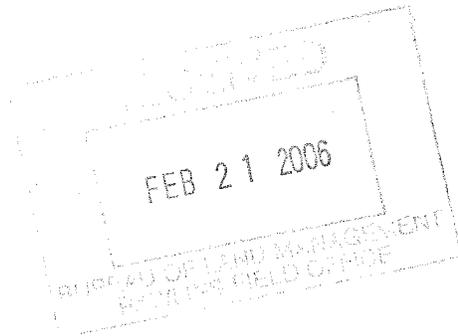


**WYOMING OUTDOOR COUNCIL • JACKSON HOLE
 CONSERVATION ALLIANCE • CENTER FOR NATIVE
 ECOSYSTEMS • GREATER YELLOWSTONE COALITION • THE
 WILDERNESS SOCIETY • BIODIVERSITY CONSERVATION
 ALLIANCE • ENVIRONMENTAL DEFENSE • TROUT UNLIMITED
 • NATIONAL WILDLIFE FEDERATION • UPPER GREEN RIVER
 VALLEY COALITION • WYOMING WILDLIFE FEDERATION**

February 13, 2006

Mike Stiewig, Project Lead
 Bureau of Land Management
 Pinedale Field Office
 432 East Mill Street
 P.O. Box 768
 Pinedale, Wyoming 82941



**Re: Comments on the Jonah Infill Drilling Project
 Final Environmental Impact Statement**

Dear Project Manager:

Please accept these comments from the Wyoming Outdoor Council, Jackson Hole Conservation Alliance, Center for Native Ecosystems, Greater Yellowstone Coalition, The Wilderness Society, Biodiversity Conservation Alliance¹, Environmental Defense, Trout Unlimited, National Wildlife Federation, Upper Green River Valley Coalition, and the Wyoming Wildlife Federation regarding the Jonah Infill Drilling Project Final Environmental Impact Statement.

WILDLIFE ISSUES

As noted in the comments of Wyoming Outdoor Council (“WOC”) et al., dated April 9, 2005, regarding the Jonah Infill Draft EIS, impacts to wildlife, particularly pronghorn antelope and greater sage grouse, are nothing short of extreme under every one of the alternatives under consideration. Although the Jonah FEIS simplifies the range of alternatives presented, provides some additional information regarding wildlife impacts, and is notable for its candor regarding the severity of certain impacts, it nevertheless continues to present several major deficiencies with regard to wildlife. First, the FEIS fails to meet BLM’s obligations under the Federal Land Policy and Management Act, 43 U.S.C. § 1712, and the Pinedale Field Office Resource Management Plan (“RMP”). Second, as previously noted in the April 9, 2005 comments of WOC et al., the FEIS, like

¹ Biodiversity Conservation Alliance signs on to these comments only with respect to the comments on Air Quality Issues and Wildlife Issues. It will provide its own comments on other issues.

the DEIS, fails to provide an adequate disclosure of direct, indirect, and cumulative impacts to wildlife as required by the National Environmental Policy Act, 42 U.S.C. § 4332(2)(C). Third, given the severity of wildlife impacts under all alternatives, the FEIS fails to provide certain, concrete, and adequate assurances of mitigation of those impacts, either on- or off-site. Fourth, the FEIS and alternatives proposed violate FLPMA § 202(c)(9) by failing to adequately take into account, respond to, or rectify inconsistencies with the State of Wyoming's minimum recommendations for development of oil and gas resources in crucial and important wildlife habitats on BLM lands. Fifth, the FEIS fails to provide an adequate response to the April 9, 2005, comments of WOC et al.

Alternatives Under Consideration Violate FLPMA and the Pinedale RMP

FLPMA mandates that the Secretary of the Interior manage the public lands in accordance with land use plans development under FLMPA § 202. 43 U.S.C. § 1732(a), 43 C.F.R. § 1610.5-3(a).

The FEIS contends that the proposed project is in conformance with the 1988 Pinedale Resource Area Resource Management Plan ("PFO RMP") and 1997 Green River Resource Area Management Plan ("RSFO RMP"). FEIS at 1-9 to 1-11. However, this discussion focuses almost entirely on fluid minerals management objectives, giving short shrift to the wildlife management objective of the PFO RMP. The Pinedale RMP specifically provides that "wildlife habitat management will be oriented towards the maintenance of fish and wildlife habitats to support populations at 1987 Wyoming Game & Fish Department planning objective levels. Activity planning will emphasize habitat enhancement and protection." PFO RMP at 21; *see* Jonah FEIS at 1-11.

The FEIS acknowledges that the level of development in the Jonah Field is, at best, in serious conflict with this objective due to well densities already authorized. FEIS at 1-11 ("However, well spacing authorized prior to 2004 has resulted in adverse impacts to some species.") Moreover, current conditions in the project area reflect an ongoing failure to meet the RMP's wildlife objectives. Wyoming Game and Fish Department ("WGFD") lek counts have shown precipitous declines in sage grouse attendance (and by extension population) in the area—declines "occurring at a faster rate in areas with oil and gas development." FEIS at 3-62. BLM candidly acknowledges that, "[g]iven the noted decline in greater sage-grouse use of the [Jonah Infill Development Project Area ("JIDPA")], existing protection measures within the JIDPA appear to be inadequate." *Id.* Similarly, the area has already been rendered all but entirely unsuitable for pronghorn antelope, despite the fact that the affected herd is already below WGFD population goals. Jonah FEIS at 3-54. Thus, the FEIS faces the fact that existing development is already making meeting the PFO RMP's wildlife objectives difficult or impossible, yet proposes to intensify levels of development even further. Neither pronghorn nor sage grouse population nor habitat has been "enhanced and protected" as required by the RMP.

The FEIS's response to this inconsistency is the claim that, "[t]o mitigate the additional impacts of infill drilling, the Operators have proposed off-site mitigation aimed at habitat enhancement linked to various levels of authorized surface disturbance." Jonah

FEIS at 1-11. We agree that, given the severe loss and disruption of habitat in the Jonah Field, onsite mitigation cannot adequately substitute for lost habitat function. However, as discussed below, the proposal for offsite mitigation is so vague and devoid of any site-specific analysis that it is impossible for BLM to even claim to back up its contention that offsite mitigation “would result in a positive impact to wildlife in the area.” FEIS at 1-11. This contention is without substantive support in the FEIS.

The FEIS Fails To Provide An Adequate Disclosure Of Impacts To Wildlife

Although the FEIS incorporates some additional discussion of wildlife impacts, it unfortunately fails to answer the fundamental questions necessary to determine the true nature of those impacts, and, in particular, the ability of proposed mitigation measures to compensate for them. As noted above, “[s]ite-specific surveys of the JIDPA conducted over the last few years indicate that while the area is still used for nesting and summer and winter foraging, use of the area by greater sage-grouse continues to decline.” FEIS at 3-62. Similarly, the FEIS notes low populations and reproductive success for pronghorn in an area including the JIDPA, although it provides little in the way of the specific parameters necessary for meaningful assessment of impacts to big game. FEIS at 3-54.²

The existing Decision Record for the Modified Jonah Field II Natural Gas Project commits to wildlife monitoring, calling on BLM to “monitor wildlife population trends . . . and avoid and/or minimize adverse impacts to wildlife.” Jonah ROD at D-1. However, while the FEIS reasonably predicts adverse impacts to major species, it acknowledges that adequate, quantitative monitoring data is lacking:

Because the Jonah Infill Project would disturb pronghorn spring/summer/fall range, it is reasonable to assume that the project would have some adverse impacts to pronghorn populations as a result of direct habitat removal and a reduction in habitat function on areas adjacent to development activities. However, specific quantitative estimates of such impacts are not possible because the requisite research has not been done. Lindzey (2002), commenting on impacts to big game from oil and gas development, said:

Changes resulting from energy development, undoubtedly, will influence wildlife populations, yet little [research] is available to support inferences about the degree of population-level effects or the best way to address possible impacts. Understanding the population-level effects of disturbances, such as those realized during energy exploration and development require more than the short-term, observational studies biologists now have to rely on.

² These parameters are, documented over time at least every other year: adult female survival, over-winter juvenile survival, reproduction, and density. See Sawyer, McDonald & Strickland, *Annual Report, Sublette Mule Deer Study (Phase II): Long-term monitoring plan to assess potential impacts of energy development on mule deer in the Pinedale Anticline Project Area* (2004).

FEIS at 4-62. Similarly, BLM acknowledges that “no peer-reviewed scientific literature exists to assess possible energy-related effects on migration of the Sublette [pronghorn] Herd Unit.” FEIS at 4-63. Given these acknowledged gaps in scientifically-credible data necessary to meaningful impact assessment, NEPA mandates that the agency obtain the information, unless unreasonable to do so, prior to acting. 40 C.F.R. § 1502.22(a), (b). Given the productivity of the Jonah Field, the amount of resources at stake, and the importance of the wildlife resource, it would defy reason to contend that the costs of obtaining vital wildlife monitoring and impact information is “exorbitant” and therefore justify proceeding without complete information. 40 C.F.R. § 1502.22(a).

Although NEPA does not require BLM to achieve complete certainty regarding the environmental impact of a proposed project, the Act does require all federal agencies to make every reasonable effort to obtain the requisite information to make an informed and environmentally sound decision. 42 U.S.C. § 4332(2)(C). CEQ’s regulations implementing NEPA expressly mandate that “[i]f . . . incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement.” 40 C.F.R. § 1502.22(a) (emphasis added). The agency is excused from gathering information only if “the overall costs of obtaining it are exorbitant or the means to obtain it are not known.” In that case, the regulations require disclosure of the missing information, its relevance, a description of existing information, and the agency’s evaluation of that existing information. 40 C.F.R. § 1502.22(b).

The Jonah Infill FEIS, while reflecting to some extent information obtained during monitoring associated with past and ongoing operations in the field, still does not provide the basic information about habitat resources needed for an informed evaluation of the costs of the extraordinary density of proposed development. With respect to sage grouse habitats apart from leks, for example, the FEIS provides that “Important greater sage-grouse wintering habitat within the Jonah and Anticline Fields and surrounding areas currently is being identified by the BLM in cooperation with WGFD. Identification of sage-grouse wintering areas will be based, at least in part, on aerial winter sage-grouse surveys.” FEIS at 3-65. The time for this information, under CEQ’s NEPA’s regulations, is not after sage grouse habitat is developed at levels of 19% to 34% total ground disturbance and essentially-total fragmentation. NEPA requires that BLM acquire at least a basic understanding of the resources at stake before taking action. Here, particularly given the high yields of the Jonah Field to date, BLM has not even begun to make a showing that the costs of obtaining the information are exorbitant, particularly relative to the benefits already reaped by lessees. Moreover, the existence of concrete measures to obtain the necessary information after the fact clearly indicates that the means to obtain it are known; simply the will to obtain it in time to do anything with it is lacking.

The Jonah Infill DEIS also fails to provide useable information regarding the efficacy of the mitigation measures it does rely upon (save for the acknowledgment that existing measures have already to date been unsuccessful in stemming sage grouse

declines, FEIS at 3-62). “It is assumed that the application of identified mitigation and protection measures would reduce impact levels; however, the efficacy of many mitigations is unknown. Therefore, no quantitative variation in impact levels based upon the application of variable mitigations is provided.” FEIS at 4-2. Although NEPA and its implementing regulations certainly do not require quantitative certainty in all cases, this concession reflects the basic problem with BLM’s approach here. BLM is rushing ahead to authorize unique densities of development, without understanding the effect to which its standard mitigation measures can alleviate impacts even from lesser levels of development.

