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MAY 25 2005

Carol Kruse
Jonah Infill Drilling Project Comments
PO Box 768
Pinedale, Wyoming 82941

RE: Comments on the Draft Environmental Impact
Statement Jonah Infill Drilling Project – CEQ #
050044

Dear Ms. Kruse:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4321, et. seq., and Section 309 of the Clean Air Act, 42 U.S.C. Section 7609, the Region 8 office of the Environmental Protection Agency (EPA) has reviewed the referenced Draft Environmental Impact Statement (DEIS) for the Jonah Infill Drilling Project, Sublette County, Wyoming.

EPA recognizes that BLM has indicated in a *Federal Register* notice that they will be providing a new analysis for the air quality impacts as part of this DEIS. As a result, EPA is submitting comments on aspects of the current DEIS, except for the air quality portion. Once the supplemental air quality information is available and subject to public review, we will submit comments completing our review of this DEIS. Furthermore, the EPA will defer a rating of this DEIS until the review of the supplemental information is complete.

The Jonah Infill DEIS analyzed ten alternatives including the "No Action" alternative. As stated in the DEIS, BLM's preferred alternative for drilling an additional 3,100 gas production wells, will generate 12,525 acres of new surface disturbance and 519 miles of roads and pipelines. The preferred alternative will result in reducing the well spacing from one well per 40 acres to one well per 5 or 10 acres.

We would like to take this opportunity to thank and recognize the BLM for working with EPA and the Wyoming Department of Environmental Quality (DEQ) to resolve the modeling and mitigation issues for air quality. This interagency cooperation is outstanding and will result, EPA believes, in a high quality environmental assessment and a product that will enable the public to fully understand and evaluate the proposed project. We have appreciated your quick, thorough response to our concerns. We believe additional air quality work will result in a much improved DEIS which will more accurately disclose the air quality effects and possible ways of mitigating any impacts.

Below are our general comments on the BLM preferred alternative. The enclosure will provide additional detail to this cover letter.

Project Surface Disturbance

The analysis within the DEIS identifies multiple potential significant impacts that could result from the intense level of surface disturbing activities that are proposed. Briefly, as a result of surface disturbance the DEIS anticipates significant impacts to: vegetation from removal or compaction, surface water quality from soil erosion, wildlife from habitat destruction and fragmentation. There is also a potential for wetlands impacts from surface activities located in playas.

DEIS Analysis

Although the DEIS indicates that there will be impacts to surface water quality from additional sediment loading, the DEIS does not include a surface water quality analysis that qualitatively provides the necessary information to determine the appropriate level of mitigation that will be required of the operator.

Regarding alternatives considered in the DEIS, EPA supports BLM's consideration of development based upon a range of numbers of wells drilled per year. In addition, EPA believes BLM should consider for this project, phased development based upon geographic considerations and associated potential impacts. Recent court rulings in Montana support the need for this approach. The supplemental analysis process that is currently underway could provide the framework for evaluating such alternatives and potential impacts with regard to all resources.

Although the DEIS states that the BLM preferred alternative reduces impacts to wildlife when compared to the industry's proposal, it is not known if the alternative provides adequate protections to sensitive species. Therefore, EPA recommends the inclusion, in the Final EIS, of findings from the Fish and Wildlife Service Biological Opinion and the Wyoming Department of Natural Resources, so as to provide the identification of needed mitigation of significant impacts.

Mitigation

Considering the unusual intensity of the well spacing for the proposed action, the mitigation being proposed may not be adequate. Considering all of the significant impacts identified in the DEIS to wildlife and surface water, EPA finds the DEIS lacking in providing specific approaches for maintaining ecosystem viability.

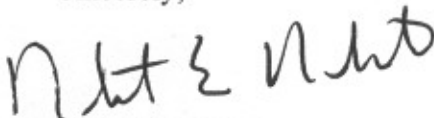
DEIS Rating

Since BLM will be supplementing this DEIS document with additional air quality analysis for public review and comment, EPA is deferring our rating of the DEIS until all of the

DEIS analysis is complete. At that time, we will submit our air quality comments and provide our rating of the complete DEIS document. During our subsequent review and comment, EPA will also provide comments on any additional alternatives considered, potential impacts identified or the preferred alternative if the future air quality analysis results in changes to the scope or level of activity for the preferred alternative.

