

STATE OF COLORADO

John W. Hickenlooper, Governor
Christopher E. Urbina, MD, MPH
Executive Director and Chief Medical Officer

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S. Laboratory Services Division
Denver, Colorado 80246-1530 8100 Lowry Blvd.
Phone (303) 692-2000 Denver, Colorado 80230-6928
Located in Glendale, Colorado (303) 692-3090

<http://www.cdphe.state.co.us>



Colorado Department
of Public Health
and Environment

March 1, 2012

Dave Peterson, President
Diamond Operating, Inc.
6680 Gunpark Dr., Ste 100
Boulder, CO 80301

RE: Certification, Colorado Discharge Permit System – Produced Water Treatment Facilities
Permit Number COG840000 Certification Number: COG840005

Dear Mr. Peterson;

Enclosed please find a copy of the permit certification, which was issued under the Colorado Water Quality Control Act. **Please read the enclosed permit and certification.** The Division holds the permittee legally liable for all permit requirements. The Water Quality Control Division (the Division) has reviewed the application submitted for the **Ward Unit** facility and determined that it qualifies for coverage under the CDPS General Permit for **Produced Water Treatment Facilities** (the permit).

As you have been previously notified, this permit and certification requires a substantial amount of additional monitoring requirements and limitations. As these limitations are new, a compliance schedule has been added to the permit, granting time to collect monitoring data for these parameters to determine whether the limitations can be met, and to devise treatment or other activities in order to meet the limitations. During the interim, limitations will be set at report only. If during the course of collecting data for these parameters, and once sufficient data is collected, the permittee may request an amendment to the permit to eliminate parameters which are absent in the effluent discharge, or at levels well below the limitations, in accordance with the Division's Reasonable Potential Guidance document.

Note that coverage under this permit is limited to the water discharged to the 4th unlined pit, which is an inchannel stock pond in the Antelope Creek drainage. Any infiltration from the first 3 disposal pits would be under the jurisdiction of the Colorado Oil and Gas Conservation Commission (COGCC).

Facility Information:

- **Industry Description**

The Ward Unit facility well is an oil producing well that operates year around. The SIC code for this facility is 1311. Crude oil is stored on site in production tanks. The permittee anticipates the maximum discharge to be 12 gpm, with an average discharge of 10 gpm. The permit limit for flow will be set at 15 gpm, which is the maximum of the 30-day averages reported in the last few years.

- **Treatment Facility Description**

Oil and water is separated and the water is sent to a series of two water disposal tanks (400 barrels each). These tanks serve as a barrier between the oil and water separator, and the outfall. Water from the bottom of the 2nd tank flows into a 300 barrel buried skim tank. Water from the bottom of the skim tank is piped to disposal pit #1. This is the first in a series of 4 water disposal pits, which allow infiltration, evaporation, or flow into the next pit. The final (4th) pit is a ½ acre stock pond constructed in a dry channel. This last pit is considered to be a state water as it is an inchannel pond. The first 3 pits would have discharge to groundwater which would be under the jurisdiction of the COGCC.

- **Chemical Usage**

The application identified the following chemicals which are added to the water flow after dissolved air flotation and before entrance into the lined, storage pond. The MSDS documents for these chemicals were provided in the permit application. The MSDS sheets have been reviewed and the following chemicals are been approved for use.

Chemical Name	Purpose	Constituents of Concern
WT-902	Oil-water emulsion breaker	Unknown

Chemicals deemed acceptable for use in waters that will or may be discharged to waters of the State are acceptable only when used in accordance with all state and federal regulations, and in strict accordance with the manufacturer's site-specific instructions.

Basis of Certification Limitations:

- **Stream Segment Information**

- The discharge is to an instream stock pond in the Antelope Creek drainage, which is tributary to Beaver Creek, and ultimately tributary to the South Platte River, within Segment 02a of the Lower South Platte River Sub-basin, South Platte River Basin, found in the Classifications and Numeric Standards for the South Platte River Basin (Regulation No. 38) (**COSPLS02a**). Segment 02a is Use Protected, and is classified for the following beneficial uses: Aquatic Life, Class 2 Warm; Recreation Class N and Agriculture.

- **Technology Based Standards**

The limitations for oil and grease and total suspended solids are from Regulation 62, which apply to all discharges that would be covered under this General Permit.

- **Water Quality Standards**

Limitations for metals and inorganics are based on the water quality standards specific to stream segment COSPLS02a. For this segment metals standards are based on agricultural protection and not the table value standards. Limitations will be based off of these values.