1. The FEIS Fails To Adequately Analyze Impacts To Pronghorn And Pronghorn Habitat

The JIDPA is located at the core of the north sub-unit of the Sublette Herd Unit for pronghorn antelope. FEIS at 3-54. This herd is already below 85% of WGFD’s population objective, and has been adversely affected in recent years by low fawn/doe ratios and drought conditions and low forage production. DEIS at 3-56. Although federal land management action cannot eliminate drought, it directly influences other important factors that contribute to pronghorn habitat condition, behavior, and population levels. 2.5% of this herd unit’s crucial range has already been directly disturbed. FEIS at 3-54. BLM, however, fails to provide any information as to (a) *what proportion of this crucial habitat’s effectiveness has been lost*, given that the impact of disturbance on pronghorn extends beyond the immediate footprint of development, or (b) what this loss of crucial habitat means for the behavior of pronghorn or crucial factors relating to population trends, including fawning rates and fawn survival.

With a population already below objective and under stress from drought, BLM now proposes an extraordinarily dense level of development directly in the path of documented pronghorn migration routes. *Id.* Based on scoping, BLM identified the problem in the DEIS:

Current developments in the region were identified as already having adversely affected the historic migrations of the Sublette antelope herd. Continued development within the JIDPA and at other locations within the Sublette herd unit area were identified as potentially cumulatively affecting pronghorn antelope seasonal migrations. Hunters, wildlife enthusiasts, and wildlife management agencies all consider the maintenance of existing migratory corridors extremely important to pronghorn population maintenance.

DEIS at 2-3 (emphasis added). Unfortunately, the FEIS neither provides adequate scientifically credible information with which to assess the effects of this development. BLM, for example, fails to discuss the recommendations of the Wyoming Game and Fish Department, the supporting science behind those recommendations, or the Department’s refutation of BLM’s accepted myths regarding wildlife “adaptation” to development in migration corridors:

Long-term displacement of wildlife from preferred habitats and disruption of migration routes could, in the extreme case, extirpate “migration memory” that required several thousand years to evolve. Each successive cohort of young ungulates learns the locations of suitable winter habitats and migration routes from older, experienced females that lead them (e.g., Baker 1978, Mackie et al. 1998:44). Extended disruptions of migration or habitat use can result in loss of learned behavior from entire cohorts of young animals, breaking the tradition of migration to the most suitable winter habitats.

Minimum Recommendations for Development of Oil and Gas Resources within Crucial and Important Wildlife Habitats on BLM Lands 8 (Sept. 10, 2004).

In addition, the pronghorn report recently compiled and reported on in the media by the Wildlife Conservation Society indicates a complete abandonment of the Jonah Field by collared pronghorn, based on the results of over 56,000 satellite locations.³ The continual fracturing of previously undisturbed lands is leading to reduced usage and abandonment of small habitat parcels, according to WCS authors. Habitat fragmentation at up to 5-acre spacing sets an unacceptable precedent for habitat elimination in the Jonah Field.

The Jonah Infill FEIS plainly involves extreme levels of development within and immediately adjacent to documented pronghorn migration routes. The FEIS, however, despite acknowledged existing stresses on the Sublette herd, fails to provide adequate scientifically credible data about the potential extent of this phenomenon, or, most importantly, how its long-term effect might be alleviated, if that is even possible.

2. The FEIS Fails To Adequately Analyze Impacts To Sage Grouse And Sage Grouse Habitat

As BLM acknowledged in the FEIS, the greater sage-grouse has been extirpated from two states, and is in serious decline across its range. FEIS at 3-57. Central and western Wyoming, including the JIDPA, represents one of the species’ “last strongholds.” FEIS at 3-62. Nevertheless, the species has experienced regional declines as high as 73% in Wyoming as well. *Id.* “Changes in the sagebrush-dominated areas where birds typically reside,” including “fire, plant invasions, land conversions, urbanization, livestock grazing, energy development, noise, and others,” are principal factors in this decline. *Id.* Unfortunately, the Jonah Infill Project continues this trend of eliminating habitat for a declining population, while failing to ameliorate this destruction through protection or restoration of habitat.

³ Brodie Farquhar, “Antelope Need Some Quiet Time,” *Casper Star-Tribune*, Jan. 17, 2006. Given the Wildlife Conservation Society’s research on antelope impacts in the area, BLM should, pursuant to 40 C.F.R. § 1502.22, defer action on the Jonah Infill proposal until such time as it can adequately take into consideration the results and implications of that research.

The BLM's preferred alternative only accelerates this habitat loss, and must compensate for this loss by protecting or restoring other habitat for the species.

The new sage-grouse report entitled, "Greater Sage-Grouse Population Response to Natural Gas Development in Western Wyoming" by Matt Holloran and Stan Anderson, (available at <http://www.voiceforthewild.org/SageGrouseStudy>) states that "greater sage-grouse are ultimately excluded from breeding within the development boundaries of natural gas fields." Indeed, Wyoming Game & Fish lek count data show an average 61% decline in lek counts within the Jonah Field, with most leks in a continual declining trend.

Like many other BLM projects, the Jonah Infill project employed BLM's standard state-wide lease stipulations and conditions of approval for sage grouse habitat: a buffer zone of a mere 0.25 mile around occupied leks, and seasonal limitations on initial drilling within two miles of a lek and in breeding, nesting, and wintering areas. As BLM acknowledges, however, "these [timing] stipulations do not preclude exploration and development from occurring in nesting and wintering habitat outside of the timing restriction dates, and therefore, habitat is not protected from development." FEIS at 3-62 (emphasis added). With admirable candor, BLM admits that "[g]iven the noted decline in greater sage-grouse use of the JIDPA, existing protection measures within the JIDPA appear to be inadequate." *Id.* Unfortunately, this candor is not matched by a commitment to either (a) minimize impacts from further drilling within the JIDPA, such as might arguably be achieved through Alternative B, provided that said alternative both meets air quality obligations *and* incorporates compensatory (offsite) mitigation; or (b) compensate for the decline within the JIDPA by ensuring added protection and/or restoration of other sage grouse habitat, as discussed below.

When considering off-site mitigation for sage grouse, the agency needs to have a *pre-development* plan identifying appropriate areas necessary for maintaining grouse movement, migration corridors, and functional habitats. As BLM acknowledges, in areas where extreme levels of disturbance and fragmentation have already occurred,⁴ management emphasis should focus on protecting remaining suitable sagebrush habitat. FEIS at 4-64. Without mapping of habitat and understanding of habitat function, how can the BLM contend that it has a mitigation plan that will actually improve wildlife conditions? Under every alternative, even alternative B, fragmentation of habitat within the project area is essentially total. FEIS at 4-68. Given this loss of habitat, if function is to be restored through mitigation, a considered, pre-development plan for *how, where, and when* habitat will be located, improved, protected, and/or restored is necessary to meet BLM's obligations under FLPMA, the PFO RMP, and its sensitive species obligations with regard to sage grouse. However, as of this FEIS, it has not even begun to undertake that necessary analysis.

⁴ Fragmentation in the Jonah Field is already extraordinarily high, with 87.4% of all lands within 0.25 mile of disturbance and 75.7% within 0.125 mile of disturbance. FEIS at 4-66. Patch size for sage grouse has been reduced to as small as 3 acres. *Id.* At 4-67.

3. The FEIS Fails to Adequately Analyze Impacts to Mule Deer and Mule Deer Habitat

While mule deer have not generally used the Jonah Field area for crucial winter range, they have traditionally used it during their annual north-south migrations between important habitats, during normal winters, and in transitional months. BLM states they have not analyzed impacts to mule deer because in 2004 TRC Mariah has only occasionally seen them there. Yet Wyoming Game & Fish Big Game Harvest data for 2001 shows 296 mule deer bucks harvested from the Boulder hunt of which the Jonah Field is a part

The study in similar habitat, directly adjacent to the Jonah Field entitled, “Sublette Mule Deer Study (Phase II): Long-term monitoring plan to assess potential impacts of energy development on mule deer in the Pinedale Anticline Project Area” by Hall Sawyer et al. (footnote 1, *supra*), states that “Natural gas development on the Mesa displaced mule deer to less suitable habitats.” Average mule deer winter population declines of 46% have occurred in this adjacent natural gas field.

Sawyer’s work on the Anticline has implications for the Jonah Field because “... reduction in effective winter range size, as potentially brought about by extensive natural gas development ... may increase deer density on remaining winter ranges, reducing forage quality, fawn survival, and over-winter carrying capacity.”

The FEIS’s discussion of mule deer is limited to the observation that “mule deer have been observed in the area (TRC Mariah 2004a), but no range designation for mule deer has been delineated in the JIDPA by the WGF, so mule deer are not discussed further.” FEIS at 3-53. Given the clarity to which severe impacts to mule deer have been documented in the adjacent Pinedale Anticline, such a dismissal of mule deer impacts is unwarranted and contrary to BLM’s NEPA mandate to make every reasonable effort to obtain requisite information necessary to an informed and environmentally-sound decision. Without analysis of mule deer use of both the Jonah Field and the Pinedale Anticline, and an assessment of how these projects may interact to alter habitat use (including where displaced animals will go), the FEIS’s discussion of direct, indirect, and cumulative effects on mule deer is inadequate.

Proposed Mitigation Is Too Vague, Indefinite, And Uncertain To Compensate For Acknowledged Impacts

Presumably in response to the exceptionally high levels of negative environmental impact, and the exceptional profitability, of the Jonah Field, the fields operators have themselves proposed resources for compensatory (including off-site) mitigation of environmental impacts. “Some Operators have . . . acknowledged that the level of development that would occur under the Proposed Action and other alternatives presented in the EIS would result in impacts that cannot be sufficiently mitigated within the JIDPA.” FEIS at 5-11. Although we are hesitant to endorse offsite mitigation as a cure-all for impacts that could otherwise reasonably be avoided, we recognize that, under

certain circumstances, full exploitation of one resource (i.e., gas resources underlying the Jonah Field) may result in unavoidable and excessive damage to other resources (here, wildlife habitat and recreational opportunity). In this case, the Operators are quite correct: the density of development underway and proposed for the Jonah Field result in impacts that cannot be mitigated within the field. *See* FEIS at 3-63, 4-56, 4-62 to -67. Given this level of disruption, offsite mitigation is may be the only way to reduce net impacts. Indeed, such circumstances of extreme impact, WGFD recommendations expressly call for compensatory mitigation as a means of reducing net, if not onsite, impact. *See* WGFD Recommendations at 74-76. However, simply throwing money at the problem will not necessarily solve it; offsite mitigation measures must be adequately planned to provide a reasonable substitute for the habitat that is lost or degraded. For example, where, as here, extreme impact thresholds for sage grouse are to be exceeded, WGFD recommends as follows:

Opportunities may exist to partially offset the loss of nesting and brood-rearing habitat by implementing habitat treatments in appropriate locations outside the well field. This type of mitigation is exceedingly difficult and expensive to accomplish effectively, and should not be looked upon as a prescriptive solution to authorize high-density well fields in important sage grouse habitat. The most effective strategy is to avoid high-density developments. Only if this is not reasonable, plan effective habitat treatments in locations that minimize the loss of habitat function for the grouse population affected by the field development.

Minimum Recommendations at 22 (emphasis added).

