HP	450 GPM @ 30	III
DAF Recycle Pump #4	P-560	30 HP	150 GPM @ 90	III
Bottom Emulsion Pump #4	P-570	Air Operated	15 GPM @ 30	III
Float Emulsion Pump #4	P-580	Air Operated	15 GPM @ 30	III
Frac Supply Pond Feed Pump	P-900	15 HP	450 GPM @ 50	I
Frac Supply Pond Feed Pump	P-905	15 HP	450 GPM @ 50	I
Frac Supply Pond Feed Pump	P-910	15 HP	450 GPM @ 50	II
Treated Water Makeup Pump	P-915	2 HP	50 GPM 20 PSIG	I
Filter Press Feed Pump	P-950	2 HP	50 GPM @ 20	I
Filter Press Discharge Pump	P-605	5 HP	50 GPM @ 30	I
VCU Knockout Liquids Pump	P-705	Air Operated	15 GPM @ 20	I
Filter Cake Conveyor	B-610	15 HP		I

Process Equipment				
Equipment	**Tag**	**Size**	**Capacity**	**Design**
Storage Units				
Condensate Skim Tank	T-125	Oversized Pipe		I
Condensate Tank #1	T-180	12'-0" DIA x 20'-0"H	400 BBL	I
Condensate Tank #2	T-185	12'-0" DIA x 20'-0"H	400 BBL	I
DAF Holding Tank #1	T-240	15-6" DIA x 24'-0"H	750 BBL	I
DAF Holding Tank #2	T-245	15-6" DIA x 24'-0"H	750 BBL	I
DAF Holding Tank #3	T-250	15-6" DIA x 24'-0"H	750 BBL	III
DAF Holding Tank #4	T-255	15-6" DIA x 24'-0"H	750 BBL	III
Makedown Water Tank	T-300	12'-0" DIA x 20'-0"H	400 BBL	I
Coagulant Tank	T-390	8'-0" DIA x 10'-0"H	90 BBL	I
DAF Emulsion Tank #1	T-922	15'-6" DIA x 30'-6"H	1,000 BBL	Existing
DAF Emulsion Tank #2	T-931	15'-6" DIA x 32'-0"H	1,000 BBL	Existing
DAF Emulsion Tank #3	T-932	15'-6" DIA x 32'-0"H	1,000 BBL	Existing
DAF Emulsion Tank #4	T-933	15'-6" DIA x 32-0"H	1,000 BBL	III
DAF Emulsion Tank #5	T-934	15'-6" DIA x 32'-0"H	1,000 BBL	III
Field Emulsion Tank #1	T-940	12'-0" DIA x 20'-0"H	400 BBL	III
Field Emulsion Tank #2	T-941	12'-0" DIA x 20'-0"H	400 BBL	III
Treated Water Tank (Existing)	T-921	15'-6" DIA x 30'-6"H	1,000 BBL	Existing
Fluid Mixers				
Emulsion Polymer Makedown	U-325			I
Filter Press Polymer	U-335			I
DAF Polymer Makedown Mixer	U-345			I
DAF Polymer Makedown Mixer	U-355			II
DAF Polymer Makedown Mixer	U-365			III
DAF Polymer Makedown Mixer	U-375			III
DAF Emulsion Tank #2	TA-931			Existing
DAF Emulsion Tank #3	TA-932			Existing
DAF Emulsion Tank #4	TA-933			III
DAF Emulsion Tank #5	TA-934			III
Heat Transfer				
Surge Tank #1 Heater A	H-110	7 KW		I
Surge Tank #1 Heater B	H-111	7 KW		I
Surge Tank #2 Heater A	H-115	7 KW		I
Surge Tank #2 Heater B	H-116	7 KW		I
Surge Tank #3 Heater A	H-120	7 KW		III
Surge Tank #3 Heater B	H-121	7 KW		III
Condensate Tank #1 Heater	H-180	2 KW		I
Condensate Tank #2 Heater	H-185	2 KW		I
HWSB Gunbarrel Heater #1	H-200	7 KW		I
HWSB Gunbarrel Heater #2	H-205	7 KW		I
HWSB Gunbarrel Heater #3	H-210	7 KW		II
DAF Holding Tank #1 Heater	H-240	7 KW		I
DAF Holding Tank #2 Heater	H-245	7 KW		I
DAF Holding Tank #3 Heater	H-250	7 KW		III
DAF Holding Tank #4 Heater	H-255	7 KW		III
Makedown Water Tank Heater	H-300	4 KW		I
Emulsion Tank #1 Heater	H-922	7 KW		I
Emulsion Tank #2 Heater	H-931	7 KW		I

