

**FILED**

JUN 07 2004

Terri A. Lorenzon, Director  
Environmental Quality Council

**BEFORE THE  
ENVIRONMENTAL QUALITY COUNCIL  
STATE OF WYOMING**

WYOMING OUTDOOR COUNCIL, )  
)  
PETITIONER, )  
)  
v. )  
)  
WYOMING DEPARTMENT )  
OF ENVIRONMENTAL QUALITY, )  
)  
RESPONDENT. )

DOCKET NO. \_\_\_\_\_

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**NOTICE OF APPEAL OF ISSUANCE OF PERMITS  
AND REQUEST FOR HEARING**

In the matter of:

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMITS  
WY0051217 AND WY0051233

COMES NOW the Wyoming Outdoor Council, by and through its attorneys, Steve Jones and Melinda Harm Benson, and hereby presents this notice of initiation of proceedings and appeal of the issuance of National Pollutant Discharge Elimination System permits issued to Bill Barrett Corporation on April 5, 2004 by the Wyoming Department of Environmental Quality, and hereby petitions the Environmental Quality Council to hold a hearing in this matter and to deny the issuance of said permits and for its petition hereby states the following:

**INTRODUCTION**

1. In accordance with Chapter 1, Section 3 of the Environmental Quality Council's (EQC's) requirements for initiation of proceedings, Wyoming Outdoor Council hereby submits this NOTICE OF APPEAL OF ISSUANCE OF PERMITS AND REQUEST FOR HEARING appealing the final decision of the Wyoming Department of Environmental Quality Administrator John Wagner's decision to issue two permits: National Pollutant Discharge Permits (NPDES), WY0051217 AND WY0051233, to Bill

Barrett Corporation, on April 5, 2004, over the protests and objections of Wyoming Outdoor Council (WOC).

## **FACTUAL BACKGROUND**

2. On January 15, 2004, the Wyoming Department of Environmental Quality (DEQ) issued a Public Notice of two proposed permits, WY0051217 and WY0051233 applied for by Bill Barrett Corporation (hereinafter "the Barrett Permits").
3. Public comment for the Barrett Permits remained open until February 17, 2004. No extension of time for additional public comments was granted by the DEQ, even though various requests were made for an extension.
4. The Barrett Permits, Permit Nos. WY0051217 and WY0051233, as issued, authorize discharges of coal bed methane produced water from coal bed methane wells at 29 outfall points (25 and 4, respectively) into tributaries of Antelope Creek, which flows into the Cheyenne River, discharging CBM water at a rate of 4.4 million gallons per day (mgd) and 3.4 mgd, respectively.
5. On February 17, 2004, WOC filed objections protesting the Barrett Permits.
6. On April 5, 2004, DEQ issued the Barrett permits over WOC's objections.
7. On April 6, DEQ Water Quality Administrator John Wagner sent a letter to WOC outlining its basis for issuing the Barrett permits and advised WOC of its appeal rights in accordance with Chapter 1 of the Environmental Quality Council's Rules of Practice and Procedure. This timely Notice of Appeal is filed herein on June 4, 2004.

## **ISSUES PRESENTED**

### **A. The Need for Specific CBM Effluent Discharge Limits**

8. The State of Wyoming administers the National Pollutant Discharge Elimination System Program for the federal government pursuant to the federal Clean Water Act. The DEQ allows discharges of coal bed methane (CBM) produced water for CBM development projects under a special exemption for produced water discharges under 40 CFR Part 435 Subpart E, promulgated pursuant to the Clean Water Act.
9. In general, EPA's regulations prohibit the discharge of water associated with the production of oil and gas. Subpart E, however, provides an exception where the operator can demonstrate that (1) the total effluent limitation for oil and grease is less than 35 mg/l and (2) the produced water is used "in agricultural or wildlife propagation" which "means that the produced water is of good enough quality to be used for wildlife or livestock watering or other agricultural uses and that the produced water is actually put to such use during periods of discharge." 40 CFR § 435.51

10. These federal regulations were put in place before CBM technologies were in existence and did not contemplate the type of water production associated with CBM development.

11. In its audit of Wyoming DEQ's program in 2001, the EPA informed Wyoming DEQ that it was inappropriate to allow water discharges under this section. Despite this, however, the Wyoming DEQ has issued virtually all of its NPDES discharge permits for CBM, including the Barrett Permits, under this section.

12. The DEQ should not allow the issuance of NPDES permits for the discharge of CBM produced water pursuant to the provisions of 40 CFR 435 Subpart E.

### **B. The Beneficial Use Exemption**

13. In the alternative, even if Subpart E is deemed applicable, the "beneficial use" requirement is not being met in any event.