We are available to work with you on all areas of the DEIS. We are very interested in assisting BLM with improving the air quality analysis and consideration of mitigation for air emissions. Please call Larry Svoboda at (303) 312-6004 with any questions you may have concerning these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert E. Roberts". The signature is written in a cursive, somewhat stylized font.

Robert E. Roberts
Regional Administrator

Enclosure

Jonah Infill DEIS Detailed Comments

Project Background

The project is referred to as the Jonah Infill Drilling Project (the Project), and the total Jonah Infill Drilling Project area (JIDPA) includes approximately 30,500 acres. This acreage includes approximately 28,580 acres of federal surface and mineral estate managed by the BLM, 1,280 acres of State of Wyoming surface and minerals, and 640 acres of private surface/federal minerals. Based on Operator knowledge of natural gas reservoir characteristics (geology, flow from existing wells, anticipated recovery rates, and economics), the Operators anticipate field development in the JIDPA to involve infill drilling among existing wells. The Operators propose drilling and developing up to 3,100 additional new wells in the JIDPA, depending on the outcome of continued exploration and reservoir characterization. Bottom-hole (subsurface) well spacing is expected to range from 16 wells/640-acre section up to as many as 128 wells/section (1 well/5 acres). The Operators propose a minimum of 64 well pads per section (1 pad/10 acres).

The Draft Environmental Impact Statement has analyzed ten alternatives including the "No Action" alternative. BLM's preferred alternative for drilling an additional 3,100 gas production wells will generate 12,525 acres of new surface disturbance, 519 miles of roads and pipelines. The preferred alternative does not include directional drilling and therefore, in addition to the 497 existing wells, the number of total wells/drill pads is 3,597. Although directional drilling is not included in the preferred alternative, the alternative does propose that the project include consolidation of well production facilities such as production water collection and the use of telemetry systems to reduce individual life of project disturbance.

It should be recognized in this EIS for leases being allowed to apply infill under this EIS, that when the area was originally leased by BLM, that little was understood concerning the difficulties of producing gas from tight sands that would require a very dense well spacing. The current NEPA action is evaluating the ability of BLM to allow an unusually high well density that would have impacts to other resources beyond what was considered under the original leasing decision, i.e. a typical 40-acre or greater well spacing. Just as BLM is currently reconsidering the Powder River Basin Coal Bed Methane development unusual development externalities such as disposal of large quantities of water, the FEIS needs to focus on reducing impacts of the preferred alternative to air, water and wildlife that were not anticipated or considered under the original leasing decision in order to be able to apply the appropriate level of stipulations.

Purpose and Need (Page 1-3)

The DEIS states the purpose of the project is to provide for development of the gas resource and prevent drainage of federal minerals by wells located on adjacent private and state leases. However, the leases in the Jonah field are almost all federal with only two sections or 1280 acres that are state leases. In addition, because of the nature of the tight sand gas reservoir for this field, as is demonstrated in this DEIS, very intense well

densities are required in order to economically remove the gas. These same reservoir properties also make drainage of off-lease gas very difficult since the influence of a nearby gas well production well is also minimal. Since drainage is of little potential, BLM should remove this from the discussion in the section on Purpose and Need.

The combination of the mineral and land ownership, plus the unlikely potential for even minimal drainage, allows BLM to consider additional or unconventional approaches to mitigation that would not be practical in other mineral lease developments where leases are more evenly split between private/federal and state leases.

Range of Alternatives (Section 2.5, Pages 2-5 to 2-31)

Although BLM has provided ten alternatives in the DEIS, most of the alternatives are heavily weighted toward a quick rate of drilling approach which impacts the entire area. With the opportunities presented as a result of the majority of the leases being controlled by BLM, additional alternatives could present development scenarios that would control the rate of development and the geographic focus of additional infill.

Another alternative could also look at enlarging the project area from the standpoint of wildlife habitat and improvements. The EIS could establish zones of habitat protection of high value and habitat improvement needs in other areas within the zone. Because the surface impacts will be quite intense due to the well density, as the DEIS points out, there will be significant habitat losses that will require wildlife to avoid or move out of the area. Prior to implementing the proposed action, BLM should provide more monitoring and analysis on the habitat surrounding the Jonah field and consider establishing habitat protection areas and improvement buffers that would provide suitable habitat. EPA recommends these stipulations be included in the FEIS.