Process Equipment				
Equipment	**Tag**	**Size**	**Capacity**	**Design**
Emulsion Tank #3 Heater	H-932	7 KW		I
Emulsion Tank #4 Heater	H-933			III
Emulsion Tank #5 Heater	H-934			III
Field Emulsion Tank #1 Heater	H-940			III
Field Emulsion Tank #2 Heater	H-941			III
Treated Water Tank Heater	H-921	7 KW		I
Destruction Units				
Vapor Combustion Unit	X-710		400 MSCFD	I

Rule 908.b.(7).

The site plan for the facility and the grading plan and drainage report provide details of the facility design and engineering. A process-flow diagram and process description for the water treatment process are provided in this submittal.

Rule 908.b.(7).A.

A comprehensive report on the soils present in the area is provided in this submittal. Figure S-1 shows the soils map in the area. A generalized geologic map of the area is provided in Figure G-1. Several investigations were completed of the soils and geology in the area of the facility for Piceance's Mega Vega Station (MVS) compressor facility which is located approximately 200 feet to the southwest of the proposed facility. A geotechnical engineering study and report on geological hazards are provided in this submittal. The material contained in these studies was incorporated into the design of the proposed facility.

As noted in the geotechnical engineering study, the facility is underlain by 20-30 feet of natural, relatively stiff, sandy lean clays. These soils are underlain by relatively hard sandstone and shale bedrock of the Wasatch Formation. The geologic hazards investigation for the MVS facility indicates that the potential for geologic hazards to impact the facility are low.

Rule 908.b.(7).B.

A map of surface water features within two miles of the proposed facility is provided in Figure SW-1. The facility is located approximately 510 feet west of Harrison Creek and is approximately 70 feet in elevation above the creek. No surface waters subject to COGCC Rule 317B are located in the vicinity of the proposed project. The location is not within an identified floodplain and is located at an elevation well above the nearest surface waters. The site is not within the Town of Collbran's Source Water Protection Area.

There is a water well located within one mile of the proposed facility at an unoccupied cabin owned by Piceance (well permit 232538) and approximately 300 feet northeast of the facility. As noted below under Rule 908.b.(9).A, a sample was collected from this well on April 8, 2009. The following are the pertinent details of this well's construction from the Colorado Division of Water Resource's records:

Well depth – 210 feet

Depth to water – 68 feet
Screened intervals – 130-210 feet
Yield – 3 gpm
Aquifer name – Unknown

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. Groundwater was not encountered in any of the borings drilled for the geotechnical investigation. It is common for bedrock aquifers in the Wasatch Formation to be discontinuous and possibly not connected to alluvial aquifers along streams and rivers.

