Rocky Mountain Oil Operations
Northern U.S. Business Unit

Marathon Oil Company

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February 10, 2006

Mr. Mark Gordon
Chair, Wyoming Environmental Quality Council
Herschler Building
Room 1714
Cheyenne, Wyoming 82002

RE: Petition of Powder River Basin Resources Council, et al. to Amend Wyoming Water Quality Rule, Chapter 2, Appendix H

Dear Mr. Gordon:

Marathon Oil Company is one of Wyoming's largest producers of natural gas. We produced over 57 million MCF of natural gas and more than nine million barrels of oil in Wyoming in 2005. Marathon's oil and gas operations account for many jobs, which support families and communities across the state.

Marathon has joined in the consolidated comments submitted to the Council by a number of oil and gas producers. Marathon firmly believes that, as those consolidated comments make clear, the Council should reject the Powder River Basin Resource Council (PRRC) petition without the need for further proceedings because, among other reasons, the requested action would interfere with the State Engineer's authority to regulate the production and use of water in Wyoming. The purpose of these

production and use of water in Wyoming. The purpose of these supplemental comments is to provide the Council with some additional information about how produced water from Marathon operations is beneficially used and why the water is an important resource on which ranchers have come to rely. To ensure the continued availability of water for beneficial agricultural use and wildlife propagation, the Council should decline to initiate PRBRC's requested proceedings to amend the Water Quality Rules.

Availability of Water for Agricultural or Wildlife Propagation

PRBRC and the other Petitioners apparently assume that, in order for water to be put to beneficial use for agriculture or wildlife propagation, all the water must actually be used for irrigation or consumed by livestock or wildlife. Because not every drop of CBNG produced water that is discharged to rivers and creeks is used for irrigation or consumed today, Petitioners suggest, water is " wasted." Petitioners apparently seek a rule under which DEQ must determine "how much the cows or antelope will actually drink" and limit discharges of produced water to that quantity. Petition at 8.

Petitioners' proposal would entangle DEQ in decisions committed to the State Engineer under state law and could seriously interfere with the State Engineer's responsibility to regulate the production, diversion and use of water in Wyoming. And, Petitioners' proposal is not feasible. There is no practical way to predict accurately how much water livestock and wildlife will drink from a given stream or stream segment during a given period of time, or to verify the amount consumed after the fact from that stream. Nor would it be feasible for producers to constantly adjust up and down the rate at which

a given well or field generates produced water so as not to exceed the volumes consumed or expected to be consumed by livestock or wildlife.

Setting aside these very important practical problems, Petitioners' focus on volumes of water consumed ignores the fact that, in order for animals to drink water in a stream, the water must be continuously available. Thus, stream flow must be adequate at all times to support a supply of fresh water for livestock or wildlife in the vicinity that may visit and consume water from the flowing supply at any time.

Petitioners' unrealistic proposal also obscures the myriad ways that produced water, which under current regulations must meet all applicable permit limits and effluent limitations, actually serves to propagate wildlife. Consumption by wildlife represents a tiny fraction of the beneficial use of produced water in the propagation of wildlife. Flowing water can support the growth of riparian vegetation on which antelope and other ruminants forage, providing an expanded food supply that supports a larger population of forage-dependent animals in a given area and allows animals to expand their geographic range. This vegetation also can provide expanded or new habitat for many other species and can host a more diverse population of animals, birds and other wildlife than would otherwise exist at those locations.

Generally speaking, streams that receive CBNG water support vegetation in direct proportion to the volume of water in the stream. Thus, restriction or elimination of the produced water flows into these streams would reduce stream flow, which could result in a proportional decline in vegetation. The loss of vegetation would, in turn, directly and

adversely affect the food supply for various species and result in a corresponding loss of habitat.

In some streams, produced water discharges support more robust and diverse aquatic resources than could otherwise live in those receiving waters. Fish thrive in a number of streams that receive produced water. Again, the size of the fish population that can be supported by a given stream, other things being equal, generally is a function of the discharge, depth and velocity of water in the stream. If properly managed, the impacts of CBNG discharges on fish communities should be minimal.

Limiting CBNG produced water discharges to volumes that cattle and antelope will drink – even assuming such a limit were technically feasible –could have seriously detrimental effects on the food supply that supports terrestrial wildlife in the vicinity of the receiving stream and on fish and other wildlife that depend on the river for habitat.