For this project, BLM has the opportunity to effectively control the rate of development. BLM would also be able to focus or phase the development to avoid impacting the entire project area at once. Furthermore, the land surrounding the Jonah project area is also primarily owned by BLM, making nearby compensatory mitigation more easily implemented and likely to alleviate impacts to wildlife populations directly affected by the project's intensive surface disturbing activities. The BLM could also consider a management approach to drilling practices that would require drilling to be limited geographically to a small area and that reclamation of vegetation and habitat be completed prior to additional nearby drilling.

BLM Preferred Alternative (Section 2.14, Pages 2-22 to 2-31)

Under the 24% and 19% disturbance areas for the preferred alternative, BLM requires the following, "well pad density limitation would be applicable until monitoring data, with up to 10-year trends, conclusively show that denser than 40-acre surface spacing meet performance-based field development and production objectives." This requirement needs to also be applied to the 14,310-acre area being considered for up to 34% disturbance, also under the preferred alternative.

The statement above, concerning well pad density limitation, indicates the potential for the operator to proceed with multiple wells from a much less dense pad spacing (one pad per 40 acres) rather than waiting for ten years of monitoring data.

The DEIS preferred alternative does not explicitly include directional drilling as an option to further reduce surface impacts. The project could reduce many of the impacts that will result from surface disturbance by employing directional drilling to further consolidate production facilities above what is suggested in the DEIS. Other projects where recent infill activities are going on have required directional drilling to reduce surface impacts. If this well drilling method is not applicable, the DEIS should present information stating why this widely used method of reducing surface impacts is not being considered for this project.

BLM Preferred Alternative Outcome Based Performance Objectives (Section 2.14.1)

EPA agrees with the list of performance objectives listed under this section. However, Chapter 4 of the DEIS shows that some of these objectives will not be met under the preferred alternative. For example, because the surface water modeling was not included in the DEIS, it is not known if the project activities will maintain sediment erosion (salt and silt discharge rates) at WDEQ- and BLM-acceptable levels. The objectives in this section should be reiterated in the appropriate resource sections of Chapter 4 and it should also be demonstrated (in the FEIS) how appropriate levels of mitigation or development practices will be implemented to meet these objectives.

General Conditions of Approval, Mitigation, Monitoring, Surveying, and Best Management Practices (Section 2.14.2, Pages 2-27 to 2-30)

EPA commends BLM for the requirements under this section. The approaches to limiting pad size through centralization of development and production facilities, reducing air emissions through flare-less or green completions, and especially to apply WDEQ storm water discharge specifications, standards and permitting requirements to all well pads and roads to reduce or eliminate surface sediment discharges is an aggressive approach. In addition, the use of remote telemetry to monitor wells when combined with other potential vehicle trip saving practices will reduce fugitive dust and wildlife impacts.

Compensatory Mitigation (Section 2.14.4, Page 22-31)

BLM should consider providing compensatory mitigation concurrent with development in the FEIS. The development should progress in such a way as to look for habitat improvements that could be made concurrently with development on nearby land.

Riparian and Wetlands Area (Section 3.2.1.2, Pages 3-54 to 3-55)

Although the section has indicated that wetlands verification was conducted, the discussion did not mention the "functioning condition" of the wetlands resource area within the project area. EPA recommends this information be included in the FEIS.

Based on recent court rulings, it should also be noted that the Wyoming General Permit, under Section 404 of the Clean Water Act, regarding oil and gas activities and wetlands may no longer be viable. Consequently, individual permits may now be necessary for these activities.

Soils - BLM Alternative (Section 4.1.7, Pages 4-37 to 4-50)

Significant Impacts

Under all scenarios in the DEIS, significant short-term impacts to soils are anticipated and these impacts could also lead to increased storm water runoff, erosion, sedimentation and increased invasive vegetation. Most of the soils in the JIDPA have a naturally high erosion potential and have limited rehabilitation due to one or more characteristics, including thin soils, shallow depth to bedrock, excess salts, excess sand and /or small stones, clayey textures, and excess lime (page 4-38).

Under the preferred alternative, almost half of the surface disturbance of 12,525 acres would be located in Sand Draw-Alkali Creek. BLM has applied the no-surface occupancy stipulations for some leases near Sand Draw. However, large amounts of vegetation removal and soil erosion could indirectly impact the Sand Draw-Alkali Creek drainage through increased sediment loads and changes to channel stability and hydrology. EPA believes it is important that the BLM address this issue with the proposed modeling that will be provided in the Final EIS.

