

MEMORANDUM

POLICY 13.48.1

TO: Whom it May Concern
FROM: John Wagner, Administrator
DATE: Revised December 1, 2005
SUBJECT: Permitting Treatment Facilities and Land Application of Produced Water Including Coal Bed Methane (CBM) Water.

I. AUTHORITY

- A. W.S. 35-11-301 (a)(iii) provides that except when authorized by permit, no person shall construct, install, modify, or operate any treatment works or disposal system or other facility capable of causing or contributing to pollution. The terms "treatment works" and "disposal system" are applicable to produced water including CBM water. Land application of both treated and untreated produced water, including CBM produced water, is subject to this permitting requirement.
- B. Chapter 3, WWQRR establishes permitting procedures for permits required by W.S. 35-11-301 (a)(iii). Chapter 3 identifies specific types of facilities which can be covered by general permits and permits by rule. Treatment and land application of produced water including CBM water is not included in the facilities identified. Therefore, general permits and permits by rule are not an option unless Chapter 3 is revised to include these facilities.
- C. Chapter 11, Part E, WWQRR establishes standards for "Waste and Wastewater Land Application Facilities". These standards cover land application as a method of treatment, a method for disposal of both treated and untreated wastewater as well as using the wastewater for irrigation purposes. These standards were established in 1984 and could be updated; however, they are still useful as criteria for evaluating land application systems and should be utilized in conjunction with Chapter 11, Section 5 when evaluating land application systems.
- D. DEQ/WQD has issued a number of "statewide permits" to cover a variety of activities. There is no specific authorization to issue these permits in the statutes or the regulations; however, they have been used extensively and never been questioned. Two types of statewide permits have been utilized. One type has been issued to specific companies or permit applicants to cover a specific facility design. An example is a permit issued to an oil company to construct a standard on-site wastewater facility at different locations. The second type has been issued to cover a specific activity and can be utilized by different companies. For example, the discharge of hydrostatic test water or water used to disinfect public water supply lines. Both of these types of permits require notification to the permitting agency when an operator or producer plans to construct a treatment works or conduct an operation covered by the permit.

II. SYSTEMS REQUIRING A PERMIT FROM THE WATER AND WASTEWATER SECTION OF DEQ/WQD

- A. Facilities for treatment of produced water including CBM water prior to discharge to a surface water under an WYPDES permit. In addition to the treatment works, this permit will cover ponds associated with the treatment system which are not permitted by the WOGCC or the SEO. These facilities may be permitted by an individual permit or a statewide permit.
- B. Facilities for treatment of produced water including CBM water prior to land application. In addition to the treatment works, this permit will cover ponds associated with treatment systems which are not permitted by the WOGCC or the SEO. These facilities may be permitted by an individual permit or a statewide permit.
- C. Land application of produced water including CBM water from a pond or treatment facility having a Chapter 3 construction permit issued by DEQ/WQD. These land application operations may be permitted by an individual permit or a statewide permit. Plans and specifications for the water distribution system are not included in the application package and are not covered by the land application permit. If the water in the pond has already passed a WYPDES discharge point, the pond would be considered waters of the state and a land application permit would not be required.
- D. Land application of produced water including CBM water that is not subject to a WYPDES permit to discharge. Produced water including CBM water utilized for land application or irrigation after it becomes waters of the state does not require a land application permit. If the water has already passed a WYPDES discharge point, it is considered waters of the state and a land application permit would not be required. These systems may be permitted by an individual permit or a statewide permit. Plans and specifications for the water distribution system are not included in the application package and are not covered by the land application permit.
- E. Mister systems which land apply produced water including CBM water directly to the land without any treatment. These systems may be permitted by an individual permit or a statewide permit. Plans and specifications for the water distribution system are not included in the application package and are not covered by the land application permit.
- F. Mister systems that are supposed to discharge over a pond in order to enhance evaporative loses may have drift onto the land surrounding the pond. If the drift from the pond exceeds the seasonal daily evaporation rate, the system is considered to be land application and a permit is required. If the water in the pond has already passed a WYPDES discharge point, the pond would be considered waters of the state and a land application permit would not be required. See item II.D. above.