14. For most NPDES permits for CBM issued by DEQ, including the Barrett permits at issue here, the permit applications contain a "beneficial use statement" often signed by a landowner, or by a consultant that "to the best of my knowledge and ability" the CBM operator is expected to use the CBM water "as defined by the landowner in the surface agreement." Such statements do not meet federal requirements under 40 CFR Part 435, Subpart E, that there must be some demonstration of *actual* beneficial use for the discharged water.

15. The available evidence suggests that, far from being a benefit to agriculture in the Cheyenne River drainage, it will be detrimental to agricultural production in that it will make irrigation more difficult for irrigators downstream of the discharges.

16. The available evidence suggests that, far from being a benefit to wildlife, CBM water from these discharges will be detrimental to aquatic species.

17. The Barrett permits do not meet the requirements for allowing discharges of produced water where there is an actual beneficial use as required by 40 CFR 435.51.

### **C. Failure to Consider Best Available Technologies**

18. The DEQ does not require the permittee, Bill Barrett Corporation, to consider Best Available Technology (BAT) requirements, as required by the 40 C.F.R. § 125.3(c)(3). The regulations state:

the permit writer must consider the following factors: . . . *for BAT requirements*: (i) The age of the equipment and facilities involved; (ii) The process employed; (iii) The engineering aspects of the application of various types of control techniques; (iv) Process changes; (v) The cost of

achieving such effluent reduction; and (vi) non-water quality environmental impacts (including energy requirements).

40 C.F.R. § 125.3(d)(3) (emphasis in original).

19. The Wyoming DEQ is ignoring this provision for BAT and is generally not requiring operators to consider treatment options for sodium adsorption ratio (SAR), specific conductance (SC -- also known as electrical conductivity, or "EC") and other pollutants that are typically characteristic of CBM produced water. In this case, the water is simply dumped into intermittent and ephemeral streams.

20. The DEQ and the permittee must consider best available control technologies in connection with the issuance of discharge permits for CBM produced water.

21. Strong advances could be made with regard to addressing water quality concerns associated with CBM discharges, in general, and with these NPDES discharge permits in particular.

22. Best available control technology must be considered by DEQ and utilized, if feasible, before the Barrett permits can be issued.

#### **D. Violations of the Narrative Standard for Agricultural Uses**

23. The Barrett Permits are not sufficiently protective of downstream uses.

24. Chapter 1, Section 20 of the Wyoming Water Quality Rules and Regulations (WWQR&R) requires that: "All Wyoming surface waters which have the natural water quality potential for use as an agricultural water supply shall be maintained at a quality which allows continued use of such waters for agricultural purposes.

25. The DEQ has set a sodium adsorption ratio (SAR) limit of 10. This standard, however, is not sufficiently protective of irrigation and soil texture, which instead requires an SAR of 6.

26. In issuing the Barrett Permits with an SAR standard of 10, DEQ ignored detailed comments by WOC and the Niobrara Conservation District outlining the need for a more protective standard.

27. The effluent limit for specific conductance (SC) is also too high. The Barrett permits set a limit of 2000 umhos/cm. However, a concentration of no more than 1333 umhos/cm is the proper maximum limit necessary to protect existing uses.

28. The standards for SC and SAR, as set by DEQ for these permits, are based on an inaccurate interpretation of the "Agricultural Salinity and Drainage, 1999" commonly referred to as the "Hanson chart." The Hanson chart is based on concentrations that are appropriate for soil, and not water.

29. The Barrett permits will violate Chapter 1, Section 20, by negatively affecting the waters of Antelope Creek and the Cheyenne River for agricultural purposes.

**E. Violations of the Narrative Standard for Aquatic Uses**

30. The DEQ has failed to meet the requirements for biological criteria with respect to these permits.

31. Chapter 1, Section 32, Wyoming Water Quality Rules and Regulations, requires that:

Class 1, 2, and 3 waters of the state must be free from substances, whether attributable to human-induced point source discharges or non-point source activities, in concentrations or combinations which will adversely alter the structure and function of indigenous or intentionally introduced aquatic communities.

32. The Wyoming DEQ published the "Whole Effluent Toxicity (WET) Testing of Coalbed Methane (CBM) Produced Water" on October 30, 2003. Of the original 20 fathead minnows placed in a tank consisting of 12.5% CBM wastewater (from the Big George coal seam) and 87.5% clean water, only 9 minnows were alive after 96 hours.

33. The WET study found the fathead minnows suffered reproduction and growth problems when put into the diluted Big George CBM wastewater. Two aquatic insect species also died, or had reproduction and growth problems when placed in Big George coal CBM wastewater.

34. The Big George coal seam CBM wastewater (see Table 3 of the study) is listed at only 2,865 ppm total dissolved solids (TDS) (an equivalent for SC of 3,830 umhos/cm). Thus one part Big George CBM wastewater and seven parts clean water is lethal to fathead minnows -- which are known to be a very tolerant species for toxic substances.