In addition to the wildlife-specific recommendations regarding mitigation in the WGFD Minimum Recommendations, we also would direct the BLM's attention to Upper Green River Valley Coalition, *Jonah Infill Position Paper* (2005) (copy attached). This document sets out a set of key considerations identified by local and national community and conservation groups for development of the Jonah Field. Specifically for wildlife, the Position Paper emphasizes the need to

- Mitigate impacts on-site, first. Don't make Jonah a national sacrifice zone.
- Make off-site mitigation meaningful. This means:
 - Replace habitat lost with equal habitat function, on land that's actually protected for the long-term
 - Don't focus just on vegetation treatments – marginal improvements to habitat is less important than obtaining fully-functional replacement habitats
 - Monitoring and studies aren't mitigation – they're the information needed, both *before* and during development, to understand where mitigation can work
 - Off-site mitigation can't substitute for the protection of critical areas such as migration corridors, crucial winter range, and sage-grouse leks
 - Meaningful offsite mitigation includes lease retirement or exchange, to preserve other still-functioning habitat for the long term

- Tying mitigation funding to number of wells sets a bad precedent. Mitigation should be based on what's needed to ensure no net loss of habitat – not on how much money the Operators are making.

Because “mitigation measures fall within the actions the Secretary of Interior can direct to prevent unnecessary or undue degradation of the public lands and protect surface resources”, FEIS at 4-117, we strongly recommend that effective mitigation measures (both onsite and offsite) to both avoid additional habitat and population loss be both required and adequately funded by the Operators.

To prevent further, unacceptable deterioration of wildlife habitats and populations, a rigorous application of both on-site and off-site mitigation must occur. Therefore, we recommend that BLM implement Alternative B (subject to air quality compliance, as discussed below), and require that all new wells be drilled from existing pads. However, given the level of impact already occurring and inevitable even under Alternative B, meaningful offsite mitigation should be required.

In addition, *the pace of development must be regulated* to allow for a reasonable reclamation schedule and to implement mitigation strategies required to conserve remaining wildlife populations. BLM's conclusion that phased development will result in “stuck pipe...[and] blow-out potential” (FEIS at 2-8) is not substantiated.

1. On-site Mitigation

Because the Jonah Field is “widely acknowledged to be one of the most highly concentrated, highly productive sweet natural gas fields in North America (FEIS,1-1) its notoriety sets broad, national standards for how a gas field is developed. That standard is a dismal failure when considering Best Management Practices for wildlife management. Despite almost complete abandonment by most indigenous species, it is not too late to begin structuring a new paradigm that attempts to set the best possible standards for future natural gas development in the Upper Green River Valley and beyond.

“Significant impacts to various wildlife habitats in the JIPDA have already occurred as a result of past and current oil and gas development activity... [and] additional significant impacts to some of these species are anticipated” (FEIS, vi).

The fact is, current wildlife studies show a degree of increasing abandonment by wildlife from the Jonah Field beyond any acceptable, biological level, and the on-site “mitigation strategies” suggested in Chapter 5 of the FEIS, including low-profile tanks, expanded monitoring, and altered seasonal restrictions are currently being used and do nothing to prevent continued abandonment by indigenous wildlife from the field.

Because existing on-site mitigation is obviously failing, and due to the important wildlife populations that are directly and indirectly affected by development in Jonah, BLM should also require additional on-site mitigation.

- Noise – Minimize the effects of continuous noise on breeding birds, including sage grouse, by requiring that any additional compressors be enclosed.
- Phased Development Schedule – despite BLM’s belief that phased development options are too complex for the public and agencies to understand, require that no more than 75 wells per year be drilled, as indicated in Alternative B.
- Directional Drilling – as indicated in Alternative B.
- Minimize and Share Facilities – on all new wells.
- Minimize the footprint of development (e.g. roads, pad size, intermediate reclamation, etc.) – where ever possible.
- Interim reclamation – Provide revegetation as soon as possible after ground disturbance, including on spoil piles, with native species, to minimize loss of vegetation, prevent erosion, hasten final reclamation, and prevent establishment of unwanted vegetation such as cheatgrass.
- Evaluate final reclamation and ensure the site is meeting requirements – continue to evaluate ways to produce vegetation that will aid in establishing the site back to a natural state; and to meet other objectives such as forage/browse for wildlife winter use, spring use, etc. Do not stop with only one attempt at reclamation: require secondary reclamation, including eradication of existing weeds and reseeding, until desirable, native vegetation is successful.
- Noxious weed control – much of current disturbance is covered with noxious weeds, including Russian thistle and halogeton. Begin an aggressive program to eradicate all noxious weeds and replace with native vegetation.
- Remove condensate and produced water with pipelines – along existing right-of-ways
- Remote Production Monitoring – use to the greatest extent possible
- Minimize roads (including numbers as well as standards) - In some cases two-tracks may be suitable for the level of maintenance needed, and in some cases the well heads are close enough to main trunk roads for maintenance crews to walk to. Eliminate all unnecessary roads, and reclaim to two-tracks those that are absolutely essential
- Ensure Best Management Practices for continued field development, especially between companies – Have companies evaluate and pursue BMPs together, and publish them for others to consider and use as conditions allow

2. Off-site Mitigation

Section 5.2 (Compensatory Off-Site Mitigation) suggests strategies that may alleviate or mitigate unacceptable, on-site degradation. However, the suggestions in section 5.2.2 are a mix of mitigation strategies for a variety of resource value losses, and should be categorized according to the resource they are designed to mitigate. Only some of the suggested mitigation strategies are applicable to wildlife. An emissions inspector, headcut stabilization, community infrastructure enhancements, roadside signs, partnership development, and public access procurement are not applicable to wildlife mitigation, though they may be mitigation strategies for other resource losses.

Wildlife habitat mitigation is not monitoring, studying, mapping or analyzing data. Wildlife habitat mitigation is the replacement of habitat lost in the short or long term that is equal to or better in vegetative, nutritional, protective, or reproductive value, necessary to prevent net loss of wildlife populations within an ecosystem. Unfortunately, the off-site mitigation measures in Chapter 5 of the FEIS are a grab-bag of hypothetical actions – many no doubt useful – without any analysis of where, when, and how they would take place or impact wildlife habitat function. While off-site mitigation will no doubt be necessary given the level of impact to Jonah, the lack of site-specific proposals, cost estimates, or effectiveness analysis, coupled with the lack of any concrete commitments for actions or concrete milestones, makes Chapter 5 wholly inadequate for the purpose.

For example, Chapter 5 proposes that mitigation funds be used to “[p]urchase a large block of sagebrush ecosystem land as close as possible to the JIDPA, that is unencumbered by fluid mineral leases and is adjacent to existing greater sage-grouse habitat, and enhance sagebrush habitat function on that land for the LOP at a ratio of 3:1.” FEIS at 5-15. This is a potentially useful proposal. Unfortunately, absent any information regarding the availability or suitability of such land, all the FEIS can say is that such a purchase might vary “from several thousand to tens of millions of dollars, depending on existing use, location, and parcel size.” *Id.* This is far from the sort of analysis necessary to determine whether there is even a possibility of actually replacing habitat function. Moreover, the caveat that land must be “unencumbered by fluid mineral leases” rules out perhaps the most useful measure available: ensuring that adequate amounts of habitat remain undisturbed by oil and gas development. In short, the suggested off-site mitigation measures for wildlife significantly overlook the most effective, available options for maintenance of wildlife populations, which is their ultimate goal.

The most effective method to maintain public land in the Upper Green River Valley for effective, wildlife habitat is to prevent degradation in the first place. In the Upper Green, the most severely degraded, publicly-owned habitat occurs in areas of oil and gas development. Therefore, to prevent habitat degradation and fragmentation, BLM must:

- (1) Consider which parcels of public land are habitats essential to the annual cycles of the widest array of wildlife species, anywhere in the Pinedale Resource Area, based on best available wildlife studies, maps and professional biologists’ opinion
- (2) Choose lands considered in (1) that allow for maintenance of productive, effective habitat at a 3:1 ratio based on actual, measured habitat size made non-productive in the Jonah Field
- (3) Prevent oil and gas development from occurring on those lands indicated in (1) and (2) by any of the following means:

- a. Allow oil and gas leases to expire on lands already leased, and withdraw them permanently from leasing
- b. Preserve from oil and gas leasing any lands not already leased
- c. Buy back oil and gas leases on lands already leased and withdraw them permanently from leasing
- d. Allow oil and gas operators to trade oil and gas leases in areas of low mineral potential for areas of high mineral potential and in existing natural gas fields, and withdraw them permanently from leasing

Without consideration of options that would allow this sort of long-term protection, and without any pre-development analysis of or commitment to site-specific mitigation measures, the offsite mitigation proposal in Chapter 5 of the FEIS cannot be relied upon to counteract the severe wildlife impacts acknowledged, under all alternatives, in Chapter 4.

The FEIS Fails To Address, And Is Inconsistent With, The State Of Wyoming's Policies For Development In Wildlife Habitat

As noted in the April 9, 2005, comments of Wyoming Outdoor Council et al. at 32-47, the Wyoming Game and Fish Department has developed a set of minimum recommendations for mitigating the impacts of oil and gas development on wildlife. In these earlier comments, we identified numerous inconsistencies between the range of proposed actions and these State policies. April 9 comments at 40-47. Because the FEIS appears to have rectified none of these inconsistencies, we hereby re-incorporate by reference those comments.

FLPMA requires that BLM land use plans be consistent with officially approved resource-related plans of State, local, and tribal governments. 43 U.S.C. § 1702(c)(9); *see also* 43 C.F.R. § 1610.3-2. Site-specific actions, such as the Jonah Infill Drilling Project, must in turn be consistent with BLM land use plans. 43 U.S.C. § 1732(a); 43 C.F.R. § 1610.5-3(a). FLPMA makes extensive provision requiring the BLM to ensure its land use plans and management activities are as consistent with State policies, management programs, and management guidelines as possible. Section 202(c)(9) of FLPMA requires that:

(c) In the development and revision of land use plans, the Secretary shall—

....

(9) to the extent consistent with the laws governing the administration of the public lands, coordinate the land use inventory, planning, and management, activities of or for such lands with the land use planning and management programs of . . . the States and local governments within

which the lands are located, including, but not limited to, [] statewide outdoor recreation plans developed under the Act of September 3, 1964 (78 Stat. 897), as amended, and of or for Indian tribes by, among other things, considering the policies of approved State and tribal land resource management programs. In implementing this directive, the Secretary shall, to the extent he finds practical, keep apprised of State, local, and tribal plans that are germane in the development of land use plans for public lands; assist in resolving, to the extent practical, inconsistencies between Federal and non-Federal plans, and shall provide for meaningful public involvement of State and local government officials, both elected and appointed, in the development of land use programs, land use regulations, and land use decisions for public lands, including early public notice of proposed decisions which may have a significant impact on non-Federal lands. Such officials in each State are authorized to furnish advice to the Secretary with respect to the development and revision of land use plans, land use guidelines, land use rules, and land use regulations for the public lands within such State and with respect to such other land use matters as may be referred to them by him. Land use plans of the Secretary under this section shall be consistent with State and local plans to the maximum extent he finds consistent with Federal law and the purposes of this Act.

43 U.S.C. § 1712(c)(9) (emphasis added).

This provision clearly anticipates that at a minimum the BLM must consider the management policies, programs, and guidelines of a State, coordinate BLM management policies and programs with those of a State, and in fact attempt to reconcile any inconsistencies between State and Federal management policies and programs to the extent consistent with Federal policy. These requirements apply to specific management actions, such as leasing, as well as to land use planning, for several reasons.