The HCWTF has been designed with a number of features that significantly reduce the potential for the facility to impact nearby surface and ground water. The tank batteries located on the north and south ends of the facilities will be completely underlain by a 30-mil synthetic liner. The liner will extend up the side of a 30-inch tall metal containment ring that surrounds each tank battery. The volume of containment provided for at each tank battery is well in excess of the working volume of the largest tank within each battery. In addition, where tanks are manifolded together (e.g., the feed tanks on the south end of the facility) the tanks will be equipped with check valves to prevent a leak in one tank from draining the entire tank battery. All produced water delivered to the facility will be offloaded from trucks through the use of manifolds that are located within the tank battery containment to capture any leaks that occur during these operations. Similarly, manifolds for loading trucks that will remove condensate, methanol or other liquids from the facility will be located within the tank-battery containment. Fluids will be transported to and from the facility primarily via an existing network of pipelines. All pipelines transporting fluids to the facility will be pressure tested with water prior to initiating transport. Pipeline integrity will be monitored during operational activity via regular inspections of pressure gauges and valve sets at the facility.

Tank batteries will be underlain by a concrete pad that has 6-inch high concrete curb to contain any leaks that may occur. The entire treatment system is equipped with a variety of monitoring devices so that the operators who will be onsite at all times will be able to immediately identify and isolate the location of the leak. In addition, the onsite operators will be trained to respond to any leaks or spills so that they will be quickly contained.

The operation of the HCWTF will significantly reduce the number of trucks required to transport produced water from Piceance's operations to offsite disposal facilities. It also reduces the amount of trucks required to bring fresh water into the area, by making the treated water available for reuse. This reduction of truck traffic also results in a significant reduction in the potential for a vehicle accident that results in discharge of produced water to the environment.

Rule 908.b.(7).C.

The site plan for the facility and the grading plan and drainage report provide engineering details for the facility. The liner that will underlay the tank batteries will be a minimum of 30-mil impervious

synthetic liner and will be installed on top of compacted clay. The liner will extend to and be attached to the top of the metal containment ring around each tank battery. The liner will be overlain by a minimum of 6-inches of gravel to protect the liner from tears during operation of the facility.

Rule 908.b.(8).

This facility is to be designed with the capability to easily expand to accommodate increased production as more wells come online. A nominal design flowrate of 15,000 BPD is to be expected for initial operations, which will most likely increase over time to a nominal flowrate of 30,000 BPD.

An Operating Plan and Emergency Response Plan for the facility is provided in this submittal. A generalized approach to operation of the facility is as follows:

Influent water is to arrive at the Harrison Creek Water Treatment Facility in one of two pipelines. The water entering via pipe from Groundhog Valley shall take a pressure cut at the facility inlet prior to being sent to the inlet surge tanks via a backpressure control valve. Water gravity feeding to the facility from surrounding Harrison Creek wells will be sent directly to the surge tanks. A backpressure control valve will be used to prevent separation within the pipeline. Water being trucked in will be offloaded at one of two available truck bays and sent to the surge tanks. These 3,000 barrel tanks are designed to provide a surge buffer for the facility, while allowing adequate residence time to achieve a rough cut of condensate from the influent water, as well as to allow any heavy, free solids entering the facility to drop out in the sloped tank bottom. Any free oil that separates out is to be manually drawn off. Any condensate collected is sent to condensate tanks via a condensate skim pump. Solids that do settle out in the residence time provided are to be periodically removed with a bottoms solids pump. These concentrated solids are then sent to emulsion holding tanks. Water is removed from the surge tanks at a rate of 15,000 BPD and sent to one of two HWSB gunbarrel tanks, patented by High Tech Consultants, Inc. These tanks serve to polish the influent water, providing surface area for any entrained oil to coalesce into larger droplets and separate out of the bulk water. This condensate is routed to condensate tanks for sales. The polished water overflows from the gunbarrel tanks into one of two 750 barrel DAF holding tanks. These tanks allow the water to equilibrate and homogenize prior to chemical treatment. Upon leaving these tanks, the water is treated with a coagulant to neutralize repulsive charges among the suspended solids. The water is then dosed with a polymer solution, which attracts solids particles to its active sites and binds them together into a larger particle, termed flocculant. Immediately after these chemicals are injected, the water enters a DAF unit. This basin contacts the water with a fine whitewater stream of recycle water and dissolved air introduced via nozzles on the basin floor. The micron-sized bubbles ascend, pushing the flocculated solids to the top of the basin. These float solids are skimmed off with a chain and flight skimmer and collected in a hopper. Solids from this hopper are intermittently drained to one of three existing 1,000 barrel DAF emulsion tanks to await further concentration. Clean water exits the DAF unit and is sent to a 1,000 barrel treated water tank, where it is held briefly before being transported to the frac water supply ponds. Solids collected from the surge tanks and DAF unit are comingled in the DAF emulsion tanks. These concentrated solids are again treated with polymer to create a more tightly bound flocculant. This treated stream is finally sent to a belt filter press. The solids