35. WET testing was not required of the permittee for the water to be discharged by the permittee, prior to the issuance of these permits, even though one of the permits, Permit No. WY0051217, does involve discharges from the Big George coal seam.

36. It should also be noted that, in the WET study, Site 1 and Site 2 (see Table 3) the measured lead (Pb) levels were 534 ppb and 238 ppb. This would indicate that compliance with lead levels as set forth in the Barrett permits could be very problematic for the permittee, if the actual water to be discharged resembles the quality of the Big George coal seam water used in the study.

37. In addition, certain heavy metals have not been regulated by the DEQ in the Barrett permits. There are no limits imposed for such toxic heavy metals as: chromium, nickel, lead, beryllium, cadmium, antimony, selenium, thorium, silicon, ammonium, fluoride,

strontium, lithium, bromide, boron, cesium, and cobalt. Limits for these constituents have been considered for inclusion in other CBM discharge permits.

38. Given the anticipated concentrations of constituents, and the volume of water that is permitted for the Barrett permits, the Barrett permit discharges will violate the narrative standards for aquatic communities set forth in Chapter 1, Wyoming Water Quality Rules and Regulations.

39. WET testing should be required for the permits, a requirement that has now been imposed by DEQ for all discharge permits discharging Big George coal seam produced water in the Powder River basin.

40. Lower concentrations for various constituents must be imposed as part of the Barrett permits, in order for the discharges will not adversely alter the structure and function of indigenous or intentionally introduced aquatic communities.

#### **F. Failure to Comply with an Affected State's Water Quality Requirements**

41. The discharges permitted in the Barrett permits present the possibility of affecting the water quality of the State of South Dakota.

42. Federal regulations provide that an NPDES permit shall not be issued "[w]hen the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States." 40 CFR § 122.4(d) (1991); see also 38 Fed.Reg. 13533 (1973); 40 CFR § 122.44(d) (1991). In *Arkansas v. Oklahoma*, 503 U.S. 91, 105 (1992), the Supreme Court held that these regulations were a reasonable exercise of EPA's authority.

43. With respect to some constituents under the Barrett permits, the DEQ cannot ensure compliance with the applicable water quality standards for South Dakota. In particular, there are serious concerns about how these discharges will affect levels of SAR, SC, and barium in the Cheyenne River. Other constituents for which there are no effluent limits in connection with these permits, as listed in Paragraph 37 above, are also of concern.

44. The DEQ should not be allowed to issue the Barrett permits without being able to ensure that the water quality of South Dakota will not be affected.

#### **G. Inadequacy of Public Notice**

45. Wyoming Water Quality Rules and Regulations, Chapter 2, Section 13 (c) provides that:

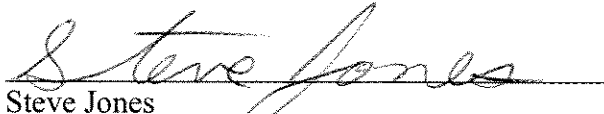
"[f]or every discharge which has a total volume of more than 50,000 gallons on any single day of the year, the Administrator shall prepare, and, following public notice, shall send, to any person so requesting, a fact sheet with respect to the application described in the notice."

46. The DEQ did not prepare any fact sheet in this matter for either permit.
47. The Statement of Basis that accompanied both of the Barrett permits does not set forth the items required to be set forth as part of the fact sheet requirement of Chapter 2, Section 13(c).
48. The public notice for NPDES permits also does not conform to federal requirements.
49. The State is required to "provide a brief description of the business conducted at the facility or activity described in the permit application." 40 CFR 124.10(d)(iii). The current notice does not do this. The only description for most of these permits is something like "CBM project." This is not adequate for even a brief description of the business conducted at the facility in question.
50. There is an inadequate description of the "comment procedures," as required by 40 CFR 124.10(d)(v). The right of any member of the public to request a public hearing is not spelled out, as is required by the regulations. While the notice states that a public hearing may be requested by the Administrator (to the Environmental Quality Council), the notice does not state that members of the public have a right to request such a hearing. Chapter 2, Section 14, WWQR&R also contemplate that same right to public notice.

WHEREFORE, Wyoming Outdoor Council hereby requests that the Environmental Quality Council:

- A. Set a hearing date in this matter during which the petitioner may present its case to the Council in a contested case format, pursuant to the Wyoming Administrative Procedure Act, W. S. 16-3-107 et seq.
- B. Deny the issuance of the Barrett permits, NPDES Permit Nos. WY0051217 and WY51233.
- C. In the alternative to Paragraph B above, remand the matter to the DEQ and require that the DEQ make further determinations concerning the permits and issue the Barrett permits only after it has determined that the permits will comply with federal and state law and regulations.
- D. Grant such other and further relief as it may deem just and equitable.

Dated this 4th day of June, 2004.



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