First, in various places the plain language of the statute states that it applies to management activities, management programs, land use guidelines, land use rules, and land use regulations. Thus, while this provision appears in a section of FLPMA dealing with land use planning, it is apparent this provision is intended to have broader reach. Second, it is now recognized that planning is an ongoing process, not punctuated. Thus, while development of an RMP may nominally have certain beginning and ending points, plans and planning are constantly subject to analysis, revision and amendment, and thus BLM must always be open to consideration of state policies, programs, and guidelines. And last, as recognized in Norton v. Southern Utah Wilderness Alliance, 124 S. Ct. 2373, 2383 (2004), “a land use plan is generally a statement of priorities; it guides and constrains actions, but does not (at least in the usual case) prescribe them.” See also 43 C.F.R. § 1601.0-5(k) (stating plans are “not a final implementation decision”). It would be incongruous for Congress to require consideration of the policies, programs, and guidelines of a State at the typically non-prescriptive planning level but not require equal

consideration, and attempts to accommodate State policies, programs, and guidelines, when actions are actually being taken.

But even if section 202(c)(9) of FLPMA is not construed to apply to specific actions like oil and gas permitting, under 302(a) of FLPMA, the Secretary of the Interior must manage the public lands "in accordance" with the land use plans developed under section 202 of FLPMA. 43 U.S.C. § 1732(a). See also 43 CFR § 1610.5-3(a) (2003) ("All future resource management authorizations and actions ... and subsequent more detailed or specific planning, shall conform to the approved plan."). Thus, to the extent RMPs developed under section 202 require consideration of State policies, programs, or guidelines, BLM must abide by such provisions.

The Jonah Infill Drilling Project, as proposed is inconsistent with two important resource-related state policies. First, the Jonah Infill Drilling Project, particularly without guaranteed compensatory mitigation, plainly violates Wyoming's official "no net habitat loss policy." It is the official policy of the Wyoming Game and Fish Commission that crucial habitat for wildlife species within the State should be managed to prevent "any loss of habitat function." Wyoming Game and Fish Commission Policy No. VII H (April 28, 1998) at 138. Some modification of crucial habitat is permitted but only if "habitat function is maintained (i.e., the location, essential features, and species supported are unchanged)." As BLM acknowledges in the DEIS, identified pronghorn migration corridors and essential sage grouse habitat will be significantly and adversely affected by the Jonah Infill project.

Second, the proposed Jonah Infill project is inconsistent in a great many respects with WGFD's recent Minimum Recommendations for Development of Oil and Gas Resources within Crucial and Important Wildlife Habitats on BLM Lands (Sept. 10, 2004) ("Minimum Recommendations").

WGFD's Minimum Recommendations, relying on extensive scientific literature and agency expertise, catalogue a number of crucial and important habitats, and establish three levels of impact thresholds (moderate, high, and extreme) based on the specific factors relevant to the functions of each type of crucial or important habitat. The Jonah Infill project will affect two important categories of priority habitat: (1) identified pronghorn migration corridors (DEIS at 3-56 to 3-57); and (2) sage grouse leks, nesting and brood-rearing complexes, and winter habitat (DEIS at 3-63, 3-67).

An extensive list of inconsistencies between the WGFD Minimum Recommendations and the Jonah Infill project, in all its variations, is found in WOC's April 9, 2005, comments at 42-47. In response to these comments, BLM merely states, without explanation, that "WGFD is a cooperator with BLM on energy development on BLM lands, and their recommendations will be given consideration in the FEIS." Jonah FEIS "Comments and BLM Responses," Table II-B, at 198-201 (Submittal ID L-61). Unfortunately, if BLM has "given consideration" to the WGFD minimum recommendations, it has neither incorporated them nor offered justification for failing to

do so. This, in turn, violates BLM's FLPMA obligation to manage public lands consistently with State plans, programs, and policies.

AIR QUALITY ISSUES

Citations to Documents

The following documents have been prepared by the Bureau of Land Management ("BLM") for the Jonah Infill drilling project, and they will be referred to in this Air Quality Issues section as follows:

- Draft Environmental Impact Statement, Jonah Infill Drilling Project ("DEIS").
- Draft Air Quality Technical Support Document for the Jonah Infill Drilling Project Environmental Impact Statement ("Draft Support Document").
- Jonah Infill Drilling Project Draft Environmental Impact Statement Air Quality Impact Analysis Supplement ("Air Quality Supplement").
- Jonah Infill Drilling Project Draft Air Quality Technical Support Document Supplement ("Draft Support Document Supplement").
- Final Environmental Impact Statement, Jonah Infill Drilling Project ("FEIS").
- Final Air Quality Technical Support Document for the Jonah Infill Drilling Project Environmental Impact Statement (Vol. 1) ("Final Support Document (Vol. 1)").
- Final Air Quality Technical Support Document for the Jonah Infill Drilling Project Environmental Impact Statement (Vol. 2) ("Final Support Document (Vol. 2)").
- Public Comment Analysis Report, Jonah Infill Drilling Project ("Public Comment Analysis Report").

Reincorporation Of Previously Submitted Material

Previously we have submitted a number of comments on the Jonah Infill project. Letters submitted during formal comment periods include:

- Letter from the Wyoming Outdoor Council et al. dated April 9, 2005 regarding the DEIS.
- Letter from the Wyoming Outdoor Council et al. dated September 26, 2005 regarding the Air Quality Supplement.
- Letter from Vicki Stamper dated October 5, 2005 regarding the Air Quality Supplement.
- Letter from Robert Yuhnke dated October 7, 2005 regarding the Air Quality Supplement.

We reincorporate those letters by this reference into these comments and ask BLM to reconsider them prior to making its final decision in this matter. As will be discussed below, BLM's responses to these letters presented in the Public Content Analysis Report is deficient in a number of respects.

In addition, on January 11, 2006 the Wyoming Outdoor Council submitted Supplemental Comments on the Jonah Infill Drilling Project Draft Environmental Impact Statement that included comments and information regarding a number of oil and gas development projects that are not adequately considered in BLM's air quality analyses for the Jonah Infill project. That letter is attached to these comments as Exhibit 1, and we ask that BLM consider it fully prior to making its final decision in this matter.

Last, on November 3, 2005 we sent BLM State Director Robert Bennett "suggestions" he invited us to provide to him for language that should appear in the Record of Decision ("ROD") for the Jonah Infill project. We have attached those Suggestions here as Exhibit 2 and ask the BLM to consider them before making its final decision in this matter. We reiterate that these Suggestions only relate to preventing air quality impacts and should not be interpreted as providing suggestions relative to other issues "by omission."

Requirements For A Record Of Decision

The Council on Environmental Quality regulations make a number of provisions regarding the ROD resulting from a National Environmental Policy Act ("NEPA") environmental impact statement ("EIS") analysis and we ask that BLM carefully adhere to them not only with respect to air quality issues, but in fact with respect to all resources. BLM must specify the environmentally preferable alternative. 40 C.F.R. § 1505.2(b). In this regard, we ask that BLM discuss the alternatives presented in the draft EIS that were not carried forward into the final EIS. See FEIS at 2-4 to 2-8. BLM claims that many if not all of these alternatives were dropped from analysis because they "introduced a level of complexity which made it difficult for the public and decision-makers to assess potential impacts," but we would like to know which of all of these alternatives was the environmentally preferable alternative since BLM presented them in the DEIS and requested public comment on them, which we supplied, an effort that required tremendous effort and resources on our part. We ask that BLM rank all of the alternatives considered in this NEPA process in terms of their environmental preferability.

We also request that BLM discuss in the ROD its preferences among alternatives based on the factors it considers relevant. 40 C.F.R. § 1505.2(b). We specifically ask BLM to state in the ROD whether it considers the following factors as relevant and what level of priority it gave to them relative to the factor of maximizing natural gas production:

- FLPMA: 43 U.S.C. §§ 1701(a)(8) (it is the policy of the United States that BLM lands be managed to "protect the quality of the scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values"), 1702(c) (multiple use management requires there be no "permanent impairment of the productivity of the land and the quality of the environment" and the relative values of resources must be considered in a way that does "not necessarily [involve] the combination of uses that will give the greatest economic

return or the greatest unit output”). 1732(b) (BLM must prevent unnecessary or undue degradation of the public lands).

- The Clean Air Act: 42 U.S.C. §§ 7401(b) (the purpose of this Act is to “protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population”), 7470(2) (a purpose of the prevention of significant deterioration program is “to preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments . . . and other areas of special national or regional natural, recreational, scenic, or historic value.”).
- NEPA: 42 U.S.C. §§ 4331(b) (the Federal government is to “use all practicable means” to achieve the policies of NEPA), 4332(1) (“to the fullest extent possible” agencies are to interpret and administer their programs and duties according to the environmental policies of NEPA).

We ask BLM to reference in the ROD where these considerations were made in the FEIS. Likewise, BLM is required to “identify and discuss all such factors . . . which were balanced by the agency in making its decision and state how those considerations entered into its decision.” *Id.* Again, we ask BLM to reference in the ROD where this balancing of relevant factors occurred in the FEIS, and to discuss the relative priority it gave to the above statutory factors, and why.

BLM is required to state “whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not.” 40 C.F.R. § 1505.2(c). We ask that BLM carefully provide this statement in the ROD. How did BLM define whether a means was practicable or not and where can that definition be found? Was it impracticable for BLM to establish a firm requirement that there be an eighty percent reduction in nitrogen oxide emissions? Why or why not? We specifically ask BLM to state whether the use of phased development as a means to control air pollution is practicable or not, “and if not, why [] not.” We make the same request relative to setting limits on emissions beyond which BLM will take actions to control the amount of air pollution that is being emitted. Last, we ask BLM to state whether the provisions in our Suggestions (Exhibit 2) are practicable or not, “and if not, why they were not.”

“A monitoring and enforcement program shall be adopted and summarized . . . for any mitigation.” 40 C.F.R. § 1505.2(c) (emphasis added). The ROD must specify what BLM will do to enforce any mitigation it adopts in the ROD. Who will do this enforcement, when will they do it, and what will the penalties be for lack of compliance with the mitigation measures specified in the ROD? As will be discussed below, the mitigation that is discussed in the FEIS seems to be notably lacking in terms of enforceability.

An agency should provide for monitoring to show that its decision is being carried out “in important cases.” 40 C.F.R. § 1505.3. The Jonah Infill project is clearly an “important case,” especially with respect to air quality issues. Thus, in the ROD BLM

must not only specify how monitoring of air pollution emissions and air quality will be carried out, but also how monitoring of implementation of its decision will be carried out.

“Mitigation [] and other conditions established in the environmental impact statement or during its review and committed to as part of the decision shall be implemented” 40 C.F.R. § 1505.3 (emphasis added). We believe BLM must commit to the mitigation it chooses to adopt in the ROD to help ensure its enforceability, but perhaps more importantly to show everyone that BLM is serious about putting these protections into place. We do not believe it is sufficient for BLM to just describe the mitigation. Under the Federal Land Management and Policy Act (“FLMPA”) BLM must “provide for compliance” with the Clean Air Act and other environmental protection laws, so therefore it has a duty to provide for mitigation measures, not just discuss them. It must do whatever is necessary to prevent unnecessary or undue degradation of the public lands. 43 U.S.C. § 1732(b). Furthermore, as will be described in the next section, under the Pinedale Field Office Resource Management Plan (“RMP”) BLM has committed to minimizing air pollution, and thus again it must go beyond just discussion of air pollution mitigation, it must provide for such mitigation in a enforceable manner.