Analysis and Modeling Deficiencies

The DEIS states that soil loss modeling will be provided in the Final EIS (Page 4-37). As pointed out above, the potential for increased sedimentation, erosion, runoff and invasive species analysis also depend on this analysis. This analysis should be reviewed in the FEIS in view of the soil loss modeling results.

Surface Water and Ground Water (Section 4.1.8, Pages 4-50 to 4-61)

Significant Impacts

As stated in the DEIS, "Potential impacts to surface and/or ground water resulting from the project include increased turbidity, salinity, and sedimentation of surface waters due to runoff and erosion from disturbed areas; accidental spills of petroleum products or other pollutants; discharge of unsuitable quality produced water and/or pipeline test water; and cross-aquifer mixing. Impacts to surface water from development generally would result from increased runoff from disturbed areas. With increased surface disturbance acreage, there may be a corresponding decrease in water quality (increased sediment loads in runoff waters) and increased runoff rates."(Page 4-51)

Since this project is located within the Green River Watershed which is a tributary to the Colorado River Drainage Basin, BLM should consider the potential for salinity loading from project runoff and recognize the requirements within the Colorado Salinity Compact.

The DEIS states, "No impacts to and/or from flooding are anticipated because areas adjacent to drainages would be avoided." However, flooding can also result from significant surface disturbance within the watershed increasing runoff rates. This scenario should be discussed in the FEIS

Analysis and Modeling Deficiencies

BLM states in the DEIS that they will provide modeling in the Final EIS to determine any corresponding decreases in water quality, increased runoff rates and sediment loading as a result of the project activities.

BLM also points out in the analysis on page 4-52 that, "While proper design, construction, and maintenance of proposed facilities would reduce erosion potential, these actions may not entirely compensate for anticipated increased flows." Based on the modeling that will be provided, BLM should consider additional mitigation in the FEIS to further reduce runoff, if necessary. These additional approaches could entail limiting the amount of surface disturbance allowed within a watershed at any one time to avoid significant impacts.

The analysis of impacts resulting from the preferred alternative are only listed in terms of acres of surface disturbance. Although it is pointed out by BLM that additional modeling of impacts to surface water will be provided in the Final EIS, the DEIS is lacking the pertinent information to be able to determine the extent of impacts that will result from implementing the preferred alternative. EPA requests that the analysis be provided in the Final EIS so as to allow reasonable determinations as to whether water quality standards are being met.

Vegetation - BLM Preferred Alternative (Section 4.2.1 Pages 4-66 to 4-75)

Significant impacts are anticipated to vegetation in the project area through loss of habitat, forage, and soil protection, and increased growth potential for invasive, non-native species under any alternative. We believe the Final EIS should include more specific actions that could be taken to minimize the effects of invasive, non-native species on disturbed lands.

Wildlife and Fisheries (Section 4.2.2 pages 4-75 to 4-93)

Sage Grouse and Sage Dependent Species General Comment

The BLM Preferred Alternative does not include a clearly defined management plan for protection of the greater sage-grouse population in the area. The EIS indicates that a

surveying and monitoring plan will be developed; however, there is no indication as to how this information is to be used, or whether any attempt will be made for protection of sage-grouse or their habitat. As noted in the document (page 3-63), areas in central and western Wyoming cumulatively represents one of the species' last strongholds. As also acknowledged (page 3-67), the management strategy (e.g., keeping activities within specified distances from active leks) is not successful and the population is in active decline in the area. The DEIS suggests that protecting a boundary surrounding the lek during specified months is protective of the species.

BLM may wish to consider developing a more robust management plan, specific to the conservation of greater sage-grouse brooding and nesting habitat. The plan may include a systematic approach for selecting and maintaining areas of existing contiguous sagebrush stands, which are critical for sage-grouse survival. EPA recommends that BLM consult with the U.S. Fish and Wildlife Service regarding this issue.

Raptors

Page 2-28, Section 2.14.2, bullets 10 and 11: There are two different distance limitations/requirements established for construction/location of well pads, access roads, and other above-ground facilities within raptor nest areas. The distances presented in Bullet 10 would result in facilities being constructed and thus may be in active operation during nesting. The distances presented in bullet 11 are recommended for all facilities, regardless of the season. These two statements appear to be contradictory and should be clarified in the FEIS.