In addition to these direct benefits to wildlife, ponds associated with discharge systems can create new nesting and migration feeding/resting habitat for many species of migratory waterfowl and other water birds, and valuable new fisheries and recreational opportunities for the public.

Historic Beneficial Use of Produced Water

In many areas of Wyoming, the ranching community has long made use of produced water from oil and gas operations. In particular, ranchers have a history of reliance on produced water in the Big Horn Basin. Indeed, ranchers have repeatedly made clear to Wyoming DEQ that, without produced water from our oil and gas fields, their ranching operations would be far less viable.

Almost 20 years ago, when Wyoming DEQ was considering water quality standards that could have precluded discharges of produced water, ranchers who depend on Marathon's and other operators' produced water discharges to various rivers and streams spoke out against any requirement for re-injection or other restriction of this supply. Over 30 ranchers whose properties received produced water from Wyoming oil and gas fields went on record in 1988 to oppose any restriction. *See* Exhibits1.A-.U attached to this letter. One rancher whose property is crossed by the Medicine Bow River wrote:

> [A]ny proposed standard changes or restrictions on existing standards that would result in stopping or restricting the water contribution [from Marathon's operations] to the Medicine Bow River would be detrimental for the following reasons: First, our cattle and horses drink this water daily and thrive on it. Second, the deer and antelope and other wildlife use this water on its course down to the river and seem to prefer it to river water when the river water is available. Third, and most important, the Medicine Bow River . . . is dry some two years out of three . . . . Your supply of additional water provides a small continuing supply of water for the wildlife all along this portion of the river until it comes up again in the fall.

Letter from Edward J. Ledder, Medicine Bow River Ranch, to Terry Skinner, Marathon (Oct. 18, 1988) [Ex. 1.A]. Ranch managers near Thermopolis wrote about the importance of produced water in arid conditions:

> [T]reater-water has become a necessity for maintaining the current economical and ecological conditions of the area. Treater water provides stock water and irrigation water for ranching operations. Probably of equal importance to the area is the fact that treater-water provides water and stream bank vegetation for wildlife habitat.

Letter from Matt M. Brown and Teresa H. Brown (October 25, 1988) [Ex. 1.B].

Many ranchers explained that they use produced water for irrigation, including one rancher who received water produced from the Hamilton Dome oil field who wrote, "we

have increased our crop production 300% with the use of the oil field water in the last 20 years." Letter from Allan Baird to Marvin Blakesley, Marathon (Oct. 28, 1988) [Ex 1.C]. Another noted the importance of the in-stream flow as a backup supply for livestock when electric pumps break down and may be out of service for a significant amount of time. *See* Letter from Irene S. Schultz to Eugene Grant, Marathon (Oct. 19, 1988) [Ex.1.D]

Many ranchers noted the benefits to wildlife from the increased supply of water to the riparian habitat. As one stated:

> The creek banks are much more stable with the water in the creek at all times. There are beavers and ducks on the creek all the time now. There is much more cover for the pheasants, other wild birds and wild game animals.

Letter from John Baird to Marathon (Oct. 30, 1988) [Ex. 1.E]. Another explained:

> Water in all of this area is a precious commodity. Pronghorn antelope, mule deer, game birds, eagles, rabbits, coyotes, wild horses, beaver, ducks, and many other animals, as well as domestic livestock depend on the water and/or riparian habitat provided by Dry Creek. And Dry Creek in turn depends on the water discharged by Marathon from Oregon Basin.

Letter from Dave Grabbert, Grabbert Ranch to Eugene Grant, Marathon (Oct. 19, 1988) [Ex. 1.F.][1]

[1] The Bureau of Land Management made the same point to Wyoming DEQ in the 1988 proceeding:

> Our interest in water quality, from point source discharges, is primarily related to the surface discharge of water produced in conjunction with oil and gas production and the various beneficial uses to which this water is presently applied. In the Cody Resource Area, produced water is providing benefits to riparian vegetation, waterfowl and shorebird habitat, and drinking water sources for livestock and terrestrial wildlife. We view this produced water as an important benefit to our management of the public lands.