BLM Must Amend the Pinedale Resource Management Plan As Part Of Its Record of Decision In This Matter

In the FEIS BLM admits that the Jonah Infill project “may not be consistent with the [reasonably foreseeable development] projections” in the Pinedale Field Office RMP, but claims it nevertheless would be in conformity with the RMP because “it remains in conformance with the overall fluid minerals management objectives of the RMPs.” FEIS at 1-10. Despite the fact the Jonah project alone will greatly exceed the reasonably foreseeable development (“RFD”) level of 1,944 new wells, BLM “considers long-term surface disturbance as the governing objective.” Id. “Under this management strategy, existing RMP objectives would still be met.” Id. BLM claims the established long-term disturbance level of 6,300 acres will not be exceeded. Id.

In our comments on the Air Quality Supplement we pointed out on pages 7-10 of those comments the reasons why the Pinedale RMP must be amended. Those comments are reiterated here, and we ask BLM to reconsider its position regarding the need for RMP amendment based on those comments. We would note that BLM claims that despite the 3,100 wells that would be drilled under the proposal here, it will remain “in conformance” with the Pinedale RMP, obviating the need for an RMP amendment. However, by greatly exceeding the 1,944-well limit established as the RFD, BLM is not adhering “to the terms, conditions, and decisions” of the RMP and since here there is a clearly defined level of well development that is permissible under the plan (1,944 wells), the alternative way to show consistency with the RMP (consistency with general policies and programs) is not available to BLM—the specific provision controls. 43 C.F.R. § 1601.0-5(c). Thus, exceeding the 1,944 RFD is not “consistent” with the specific provisions of the RMP and it certainly is not “clearly consistent” with them. Id. § 1601.0-5(b).

There are more problems with BLM's rationale for not pursuing an RMP amendment. First, it is irrational to claim that the "governing objective" is the level of long-term surface disturbance with respect to air quality issues. While surface disturbance has relevance to air quality issues, particularly relative to particulate matter ("PM"—dust), the number of wells drilled has even more relevance. Each well drilled requires a separate drill rig. The more wells that are drilled the more need there is for compressors. These are two major sources of air pollution that are not tied to surface disturbance. Similarly, other sources of air pollution such as dehydrators have much more relationship to the number of wells that are drilled than the number of acres that are disturbed. BLM certainly presents no evidence showing a clear linkage between surface disturbance and most air pollutants (particularly critical pollutants such as NO_x and ozone). Thus, surface disturbance cannot be rationally viewed as the "governing objective" with respect to air pollution issues; the RFD is a much more relevant provision, and in fact conformance with both limitations must be insured.

Not only is exceeding the RFD inconsistent with the RMP relative to the number of wells that can be drilled it is also inconsistent with the provision in the RMP that BLM "will strive to minimize, within the scope of its authority, any emissions which may add to acid rain, cause violations of air quality standards, or degrade visibility." Pinedale RMP ROD at 15. As will be discussed in more detail in these comments, BLM is setting in motion a project that will add to acid rain, violate air quality standards, and degrade visibility. Consequently, it must seek to minimize those impacts, within the scope of its authority. Yet it is authorizing a dramatic exceedance of the RFD without engaging in an RMP amendment even though an amendment is clearly within BLM's scope of authority. Pursuing an RMP amendment would provide opportunities to minimize pollution that would extend beyond just the Jonah project, giving BLM a far greater range of options for reducing the air pollution that is so clearly becoming a dominant problem in the Pinedale Field Office.

Furthermore, it is not at all clear that BLM will remain within the 6,300-acre long-term disturbance level that is permissible. For one, the FEIS states that the 2,530 wells in place as of March 2004 (already exceeding the RFD before the 3,100 Jonah wells are even drilled) "are estimated to require approximately 8,572 acres of long-term disturbance." FEIS at 1-10. Pending proposals for further well drilling (3,310 more wells are proposed) will cause 5,190 acres of additional long-term disturbance. If even a fraction of the 8,572 acres of long-term disturbance in place in 2004 occurred after establishment of the 6,300 acre limit in 2000, it is clear that the acreage limit will be exceeded. We request that BLM visit the Wyoming Oil and Gas Conservation Commission website and determine how many wells have been drilled in the Pinedale Field Office after 2000 (when the RMP "updates" were put in place by the Pinedale Anticline EIS) and how many wells are projected to be drilled (apparently 3,310) and multiply that number by a reasonable long-term disturbance acreage per well⁵ in order to

⁵ We suggest that BLM review various documents that estimate actual, on-the-ground averages of well pad size, such as the January 2006 report submitted to Wyoming Game & Fish Department by the Wildlife Conservation Society entitled "Wildlife and Energy Development" showing that the average Jonah pad size is 4.8 acres. With 3310 more wells, this report indicates a total of 15,888 acres of additional disturbance.

provide an up-to date estimate of the long-term disturbance acreage in the Pinedale Field Office as a whole.⁶ Last, we would note that the scoping notice for the Pinedale Anticline infill supplemental EIS shows that approximately 7,300 wells will be drilled. If the 0.9 acre “life of project” disturbance level per well assumed in the Jonah EIS⁷ is assumed for these wells, there would be 6,570 acres of disturbance from this project alone, which would have to be added to the 4,267 to 6,020 life of project acres disturbed by the Jonah Infill project. FEIS at 2-12, 2-19 (Tables 2.1 and 2.5). See also Exhibit 1 (presenting the Pinedale Anticline supplemental EIS scoping notice). Clearly the 6,300 acre limit that BLM has deemed controlling will be exceeded, and has possibly already been exceeded.

Air Quality Impacts Are Improperly Addressed In The FEIS

1. Other BLM Environmental Documents Show The Cumulative Impacts On Visibility In The Bridger Wilderness Area Are Apparently Greater Than Six Days

The FEIS claims there will be six days of significant cumulative impacts to visibility in the Class I Bridger Wilderness Area. See, e.g., FEIS at 4-10 (Table 4.4). But this is demonstrably wrong. When other EISs that BLM has recently prepared are considered, they show that the cumulative impacts must exceed 6 days. The FEIS also claims there will be three days of direct impacts from the Jonah Infill project causing visibility impacts of greater than 1 dv in the Bridger Wilderness Area. Id.⁸

BLM recently released the Seminoe Road Draft EIS. It shows there would be four days of cumulative impacts to the Bridger Wilderness associated with that project. Seminoe Road Draft EIS at 4-9. The EIS is cryptic about what the level of direct impacts would be to the wilderness, but it appears to be more than 0 dv but less than 0.04 dv. Id. at 4-9, H-24. The Desolation Flats project will contribute to seven days of cumulative impacts exceeding the 1 dv standard. Draft Environmental Impact Statement for the Rawlins Resource Management Plan at 4-25 (Table 4-8).⁹ If the cumulative impacts from the Desolation Flats project cause 7 days of significant cumulative impacts to the Bridger Wilderness, the Jonah Project will clearly have to cause additional impacts on top of that. BLM is proposing 3100 wells that are even closer to the wilderness area and which were not analyzed in the Desolation Flats EIS. The Jonah FEIS should be corrected so that the proper cumulative impact is presented, or at a minimum an explanation must be provided as to why the Desolation Flats project, which is further from the Bridger Wilderness Area than is the Jonah Infill project and has fewer wells (385), has greater cumulative impacts than does the Jonah Infill project.

⁶ The data presented in the FEIS seems to only relate to the Jonah Infill project itself, not likely long-term disturbance in the Field Office as whole, the relevant measure.

⁷ See, e.g., FEIS at 2-19, Table 2.5, footnote 2.

⁸ If FLAG methodology is used, the cumulative visibility impacts of the Jonah Infill project on the Bridger Wilderness are 5 days. FEIS at J-26 (Table J-33). The direct project impacts using FLAG methodology are 2 days. Id. at J-13 (Table J-17).

⁹ This appears to be based on FLAG standards. But as indicated in the Jonah FEIS, if IMPROVE standards were used the impacts would likely be greater.

Similarly, the Powder River Basin Coalbed Methane EIS showed that that project would cause four days of significant impacts to visibility in the Bridger Wilderness Area. Final Environmental Impact Statement and Proposed Plan Amendment for the Powder River Basin Oil and Gas Project at 4-384, 4-391, Appendix F.¹⁰ Similarly, the Powder River Basin Coalbed Methane EIS showed that that project would contribute to eight to twelve days of significant cumulative visibility impacts in the Bridger Wilderness. *Id.* at 4-391, Appendix F. If the Powder River Basin project is associated with causing that level of cumulative impacts, the level of cumulative impacts from the Jonah Infill project clearly must exceed six days.

If the Seminoe Road, Atlantic Rim, Desolation Flats, Jonah, and Powder River Basin projects are considered together—as they must be in order to do a proper cumulative impacts analysis—the significant cumulative visibility impacts in the Bridger Wilderness would appear to be on the order of about two to three weeks per year, at a minimum. At a minimum BLM must provide an explanation of how the impacts analyses from these (and other) projects relate to each other and to what degree the impacts are additive or not, and why. *See* Exhibit 1 (presenting some of the projects BLM must consider in its cumulative impacts analysis).

The Council on Environmental Quality regulations require consideration of cumulative impacts. We will not belabor those regulatory provisions here. But clearly BLM must engage in some effort to “add up” the impacts from these various well-defined and already-analyzed NEPA projects; at this time they do not add up. We would also note that BLM is required to ensure the scientific accuracy of its NEPA analyses, and that standard is clearly not being met when BLM has not even attempted to resolve and explain the impacts of these various NEPA projects. *See* 40 C.F.R. §§ 1500.1(b) (“Accurate scientific analysis . . . [is] essential to implementing NEPA.”), 1502.24 (agencies must ensure scientific integrity of NEPA documents).

The above discussion only relates to visibility issues. But we believe that in all likelihood other pollutants or air quality related values that are shown in the FEIS as having little or no impact to Class I areas in the Jonah FEIS would be shown to have much greater impacts of concern if the results of these other NEPA projects were fully considered (that is, “added to” the impacts from the Jonah Infill project, as required by the NEPA cumulative impact analysis regulations). For example, the Powder River Basin project EIS shows that PM₁₀ concentrations would exceed the prevention of significant deterioration (“PSD”) Class I increment in the Washakie Wilderness and that Acid Neutralizing Capacity Standards would be exceeded in Upper Frozen Lake. Final Environmental Impact Statement and Proposed Plan Amendment for the Powder River Basin Oil and Gas Project at 4-387 to 389. The FEIS shows that the Jonah Infill project will also have impacts with regard to these pollution concerns in those areas. Consequently, BLM must ensure that it considers these impacts together, especially since much of the Powder River Basin was excluded from the modeling domain in the Jonah FEIS, and thus the impacts shown in the Powder River Basin EIS are not fully accounted

¹⁰ Again, these estimates appear to be based on FLAG methodology; if IMPROVE methodology were used the estimated impacts would likely be greater

for in the FEIS. We ask that BLM consider these cumulative impacts and allow the public to review and consider them prior to issuing the ROD in this matter.

2. BLM Continues To Improperly Define Significant Impacts to Visibility In Class I Areas As "> 1 dv" Despite The Forest Service Having Pointed Out That The Proper Standard For Significance Is "≥ 1 dv"

In its comments on the Air Quality Supplement, the Forest Service pointed out BLM was improperly displaying significant impacts to visibility as occurring only when impacts were greater than 1 dv rather than the greater than or equal to 1 dv. See Forest Service comments dated October 7, 2005 at Detailed Technical Comments page 1. Yet in the FEIS BLM continues to use the incorrect standard. BLM should correct this so that a proper portrayal of impacts is presented, and if there is anything more than a very minor change in the impacts that are shown, the analysis and mitigation measures in the FEIS should be revised and should be circulated for additional public comment. After reviewing the Public Comment Analysis Report it is not apparent to us that BLM has responded to this comment from the Forest Service or provided any basis why the standard adopted by the Federal Land Manager agency with the affirmative obligation to protect Class I areas has not been utilized, or even recognized, by BLM.