Note that temperature limitations will not be applied as the receiving stream is assumed to be a zero low flow stream in all months. For all other parameters the water quality standards for Segment COSPLS02a will be applied.

For organic parameters, only the aquatic life limits in Regulation 31 will be applied.

- **Antidegradation**

Because the receiving water is use protected, an antidegradation evaluation is not applicable to this discharge.

- **Narrative Standards**

Section 31.11(1)(a)(iv) of The Basic Standards and Methodologies for Surface Waters (Regulation No. 31) includes the narrative standard that State surface waters shall be free of substances that are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life.

Agricultural Protection

Based on available information, the water in Beaver Creek is used for irrigation water, however the nearest potential intake is over 25 miles away, and the effluent discharge is limited to 12 gpm. As the receiving stream and first tributary (Antelope Creek) are normally dry stream channels, and Beaver Creek in this location is also normally a dry channel, it is not believed that this discharge will make it downstream to the intake and therefore is not evaluated for SAR and EC.

Whole Effluent Toxicity

WET testing is applicable to this stream segment and this discharge as the produced water may contain metals and/or salts at concentrations that may be toxic to aquatic life. As this segment is listed for Aquatic Life Warm 2, without the appropriate aquatic life water quality standards, acute WET testing would be applicable in this permit.

General Information:

- **Permit Action Fees** : The Annual Fee for this certification is \$2150 [Category 12 Subcategory 2, Manufacturing and Other Industry per CRS 25-8-502] and is invoiced every July. Do Not Pay This Now. The initial invoice will be prorated and sent to the legal contact shortly.

- **Changes to the Certification** – Any changes that need to be made to the certification page – changes in outfalls, monitoring requirements, etc., must be submitted using the “Permit and Certification Modification form” available on our website: coloradowaterpermits.com, and signed by the legal contact.
- **Discharge Monitoring Report (DMR)** forms will be mailed out within the next month. Reports must be submitted **monthly** as long as the certification is in effect. The permittee shall provide the Division with any additional monitoring data on the permitted discharge collected for entities other than the Division. This will be supplied to the Division within 48 hours of the receipt of the data by the permittee. If forms have not been received, please contact the Division at 303-692-3517.
- **Sampling Requirements** Sampling shall occur at a point after treatment, or after the implementation of any Best Management Practices (BMPs). If BMPs or treatment are not implemented, sampling shall occur where the discharge leaves control of the permittee, and prior to entering the receiving stream or prior to discharge to land. Samples must be representative of what is entering the receiving stream.
- **Termination requirements** This certification to discharge is effective long term, even though construction and dewatering discharge are only expected for approximately three months. For termination of permit coverage, the permittee must initiate this by sending the “CDPS Permits and Authorization Termination Form.” This form is also available on our web site and must be signed by the legal contact.
- **Groundwater Contamination** If groundwater contamination is encountered, then the permittee is to contact the Division, the permit writer, cease all discharges, and if appropriate, contact the owner of the collection system receiving the discharge. If the dewatering can be treated to meet surface water or groundwater numeric limitations, the certification will be amended to include sampling and monitoring for additional parameters representative of the groundwater contamination. **The discharge of contaminated groundwater, above surface water or groundwater standards, is not authorized under this permit.**
- **Certification Records Information** The following information is what the Division records show for this certification.

For any changes to Contacts – Legal, Local, Billing, or DMR – a “Notice of Change of Contacts form” must be submitted to the Division. This form is also available on our web site and must be signed by the legal contact.

Facility: Ward Unit
Industrial Activities : Crude oil production

Washington County
SIC Code 1311

Legal Contact *Receives all legal documentation, pertaining to the permit certification. [including invoice; is contacted for any questions relating to the facility; and receives DMRs.]*

Dave Peterson, President
Diamond Operating, Inc.
6680 Gunpark Dr., Ste 100
Boulder, CO 80301

Phone number: 303-494-4420
Email:

Facility, Billing, and DMR Contact *Contacted for general inquiries regarding the facility*
Same as Legal

If you have any other questions please contact me at 303-692-3655.

Sincerely



Andrew Neuhart
Assessment Based Permits Unit Manager
WATER QUALITY CONTROL DIVISION

Enclosures: Certification page; General Permit
xc: Washington County, Local County Health Department
D.E., Technical Services Unit, WQCD