

APPENDIX I

Additional Requirements Applicable to Produced Water Discharges from Coal bed Natural Gas (coalbed methane "CBM") Facilities

(a) Applications for produced water discharges from coal bed methane gas production facilities shall be on the form provided by the administrator, and shall include, in addition to the requirements of Section 5 (a)(v), credible data establishing each of the following: Application requirements specific to all produced water discharges from coal bed methane gas production facilities must provide the following information, in addition to that described in Section 5 (a) (v), to the administrator, using the application form provided by the administrator.

(i) That the produced water discharged into surface waters of the state shall have use in agriculture or wildlife propagation. The produced water shall be of good enough quality to be used for wildlife or livestock watering or other agricultural uses and actually be put to such use during periods of discharge;:-

(ii) That the quantity of produced water shall not cause, or have the potential to cause, unacceptable water quality;

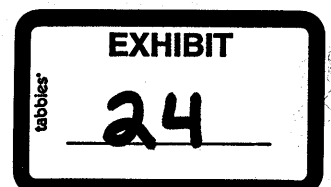
(iii) That the produced water shall not cause contamination or other alteration of the physical, chemical or biological properties of any waters of the state, including change in temperature, taste, color, turbidity or odor of the waters; or shall not cause the discharge of any acid or toxic material, chemical or chemical compound, whether it be liquid, gaseous, solid, radioactive or other substance, including wastes, into any waters of the state which:

(a) creates a nuisance, or

(b) renders any waters harmful, detrimental or injurious to public health, safety or welfare, to domestic, commercial, industrial, agricultural, recreational or other legitimate beneficial uses, or to livestock, wildlife or aquatic life, or

(c) degrades the water for its intended use, or

(d) adversely affects the environment.



(b) Permits for all produced water discharges from gas production facilities shall include the following conditions and limitations:

(i) In no case shall any produced water discharge contain toxic materials in concentrations or combinations which are toxic to human, animal or aquatic life.

(ii) Diffuse discharges. Water shall not be discharged in a diffuse manner such that damage to land and/or vegetation occurs.

(iii) Facility identification. All facilities authorized to discharge produced water shall be clearly identified with an all-weather sign posted at a visually prominent location. The sign shall be securely mounted and maintained to prevent the sign from being knocked down by livestock or wind. In the case where multiple outfalls are permitted or authorized, a sign shall be posted to identify each outfall. Signs shall, as a minimum, convey the following information:

(A) The name of the company, corporation, person or persons who hold(s) the discharge permit;

(B) The name of the facility (lease, tank battery number, etc.) as identified by the discharge permit; and

(C) The WYPDES permit number assigned to the facility and outfall identification number assigned to each outfall.

(iv) Measures must be implemented to minimize erosion of the drainage at the point of discharge.

(v) Discharges of produced water will not contain substances that will settle to form sludge, bank or bottom deposits in quantities sufficient to result in significant aesthetic degradation, significant degradation of habitat for aquatic life or adversely affect public water supplies, agricultural or industrial water use, plant life or wildlife.

(vi) Discharges of produced water may not result in the formation of a visible hydrocarbon sheen on the receiving water.

(vii) The following effluent limitations are protective for stock and wildlife consumption. Limitations on additional parameters or limitations more stringent will be imposed when such limitations are necessary to assure

compliance with Wyoming Water Quality Rules and Regulations, Chapter 1.

(A) Chlorides. The chloride content of any produced water discharge shall not exceed 2,000 mg/l in any single properly preserved grab sample except in those cases where a modification is granted in accordance with paragraph (c) of this appendix.

(B) Sulfates. The sulfate content of any produced water discharge shall not exceed ~~3,000~~500 mg/l in any single properly preserved grab sample except in those cases where a modification is granted in accordance with paragraph (c) of this appendix.

(C) Total dissolved solids and specific conductance. The total dissolved solids content of any produced water discharge shall not exceed ~~5,000~~2,000 mg/l for total dissolved solids or 7500 μ mhos/cm for specific conductance in any single properly preserved grab sample except in those cases where a modification has been granted in accordance with paragraph (c) of this appendix.

(D) pH. In no case shall the pH of any produced water discharge be less than 6.5 or greater than 9.0 standard units as measured by a single grab sample.

(E) Barium. The barium content of any produced water discharge shall not exceed .2 mg/l in any single properly preserved grab sample except in those cases where a modification is granted in accordance with paragraph (c) of this appendix.

(viii) Samples collected to demonstrate compliance with effluent limitations specified in this appendix shall be collected as grab samples and reported as an instantaneous maximum, unless otherwise specified.

(ix) There shall be no discharge of waste pollutants into surface waters of the state from any source (other than produced water) associated with production, field exploration, drilling, well completion, or well treatment (i.e., drilling muds, drill cuttings, and produced sands). These materials shall be managed in accordance with applicable state and federal regulations.

(x) All water quality samples collected by the Department and discharge permit holders subject to this Appendix shall be taken from the free fall of water from the last treatment unit which is located out of the natural drainage. The sample must not be mixed with waters of any other surface water or with

water from another discharge point.

(c) Additional Permit Conditions and Limitations

(i) Where discharge water is accessible to livestock and/or wildlife; meets the effluent limitations as specified in this appendix; and meets the criteria for the protection of livestock and wildlife as specified in Wyoming Water Quality Rules and Regulations Chapter 1, Wyoming Surface Water Quality Standards, the discharge will be considered in compliance with the requirements of Appendix I (a) (i) of these regulations

(ii) For discharge permit applications filed after the date of adoption of these regulations, modification of effluent limits described in paragraph (b) (vii) of this appendix may be granted on a case by case basis. The Water Quality Administrator shall review all requests for modification of effluent limits submitted under this section and make a determination based upon the technical merits of a Use Attainability Analysis. Such requests shall also provide a signed "letter of agricultural or wildlife use" by the land owner specifically requesting that the discharge will serve a specific agricultural or wildlife use or a demonstration that the conditions of Appendix I (c) (i) have been met.

(iii) Location of disposal pits. Location of disposal pits shall be managed in accordance with applicable state (e.g. Oil and Gas Conservation Commission) and federal (e.g. Bureau of Land Management) regulations.

(iv) The permittee shall take all reasonable measures to prevent downstream erosion that would be attributable to the discharge of produced water.