Furthermore, as discussed in our prior comments, we continue to believe that the 0.5 dv standard is the proper measure of significant impacts established by the relevant Federal Land Managers. When this standard is used, the FEIS continues to show extreme impacts to visibility in Class I areas. We request that BLM at least present the 0.5 dv standard in the ROD; it has presented this information in the DEIS and FEIS, so it should not ignore it. This is a standard that is applicable in at least some circumstances, so it should be discussed.

3. The Data In The Jonah Infill FEIS Do Not Support Claims That NO_x Emissions Will Be Reduced

The FEIS claims that emissions of NO_x will be greatly reduced from what was presented in the DEIS. Compare FEIS at J-6 (Table J-9), Final Support Document (Vol. 1) at 14 (Table 2.3), 45-46 (Table 4.1) (showing emissions variously of 641-696 tons per year) with DEIS at F-8 (Table F-9), Draft Support Document at 15-21 (showing emissions variously of about 1000 to 1700 tons per year). These claims do not seem to be supported by the data in the FEIS.

A comparison of the project emissions inventory tables presented in the FEIS with the inventories presented in the DEIS shows that if anything NO_x emissions will be greater. This is apparent if the tables in Appendix B of the Final Support Document (Vol. 1) are compared with tables in Appendix B of the Draft Support Document. A comparison of these tables indicates that the only changes in estimated NO_x emissions that have occurred between the FEIS and DEIS relate to Tables B.1.8, B.1.9, B.1.23, and B.1.24 (relating to emissions from drilling straight and directional wells using Tier I and Tier II technology). All of these tables show increased emissions from well drilling.

If the emissions from drilling wells have increased it is impossible to see how emissions can be claimed to have decreased overall. It may be that BLM has simply reduced the predicted emissions by eighty percent to arrive at the purported lesser level of emissions claimed in the FEIS. The inappropriateness of claiming these levels of emissions reductions will be achieved is discussed in more detail below.

4. The FEIS Shows The Levels Of Impacts BLM Claims Will Result From Its Preferred Alternative Are Impossible To Support

In the Final Support Document (Vol. 1), BLM presents the modeling results for each of the alternatives considered based on the project emissions inventory tables described above, including results for the Preferred Alternative. See Final Support Document (Vol. 1) at 43-46, Appendix F. In the Final Support Document (Vol. 2), BLM presents the modeling results for the Preferred Alternative subject to three scenarios: The Low Emissions Configuration, High Emissions Configuration, and the Mitigation Analyses. Final Support Document (Vol. 2) at G-6, Addendum G-A at 3-7. These projections were based on emissions inventory tables containing exactly the same emissions data as those used to model the Preferred Alternative in Volume 1. Compare Tables B.1.7, B.1.8, B.1.9, B.1.22, B.1.23, and B.1.24 with Tables G-B.1.2, G-B.1.3, B-B.1.4, B-B.1.5, B-B.1.6 and G-B.1.7.

Since the Preferred Alternative, Low Emissions scenario, and High Emission scenario all assume there will be 3100 wells drilled at a rate of 250 wells per year with a 50:50 split between straight and directionally drilled wells, the only relevant differences between the emissions reductions scenarios relative to the Preferred Alternative are as follows.¹¹ The Low Emissions configuration assumes there will be one-hundred percent use of Tier II technology on drill rigs. Final Support Document (Vol. 2) at G-6, Addendum G-A at 4-5. The High Emissions scenario assumes that eighty percent of the drill rigs used will use Tier 0 technology (uncontrolled emissions) and twenty percent will use Tier I technology. *Id.* The mitigation analyses assume that the various percentage reductions (80% reduction is the relevant scenario relative to the Preferred Alternative) will be achieved somehow, with no indication of how they will actually be achieved. *Id.* BLM recognizes that an eighty percent reduction in emissions cannot be achieved using Tier II technology alone; additional measures will have to be used. See FEIS at 5-5 (“Because preliminary modeling . . . indicated that emissions from engines for drilling rigs would have to be further reduced to attain [BLM’s] air quality goals . . . , BLM treats emissions factors for Tier 2 engines . . . as reference points for the minimum control of emissions” needed to meet the eighty percent reduction scenario). BLM strongly implies that it has in mind unproven technological fixes as the means to exceed Tier II standards, not proven means such as phased development. *Id.* (establishing a

¹¹ See also FEIS at 4-19 (“Impacts from the Preferred Alternative as described herein are those potentially occurring from the high emissions scenario (i.e., 250 wells developed per year, 50% directionally drilled wells, 80% Tier 0 . . . and 20% Tier I drilling rig emission levels) with an 80% reduction in emission levels.”).

“demonstration period” for new technologies that have been “suggested” by the operators).

The results of these analyses are remarkable and revealing and demonstrate that BLM has no basis for claiming the reductions in impacts (relative to what was shown in the DEIS) that it is claiming, unless it requires the use of phased development. Using visibility as an example, the analyses show that the Low Emissions scenario has impacts greater than the Preferred Alternative and the High Emissions scenario not surprisingly has even greater impacts. Compare Tables F.8.4 and F.8.9 with Tables G-C.8.1, G-C.8.4, G-C.8.11, and G-C.8.14. The eighty percent reduction scenario has impacts that are exactly the same as the Preferred Alternative because they are the same proposal. Compare Tables F.8.4 and F.8.9 with Tables G-C.8.10 and G-C.8.20. This same pattern is evident for all pollutants and air quality related values: both the Low Emissions scenario (one-hundred percent use of Tier II technology) and the High Emissions scenario (largely unregulated emissions) exceed the Preferred Alternative (assumed reductions by eighty percent achieved through unstated and unknown means) emissions.

But BLM has not demonstrated how the projections the Preferred Alternative and the eighty percent reduction scenario can be achieved. The Low Emissions scenario is based on one hundred percent use of Tier II technology. This presents the upper bar for emissions reductions achievable via technology that BLM has identified. Moreover, the availability of drill rigs employing Tier II technology is questionable. Tier II technology is not widely available yet. BLM is already assuming it will not be available until at least 2008. BLM recently modified its record of decision relative to Questar’s winter drilling operations on the Pinedale Anticline allowing it to avoid the use of Tier II technology until January 1, 2008 even though it had previously required its use by January 1, 2007.¹² So even the widespread use, let alone one-hundred percent use, of Tier II technology is speculative at best at this time. No one seems to know with assurance when it will be widely available for drill rigs, let alone for the drill rigs operating in the Jonah field. But despite this unavailability, BLM wants to take things even further with respect to assumed emissions reductions, claiming in the Preferred Alternative that unknown and unstated mitigations can achieve eighty percent reductions, a level of reduction that is not achievable with even one hundred percent use of Tier II technology (i.e., the Low Emissions scenario). But if this assumed reduction is based on technological fixes it is even greater speculation than is evident with the assumed use of Tier II technology in the Low Emissions scenario. We don’t know what the methods are, how available they are, or anything else about them. Further experiments with these unproven technologies will occur during the “demonstration period.” FEIS at 5-5. While things like natural gas

¹² See Environmental Assessment for the Questar Year-Round Drilling Proposal—Condensate Pipeline Modifications, Sublette and Lincoln Counties, Wyoming and Finding of No Significant Impact, Decision Record and Environmental Assessment for the Questar Year-Round Drilling Proposal—Condensate Pipeline Modifications, Sublette and Lincoln Counties Wyoming, available at <http://www.wy.blm.gov/nepa/pfodocs/QYPD/index.htm>. On page 1 of the Decision Record BLM allows “Modification of the [Questar] air quality emissions commitment, to having year-round drilling rig emissions Tier II-compliant (or equivalent) no later than January 1, 2008 (versus previous commitment to having all drilling rig emissions Tier II compliant (or equivalent) no later than January 1, 2007).” See http://www.wy.blm.gov/nepa/pfodocs/QYPD/dr_fonsi.pdf.

powered drill rigs and electric drill rigs are mentioned from time to time, BLM has not demonstrated, or even discussed, their efficacy or their actual availability, especially on a widespread basis.

Because no means of even arguably ensuring an eighty percent reduction is identified, it is not appropriate for BLM to take “credit” for fewer impacts to air quality than were presented in the High Emissions and Low Emissions scenarios and in the DEIS. As the situation stands now, the best estimate of impacts lies somewhere between those presented in the High Emissions case and the Low Emissions case, either of which always show greater impacts than the Preferred Alternative/eighty percent reduction modeling. BLM must adopt the High and Low Emissions scenarios (or a point between them) as better reflecting what the true air quality impacts of the Jonah Infill project will be and modify its impacts analysis and the mitigation measures it will require in the ROD accordingly, unless and until it identifies and adopts specific mitigation measures that are actually available and which have actually been demonstrated to work.

In fact, the only demonstrated way that BLM can currently reach an eighty percent reduction in emissions, as it must pursuant to EPA’s letter dated October 7, 2005 if wants to avoid an environmentally unsatisfactory rating, is to require phased development in the Jonah field. This was made clear in the Air Quality Supplement where BLM recognized the only way to achieve an eighty percent reduction in emissions was to pace development at a rate of 50 or 75 wells drilled per year coupled with one hundred percent use of Tier II technology and virtual elimination of flaring.¹³ Air Quality Supplement at 22 (Table 3). Consequently, if BLM is to be able to rationally claim that the impacts it claims will occur under an eighty percent reductions scenario are reasonable portrayals of what might actually be achieved, it must firmly commit to requiring phased development in the Jonah field. Unlike Tier II technology and the unidentified other mitigation, regulating the number of drill rigs in operation at a given time is something within BLM’s authority to require and implement and it has clear and definite effects on the level of emissions—it is not speculative. As will be discussed in detail below, BLM has not made any firm commitment to adopt phased development. That being the case, it cannot take credit for the emissions reductions it is claiming (because they are highly speculative) and the expected impacts from this project are far more extreme than BLM is representing to the public.

An EIS must discuss “steps that can be taken to mitigate adverse environmental consequences.” Robertson v. Methow Valley Citizens Council, 109 S.Ct. 1835, 1846 (1989). “Implicit in NEPA’s demand that an agency prepare a detailed statement on “any adverse environmental effects which cannot be avoided should the proposed be implemented,” 42 U.S.C. § 4332(C)(ii), is an understanding that the EIS will discuss the

¹³ We will not belabor the point that one-hundred percent use of Tier II technology is not possible at this time. But we do want to point out that virtual elimination of flaring is not what BLM plans for the Preferred Alternative. In fact, BLM only plans on eighty percent of well completions to be done without flares. Final Support Document (Vol. 1) at G-4. If 250 wells are drilled per year and if only half of them are “producers” (a tremendous underestimate), this would mean that about 25 completion flarings would occur per year, greatly exceeding the zero or one flaring per year presented in the Air Quality Supplement.

extent to which adverse impacts can be avoided.” *Id.* at 1846-47. “[O]mission of a reasonably complete discussion of possible mitigation measures would undermine the “action-forcing” function of NEPA.” *Id.* at 1847. *See also* 40 C.F.R. §§ 1500.2(f) (agencies must to the fullest extent possible “restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects”) 1502.14(f) (alternatives presented in an EIS “shall” include appropriate mitigation measures), 1502.16(h) (means to mitigate impacts must be discussed in the environmental consequences section of an EIS).