III. STATEWIDE PERMITS FOR TREATMENT FACILITY DESIGNS

- A. Owner/operators of treatment facilities with a standard design may obtain a statewide permit to utilize the approved design throughout the state. This will simplify the permitting process by allowing an operator with a statewide permit to utilize the facility design for a new site without having to obtain a permit each time the design is utilized. **Standard designs may receive approval by:**
 - 1. Submission of design and operational information from identical (or nearly identical) treatment facilities which have long-term (at least one year) operational

success under conditions likely to be experienced in Wyoming. Critical factors could include, among others, temperature and exposure conditions, and the quality of the water being treated; or

2. Permitting, construction, and operation of "pilot" treatment plants. If, over the course of an entire year, a pilot plant is successful in meeting target effluent limits, statewide approval of that plant's design for treating that basic type/quality of raw water will be granted;
 - a. No more than 4 pilot plants of similar design treating similar quality raw water will be permitted. This does not mean 4 plants per operator, but 4 plants of similar design statewide regardless of the number of operators;
 - b. Additional pilot plants of similar design will be allowed when it is shown that the raw water quality (or other factors) are substantially different from the originally permitted pilot plant conditions.
- B. Where a treatment facility design with a statewide permit is utilized, the disposal of treated wastewater must be addressed by either a WYPDES discharge permit or a land application permit. Construction of ponds associated with the treatment facility must be covered by a permit issued by either WOGCC, SEO, or DEQ/WQD.
- C. The statewide permit will require the following requirements:
 1. Notification of DEQ/WQD prior to installation/construction of the facility This will include an identification of WYPDES permits or land application permits as appropriate.
 2. Identification of any operational modifications from the statewide permit.
 3. Analysis and reporting of inflow and outflow water quality.
 4. Site specific as-built drawings.
 5. Financial assurance for commercial facilities.
 6. Additional information required by the reviewing engineer to ensure proper operation of the facility.

IV. PERMITS FOR LAND APPLICATION

- A. Land application may be covered by either an individual or statewide permit. The permit will generally be obtained by the producer or a commercial operator. The permit application will require land owner approval. A permit is required for each individual application site. A land application site is defined as a site under the control of an individual operator or producer and applying wastewater to a single ownership of surface rights.
- B. Initially individual land application permits will be required. After operators or producers have established a record indicating a history of compliance and effective operation, a

statewide permit may be issued to an operator or producer to land apply to surface sites owned by multiple land owners. Notification and land owner permission from each owner will be required under the statewide permit.

C. Applications for individual and statewide permits to land apply will provide for the following:

1. Soils testing.
2. Location maps.
3. Land owner permission.
4. Water quality testing and reporting.
5. Volume and application rate of wastewater.
6. Application at agronomic rates.
7. No surface or groundwater discharge.
8. Maintenance of vegetation.
9. Reclamation and restoration of the site.
10. Financial assurance for commercial facilities.
11. Annual reporting.
12. Additional information required by the reviewing engineer to ensure proper operation of the facility.

V. COMMERCIAL DISPOSAL FACILITIES

- A. Operators of treatment facilities who receive wastewater from more than one producer and provide treatment, and who are also responsible for the final disposal of the treated wastewater are, by definition, commercial disposal facilities. Individual producers who land apply their own produced water including CBM wastewater are not considered to be operating commercial disposal facilities. The individual producer may use contract services to conduct part or all of the treatment and disposal process. As long as a single producer is responsible for the treatment and disposal, it is not considered a commercial disposal facility. The criteria currently used to define a commercial disposal facility is whether the produced water comes from a single lease, unit, or communitized area.
- B. Commercial oil field disposal facilities are required to meet bonding and financial assurance costs associated with closure and post closure requirements. Authority for this requirement is contained in W.S. 35-11-306 and Chapter 14, WWQRR.

VI. PERMITTING OF NEW AND EXISTING OPERATIONS.

- A. **Permitting deadlines for both new and existing plants and land application systems**

were established in two letters from the WQD Administrator. The first was dated 12/19/03 (for plants) and the second 1/27/05 (for land application). A summary of those requirements is:

1. Treatment plants proposed after 1/1/04 were required to submit applications and obtain Chapter 3 permits prior to construction;
2. Existing treatment plants were required to submit applications with "as built" plans and specifications by 4/1/04;
3. Land disposal systems proposed after 3/15/05 were required to submit applications and obtain Chapter 3 permits prior to construction; and
4. Existing land disposal systems were required to submit applications with "as built" plans and specifications by 6/1/05.

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