Letter from Thomas E. Enright, BLM to John Wagner, WDEQ (Nov. 3, 1988) [Ex. 2]

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Produced water from Marathon operations is no less important for beneficial agricultural use today than it was in 1988. In 2002 and 2003, the ranching community strongly supported the renewal of Marathon's NPDES permits to discharge produced water from Marathon's Pitchfork, Gebo, North Sunshine and Steamboat fields. Comments provided by Turnell Cattle Company, Sanford Ranches, Antler Ranch, Inc., PAR Ranch, Larsen Ranch Co., Wyoming Horses, the Baquin family and other ranchers echo the points made in 1988 concerning the benefit of produced water discharge both to livestock and to wildlife. *See* Ex. 3.A-.L.

All of these ranchers emphasized the economic importance of the water supplies to their operations. One said that produced water from the Sunshine Field is the "only live water source for our livestock and the economic viability of this portion of agricultural land is dependent on the continued discharge of the water." Letter from Michael Q. May, Antlers Ranch (Feb. 22, 2002) [Ex 3.A]. Another noted simply that, with respect to discharges from Marathon's Circle Ridge field: "I can't say enough about how important this discharged water is to my cattle, and therefore, my livelihood, especially in drought years like the past two when all other water sources have dried up. Letter from James H. Fike, Jr. (Jan. 18, 2002) [Ex. 3.B]. As one rancher summed up the benefits to both agriculture and wildlife:

> The water [from Pitchfork Field] is of good quality and is used by my cattle throughout most of the year. The water provides an important year round water source for several of my pastures. We also utilize the water for irrigation of our crop lands. Rawhide Creek, above the Pitchfork Field, often goes dry during the summer. The produced water provides a steady flow throughout the year. The water also provides many beneficial uses to wildlife, including deer, antelope, sage grouse, chukar, and Hungarian

> partridge. Some non-game species of fish and wildlife are also dependent on this discharged water.

Letter from Jack Turnell, Turnell Cattle Co., to Marvin Blakesley, Marathon (Mar. 15, 2002) [Ex. 3.C]. Another rancher noted that, on his property, produced water from the Gebo Field created and sustained a several mile long riparian zone in the lower end of Coal Draw, prior to entry into the Big Horn River, which would not have existed without the flow of produced water. Letter from Norman Sanford, Sanford Ranches to Marvin Blakesley, Marathon (Feb. 25, 2002) [Ex. 3.D].[2]

The statements of these ranchers, some as recently as 2003, leave no doubt that produced water can be and is beneficially used for agricultural operations, as well as supporting the wildlife that congregates near the receiving streams. It is indisputable that many downstream ranching operations value Marathon's produced water. They have testified to the importance of this water as a resource for agriculture and wildlife. One would anticipate that ranchers who employ produced water from coalbed natural gas ("CBNG") operations have had similar experiences. Indeed, Marathon understands that the Council will receive comments reflecting benefits akin to those experienced by

[2] In 2001, in connection with the renewal of Marathon's NPDES permits, the Wyoming Game and Fish Department provided information "concerning the beneficial use by wildlife of production water produced at several of your oil fields." According to Game and Fish:

> The Gebo, North Sunshine and Pitchfork fields all produce water that is used yearlong by many species of wildlife. In particular, pronghorn antelope, sage grouse, Hungarian and chukar partridge benefit by using these water sources. In addition mule deer and numerous species of nongame birds use these water sources on a daily basis. The presence of these water sources increases the distribution and abundance of most wildlife species.

Letter from John Emmerick and Ron McKnight, WGFD, to Marvin Blakesley, Marathon (Dec. 21, 2001) [Ex. 4].

conventional oil and gas operations. Thus, experience strongly suggests that the Council should avoid any disruption or curtailment of produced water discharges.

The Environmental Quality Council must realize that the changes to the current Chapter 2 Appendix H proposed by the Powder River Basin Resource Council would eliminate many historical surface water discharges across the state. Loss of these perennial water sources would hurt many agricultural operators in Wyoming. These proposed changes would also be extremely detrimental to existing fish and wildlife populations, which have become dependent on these water sources over the past 60 to 80 years. Therefore, Marathon respectfully urges the Environmental Quality Council to deny and take no further action on the Petition.

Sincerely,

Marvin Blakesley/DAS

Marvin Blakesley
Adv. HES Professional
Marathon Oil Company