With respect to the eighty percent mitigation reduction scenario BLM does not present a “reasonably complete discussion” of the mitigation it would employ to achieve this emissions level; in fact it provides no discussion of it, it is just assumed that an eighty percent reduction will be achieved, somehow. This vague and speculative approach prevents any conclusions from being reached about “the extent to which adverse impacts can be avoided” because it is not even clear what the mitigation would be. A discussion of “possible mitigation measures” requires some indication the measures exist and work, otherwise they are not “possible.” If no specific mitigation that is actually available is presented and discussed there is no “means” to mitigate impacts available for discussion in the EIS. NEPA is intended to be a fundamental part of agency decision-making with respect to protecting the environment, not an academic exercise, and that intent is thwarted when the agency does not specify and present real, concrete options for mitigation, instead invoking unstated and quite possibly unavailable measures. *See* 40 C.F.R. §§1500.1, 1500.2, 1501.1, 1502.1.

5. Compounding The Above Problems Is The Fact That BLM Is Largely Proposing To Not Do Anything Different Than What Was Proposed In The DEIS Relative To Mitigating Air Pollution Impacts

A comparison of what BLM proposed relative to controlling air pollution in the DEIS and what it proposes in the FEIS further shows there is little or no basis for BLM to claim that it is doing anything that would reduce air quality impacts below what were presented in the DEIS. In the DEIS BLM stated that it would use flareless completions “unless proven on a case-by-case basis that flareless completions would be unsafe.” DEIS at 2-27. Now, BLM states that flareless completions would be used “unless proven to the satisfaction of the authorized officer on a case-by-case basis that flareless completions operations would not be technically or economically feasible or would be unsafe, and that flaring completion is permitted by [the Wyoming Department of Environmental Quality—“DEQ”].” FEIS at 2-22. As far as we can determine, “economic feasibility” is left undefined, a major potential loophole. The options for avoiding flareless completions have been expanded greatly. Consequently BLM cannot take any credit for a reduction in emissions due to the use of this technology. As noted above, there are likely to be at least 25 flaring operations per year, far exceeding the limit shown to be necessary to achieve an eighty percent reduction in the Air Quality Supplement Table 3.

In the DEIS it was stated that Tier II technology and other technological fixes for controlling emissions from drill rigs would be used “when they become available.” DEIS at 5-2. The use of this technology was one of several “mitigation opportunities” that “could” be used to reduce emissions. *Id.* at 5-1. The FEIS goes no further, stating that Tier II technology would be used “at the earliest possible date.” FEIS at 2-23. Use of this technology would be subject to “exceptions” if its use was deemed to “not be technically or economically feasible,” an exception BLM itself has already begun to employ, as shown by its approval for Questar to delay the use of Tier II technology.

As noted above, under the Preferred Alternative presented in the FEIS, it is assumed there will be 3100 wells drilled at a rate of 250 wells per year with a 50:50 split between straight and directionally drilled wells. FEIS at 2-18, Final Support Document (Vol. 1) at 43-46, Final Support Document (Vol. 2) at G-4 to G-7. This is not very different than what was assumed in the DEIS, and may not differ at all. Draft Support Document at 49-51.¹⁴ There would perhaps be fewer directionally drilled wells under the Preferred Alternative presented in the DEIS versus what is presented in the FEIS, but that is far from clear.

The implications of this virtual or complete identity between what would be done under the proposal in the DEIS and the proposal for the Preferred Alternative in the FEIS is that there is no basis for BLM to claim that any lesser air quality impacts are likely to result. Consequently BLM should reevaluate the analysis presented in the FEIS so that it reflects the reasonably anticipated air quality impacts of this project and make its decision regarding mitigation measures in the ROD accordingly. Additional problems with the mitigation presented in the FEIS that make it unreasonable for BLM to claim that it will achieve an eighty percent reduction in emissions will be discussed in the next section.

6. The Potential Mitigation In The Jonah Infill FEIS Is So Speculative And Uncertain That BLM Cannot Rely On It To Meet Its Obligations To Protect Air Quality

To piece together what mitigation may apply to the Jonah Infill project relative to controlling air pollution, one must visit sections 2.4.5.1, 2.4.5.2, 2.4.5.3, Chapter 5, Appendix C, and Appendix F of the FEIS, as well as the Final Support Document (Vol. 1) and Final Support Document (Vol. 2). The need to do this amount of cross-referencing is an extreme impediment to informed decision making in its own right. But here is what BLM appears to be proposing relative to mitigation.

BLM will implement a vague and non-binding “outcome-based performance objectives” approach to regulating air quality impacts. FEIS at 2-20. To do this it first sets goals with objectives. One goal relates to the concentrations of air pollutants that will be allowed and another goal relates to visibility and acid precursor deposition. *Id.* The visibility and acid precursor goal will be implemented “as practicable.” *Id.* BLM does

¹⁴ The Preferred Alternative was not directly modeled in the DEIS, but its impacts and elements were said to “fall between Alternative A and Alternative F.” *See id.* at 50 (Table 4.1).

not define what it means by “as practicable.” Essentially in these goals and objectives the BLM says it will obey the law and not much more than that, and only if “practicable” relative to visibility and acid precursors.

BLM makes no commitment to obey the law relative to hazardous air pollutants (section 112 of the Clean Air Act). FEIS at 2-20. It states that if it is practicable it will abide by the State’s regional haze state implementation plan. *Id.* But the State’s regional haze state implementation plan is not due to EPA until December 17, 2007, and when it will be approved by EPA and become binding is uncertain; approval is probably at least three years away. However, the State has a legal obligation to develop and implement a plan to show progress toward improving visibility at every Class I area within its borders. Correspondingly, BLM has a legal obligation to ensure that its actions do not impede this progress. BLM already has a “practicable” mitigation approach at its disposal—requiring phased development rates—and consequently it must commit to abiding by the State’s regional haze plan.

Additionally, BLM fails to indicate or commit to abide by the standard that EPA has already established relative to regional haze, namely that visibility must be improved in Class I areas on the most impaired days and not be degraded on the least impaired days. 40 C.F.R. § 51.308(d)(1). We know that this sets a minimum requirement for the state implementation plan, yet BLM has failed to even acknowledge it. Furthermore, BLM fails to even acknowledge, let alone commit to abide by, the national goal of the “prevention of any future, and the remedying of any existing, impairment of visibility in mandatory class I Federal areas.” 42 U.S.C. § 7491(a)(1). *See also id.* at § 7470 (2) (one purpose of the PSD program is to “preserve, protect, and enhance” air quality in protected areas).

Furthermore, the goals presented in the FEIS abandon commitments that had been established in the DEIS. In the DEIS BLM committed to not allowing air pollution in Class I areas to decrease visibility in those areas beyond the Federal Land Managers’ Air Quality Related Values Workgroup (FLAG) thresholds. DEIS at 2-26. That commitment has now been abandoned; the Jonah Infill project is in fact expected to lead to violation of these thresholds. Moreover, in the DEIS the BLM committed to avoiding an increase in acid deposition in sensitive areas beyond deposition analysis thresholds (“DAT”), but it has now abandoned that commitment. BLM is planning to approve a project that is expected to exceed the DATs, in the Bridger and Popo Agie Wilderness Areas, at a minimum.

After establishing these goals, BLM then states that it “would” impose operating procedures and best management practices (“BMP”) for project actions in the Jonah Infill project area. FEIS at 2-21. But this “commitment” is full of conditional language that makes it no commitment at all. As noted above, exceptions to these protections “may be granted,” including if the mitigation practice would be technically or economically infeasible, a huge loophole. Conditions of approval “may” be applied (or not) and all of these protections that “would” be applied may be “adjust[ed]” if BLM decides such is

needed “to meet field development and production objectives,” which are to maximize production first and foremost.

As noted in the prior section, BLM then goes on to discuss the use of flareless completions and Tier II technology, but as noted the use of this technology is far from certain. FEIS at 2-22 to 23. In addition, the operators would “periodically demonstrate” that visibility impacts to the Bridger Wilderness Area would not exceed the “visibility impact level of concern” (presumably an impact greater than 1 dv, an improper standard, as discussed above). This vague (“periodically”) provision is not tied in any way to the goals BLM has established (which with respect to visibility would only apply “as practicable” in any event) and it makes no commitment as to what if anything would happen if the “impact level of concern” was exceeded.

BLM then goes on to say that it “may” (or may not) implement additional measures at the Application for Permit to Drill (“APD”) stage of development. FEIS at 2-25. BLM would “consider” recommendations of its working group in this regard to “adjust” these measures, but the intent of this adjustment would again be to “meet field development and production objectives.” With respect to air quality, BLM then states that “additional air quality protection measures such as reduced development rates” could be used, as well as several other technologies that are not widely available or in use or which may be entirely experimental. It does not state any firm trigger for when these approaches might be used or make any firm commitment to regulate the pace of development. It is worth noting that in all likelihood that under BLM’s view of its role in controlling air pollution it has no authority to require many of these measures, only DEQ could do that, and thus it is not certain that BLM would even entertain these measures let alone require them. We would also note that since the provisions in this section would be applied at the APD stage, BLM might seek to use the categorical exclusion provisions from NEPA found in section 390 of the Energy Policy Act of 2005, and thus avoid any additional review of well development. BLM has recently begun to take advantage of this exclusion on wells being drilled on the Pinedale Anticline, at least (see further discussion of this issue below).

Chapter 5 of the FEIS probably presents the most significant measures that might be used to control air pollution. This chapter opens with a general statement that all of these measures are only measures that “could be applied.” FEIS at 5-1. It then specifically reiterates the tentative and optional nature of these provisions relative to air pollution. *Id.* at 5-2 (stating the following actions “could” be used). A vague plan for emissions tracking is mentioned (BLM would work “cooperatively” with others to track emissions). *Id.* at 5-3. No potential additional mitigation is planned with respect to ensuring National Ambient Air Quality Standards and PSD increments are not violated, and issues related to the high ozone levels being detected in this area are postponed to the future. *Id.* There will also be no additional mitigation aimed at reducing atmospheric deposition of acid precursors. *Id.* at 5-4.

BLM does discuss a number of further actions that “could” be taken with respect to visibility, but one must keep in mind the “as practicable” language that applies to all

issues related to visibility impairment in Class I areas. FEIS at 5-4 to 5-6. With respect to these provisions there are some troubling things that must be mentioned. First, it appears that during the “demonstration period” there will be two plans developed, one regarding how emissions tests will be conducted that is submitted to DEQ and one describing to BLM how emissions will be minimized. *Id.* at 5-5. A number of questions are raised by these provisions. It is not specified what would be done if either of these plans is not submitted on time or if they are not deemed adequate. What standards must these plans meet? Who will ensure and enforce their implementation? Will DEQ in any way be bound by BLM’s ROD; what assurance is there that DEQ will establish new controls? And on what timeline will it be developed?¹⁵ It can take years to establish, impose, and implement control requirements.