are dewatered and conveyed to a disposal box. Filtrate water pressed from the solids is returned to the inlet surge tanks.

Rule 908.b.(9).A.

A water well located within one mile of the proposed facility is located at an unoccupied cabin owned by Piceance and is approximately 300 feet northeast of the facility. A sample was collected from this well on April 8, 2009, and the analytical results for this sample are provided.

Piceance will sample all wells within one mile that have not been previously sampled for baseline water quality analysis prior to construction and operation of the facility. Follow-up sampling will be conducted once per year thereafter, unless a leak is detected, in which case, sampling will be conducted immediately. Copies of results from water monitoring will be forwarded to the Director within three months of receipt.

Included in this submittal are results of water sampling conducted within one mile of the proposed facility, addressing the analytical parameters as required.

Rule 908.b.(9).B.

As discussed above under Rule 908.b.(7).B, the HCWTF has been designed with a number of features that significantly reduce the potential for this facility to impact groundwater. Therefore, Piceance is proposing that no site-specific monitoring wells be installed at this facility.

Rule 908.b.(10).

As part of a previous Delta Petroleum Corporation project, baseline surface water sampling was conducted on Harrison Creek. A summary of the data collected for the location is included in this submittal. Periodic monitoring of the surface water will be conducted throughout the life of the facility to insure that no contaminates are reaching the surface waters. Because of inconsistencies of flows on Harrison Creek, baseline surface water monitoring was conducted on Buzzard Creek, also. Harrison Creek is intermittent, so only one baseline sampling has been conducted on that stream. A summary of the baseline water quality data collected for Buzzard Creek is included in the attached documentation.

Rule 908.b.(11).

An emergency response plan for the facility is included as part of the contingency plan provided in in this submittal.

Rule 908.c.

No response required.

Rule 908.d.

After the removal of the appropriate equipment and operational support structures, Piceance intends to reclaim and recontour the site to promote and support wildlife populations. To this end, Piceance will consult with the Colorado Parks and Wildlife at the time of final reclamation. The financial assurance estimates accompanying this submittal are intended to accommodate

reclamation efforts that will not require the reuse of all spoils generated at the time of construction. The estimate of the cost for proper reclamation, closure and abandonment of the proposed facility is provided. Prior to commencing construction of the facility, Piceance will provide the required financial assurance to the COGCC. Surety ID 2012-0085 is an active Waste Management Facility Bond held by the COGCC for this facility.

Rule 908.e.

Throughout the life of the facility, Piceance shall submit proposed modifications to the facility design, operating plan, permit data, or permit conditions to the Director for prior approval.

Rule 908.f.

To facilitate the annual review of this facility by the COGCC, Piceance will submit an annual report summarizing operations, including the types and volumes of waste actually handled at the facility.

Rule 908.g.

A preliminary plan for reclamation and closure of the facility is provided. As noted above, an estimate of the cost to close and reclaim the facility is provided.

Rule 908.h.

This facility has been permitted via a Conditional Use Permit (CUP) application with Mesa County. A copy of the approved CUP Resolution is included in this submittal. Piceance is in the process of obtaining an Amendment to the CUP. The CUP Amendment is required because the original permitted use for this site has changed from a water distillation facility to a dissolved air floatation water treatment facility. A copy of the approved amendment will be forwarded to the COGCC when approved.

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