It appears that if DEQ can develop and require new control requirements that ensure the eighty percent reduction in emissions scenario is achieved—a highly unlikely prospect for the reasons previously discussed—that will be the end of the matter, the controls will be applied and no more will be demanded of the operators. FEIS at 5-5. But if new control requirements are not developed the operators will have to “demonstrate” annually that their emissions will be less than the eighty percent reductions scenario impacts. *Id.* The “method” for this demonstration would nominally be determined by BLM, but “BLM would rely on the Operators to determine how they would attain the reduction in potential visibility impacts.”¹⁶ *Id.*

These provisions produce almost nothing but questions and uncertainty, not answers. What will the consequences be if impact levels are being exceeded? None are specified. Will APDs be denied? Will BLM impose requirements to phase development? Who will impose or demand those consequences? BLM? DEQ? If, as stated, the operators get to determine how emissions reductions will be achieved, how will BLM or DEQ be in a position to ensure that the limits are not exceeded? This provision would seem to allow the operators to refuse to reduce drilling rates if they did not want to do that, even if the impact levels were being exceeded with the imposition of technological controls. Overlying all of this is the fact that when it comes to visibility issues, BLM is only committing to abide by the State of Wyoming’s regional haze state implementation plan (a plan that will not be in place for over two years, and perhaps quite a bit longer) “as practicable.” Perhaps summing up our concerns regarding the

¹⁵ We would also note that EPA regulates emissions from non-road engines. This fact bring into question BLM’s whole premise regarding air pollution control, namely that only DEQ regulates air pollution. In fact, “cooperative federalism” is a more accurate description of the program in place regarding air pollution control. The State has primacy in some areas, EPA in others, and BLM must “provide for compliance” with the Clean Air Act and other pollution control laws and prevent unnecessary or undue degradation of the public lands under FLPMA. BLM also has the sole authority over whether to allow a well to be drilled in the first place, that is, whether to approve an APD or not. BLM should recognize the multiple responsibilities and authorities relative to air pollution control in the ROD and ensure steps are taken to control air pollution accordingly.

¹⁶ See also Public Comment Analysis Report, Table II-B, Submittal ID L-61, Comment No. 21 (“BLM prefers to leave the choice of mitigation measures to the industry.”). The incredibly speculative nature of the “mitigation” BLM plans to implement is further emphasized by this comment: “BLM encourages Operators to eliminate significant potential impacts to visibility from the proposed project as soon as possible.” Public Comment Analysis Report, Table III-B, Submittal ID 2, Comment No. 4.

mitigation BLM is proposing is this statement: “the mitigation suggestions are conceptual only.” Public Comments Analysis Report, Table III-B, Submittal ID 18, Comment No. 17.

In its October 7, 2005 letter to BLM, EPA made it clear that its rating of this project was based on BLM imposing an eighty percent reduction in emissions, with that reduction to occur immediately. But the provisions in the FEIS make it clear that BLM is not committing to any particular reduction in emissions. Instead it is making plans to try to limit the impacts of whatever emissions occur to those the agency expects under the eighty percent reduction scenario. This is an important difference because while emissions can be directly measured and attributed to individual sources (operators) in the Jonah field, there is no such direct accountability for the impacts that result from those emissions. The relationship between emission and air quality impacts such a deposition, visibility, ozone concentrations, and NO₂ increments would have to be modeled, potentially inviting protracted disputes about whether emissions from the Jonah field were responsible at all or over how much they contribute to the problem. This inadequate plan for limiting impacts is further undercut by the vague, nonbinding, unsubstantiated, and improbable provisions discussed at length above. This fails to meet BLM’s legal obligations as well as the needs specified in the EPA rating letter.

BLM’s legal obligations in this regard were discussed at length in our previously submitted letters reincorporated into these comments above. So we will not go into much further detail here. BLM must “provide for compliance” with air quality laws, standards and plans under the FLPMA.¹⁷ 43 U.S.C. § 1712(c)(8). It is failing to do that, in fact it is specifically planning for a lack of compliance with these laws. BLM is also failing to comply with the Pinedale RMP, which requires BLM to “minimize” air pollution.

7. The Early Project Development Stage

BLM has carried the “early project development stage” modeling presented in the Air Quality Supplement forward into the FEIS without modification. Thus, BLM is predicting the horrific impacts that were presented in the Air Quality Supplement will still occur. These impacts include, but likely are not limited to, significantly impaired visibility in a number of Class I areas besides just the Bridger Wilderness Area. Final Support Document (Vol. 2) at G-ix (Table G-ES-4). The Bridger Wilderness Area will see 9 days of direct significant impacts, not the 3 days that BLM highlights in the body of the FEIS. Id. It will see 61 days of cumulative impacts (with visibility reduced by up to 65.7 percent), and the significant impacts will extend to Grand Teton and Yellowstone National Parks, in fact to all Class I areas in northwestern Wyoming. Id. It is unacceptable for BLM to not point these impacts out in the body of the FEIS where most people might actually see it, but instead to bury it in a technical supplement appendix that is an entirely separate document from the FEIS and read (and understood) by very few. In developing and issuing its ROD BLM must point out these severe impacts that it expects in the near future and take whatever steps are necessary to eliminate them.

¹⁷ BLM acknowledges this responsibility. Public Comment Analysis Report, Table III-B, Submittal ID 2, Comment No. 11 (“The BLM will provide for its obligations under the FLPMA, NEPA, and the CAA.”).

It appeared from the Air Quality Supplement that these severe impacts were predicted to occur in 2006, and that same impression can still be gotten from the Final Support Document (Vol. 2). For example, it is stated that “it was considered probable that regional impacts would be greatest during the early stages of [the Jonah Infill project]” and the “[y]ear 2006 was selected as representative of a maximum emissions scenario for regional emissions.” Final Support Document (Vol. 2) at G-19 to G-20. But apparently these impacts could occur for an undefined greater length of time, until technology like Tier II technology is fully available. See Public Comment Analysis Report, Table III-B at 3. This modeling is also intended to represent current conditions.¹⁸ Id.

Based on the two-stage predictions BLM has developed (early project development stage versus 2017 emissions), we believe it would be appropriate for BLM to develop a two-stage plan for reducing the impacts from the Jonah Infill project. The first stage would deal with the impacts and impact levels modeled for the early project development stage scenario. This would be a plan for dealing with impacts before Tier II and other technology becomes widely available. From everything BLM has shown, dealing with these impacts will likely require BLM to put in place provisions for phased development. The second stage could deal with mitigation after technological fixes can be enforceably required, at which point BLM could reasonably consider whether the need for phased development has eased, at least for purposes of mitigating air quality impacts. We believe this approach coupled with our Suggestions (Exhibit 2) would allow BLM to meet its obligations for protecting air quality.

8. Modeling Is A Valid Way To Predict Impacts

From time to time we hear skepticism or perhaps even disparagement expressed toward making predictions regarding what impacts will be via modeling. We would like to note that in the Southwest Wyoming Technical Air Forum (“SWYTAF”) report a comparison was made of CALMET/CALPUFF modeling results versus observed conditions with respect to conditions in the Bridger Wilderness Area, and the modeled conditions were remarkably consistent with observed conditions. The SWYTAF report is available at this website, which is incorporated into these comments by this reference: <http://deq.state.wy.us/aqd/visibility.asp> (click on Appendix F of the 2003 visibility Review Report). Modeling is used in all facets of our lives: making weather forecasts, making economic predictions, and so on. It must and should also be used with respect to analyzing air quality impacts, otherwise we would be flying blind. BLM must reject the claim that modeling is invalid.

¹⁸ If these are the current conditions, there is no basis for anyone to claim that there has not already been severe degradation of air quality in the Upper Green River Basin.

9. BLM Should Clarify How It Presents Eighty Percent Emission Reduction Scenarios

In numerous tables and various places in the text of the FEIS and supporting documents, BLM makes it very difficult to determine whether an eighty percent reduction in emissions is under consideration or a twenty percent reduction. The terminology that is used creates this confusion. An eighty percent reduction in emissions scenario is often presented as emissions occurring at twenty percent of what they would have been. This is very confusing, and BLM should clarify this text and these tables so that there is no confusion. Clear and consistent terminology and presentation should be used.

10. PM₁₀ And NO₂ PSD Increments Apparently Will Be Violated

We reiterate and reincorporate our comments regarding these issues expressed in our prior comments. The FEIS continues to show that PSD increments will likely be violated for NO₂ and PM₁₀.

a. *PM₁₀*

Table J-4 shows that the “direct modeled impact” will be 94.0 µg/m³ for the near-field PM₁₀ 24-hour standard. FEIS at J-2. The PSD Class II increment for the PM₁₀ 24-hour standard is 30 µg/m³. FEIS at 3-8 (Table 3.7). As noted in the FEIS, “[t]he near-field analyses include impact assessments for comparison to applicable ambient air quality standards and for comparison to PSD increments.” FEIS at 4-4 to 4-5. Thus, these data show the Class II increment will be greatly exceeded. Furthermore, the estimated direct modeled impact does not include production-related emissions, meaning it is an underestimate. FEIS at 4-6. It also does not include any increment that has already been consumed by the existing background concentration (33 µg/m³). And while BLM may view these emissions as “temporary” and thus not subject to PSD regulation, in reality there will be nothing “temporary” about the well pad construction, road building, etc. that contributes to this PM₁₀ pollution. There will be an intense, continuous, and unbroken construction project consisting of 3100 wells occurring in the Jonah field for approximately the next ten years. The vast majority of this construction will be undertaken by one or two operators (BP and Encana) and will occur on a relatively few leases controlled by these operators. The FEIS makes it clear BLM views this as one overall construction project (the FEIS is entitled the “Jonah Infill Drilling Project,” after all).¹⁹

¹⁹ We would note that even if the 23.2 µg/m³ level shown in Table J-24 is used as the relevant measure, the PSD Class II increment would likely still be violated. As noted, this value does not include production-related emissions (which are obviously not temporary) and it also does not reflect background concentration which has previously consumed increment. If BLM is relying on this value to claim that the Class II increment will not be violated, it needs to provide some support showing that production-related emissions and the already-consumed increment would not push this value over the 30 µg/m³ level, because it is already close to the limit.

b. *NO₂*

The impacts we described in our previous comments (particularly the comments of Vicki Stamper) indicating the NO₂ Class II increment would be exceeded still appear to occur under the modeling presented in the FEIS. With respect to the NO₂ Class II increment of 25 µg/m³, the increment consumption analysis performed by the State of Wyoming last fall showed that 11.5 µg/m³ of that increment has already been consumed. This means that, effectively, the Class II increment for NO₂ is 13.5 µg/m³ in this area. We ask BLM to revisit its NO₂ increment consumption predictions from this perspective. Yet BLM is predicting that there will be a “direct modeled impact” of 18.9 µg/m³ for near-field NO₂ concentrations. FEIS at J-1(Table J-1). Thus, again, it appears that the Jonah Infill project will exceed the PSD Class II increment for NO₂. And as discussed in detail above, given the unlikelihood of achieving an eighty percent reduction in emissions absent a firm commitment to the use of phased development of the natural gas resource, it would appear that the NO₂ Class II increment consumption levels for other scenarios are much more likely to occur than the conditions modeled under the eighty percent reduction scenario. These scenarios make it even clearer that the NO₂ PSD Class II increment will likely be violated.

11. The Analysis Presented In The FEIS Does Not Support The Claim That Ozone Concentrations Will Not Violate The WAAQS and NAAQS

BLM claims in the FEIS that potential concentrations of criteria pollutants are all below applicable Wyoming Ambient Air Quality Standards (“WAAQS”) and National Ambient Air Quality Standards (“NAAQS”). However, BLM has not addressed the deficiencies in its ozone modeling that we identified in our previous comments. This is a serious concern, because as BLM acknowledges, exceedances of the ozone standards have already been measured in the Jonah Infill area.

As discussed in our April 9, 2005 comments on the DEIS and our September 26, 2005 comments on the Air Quality Supplement, BLM is relying on an outdated, inadequate screening model to estimate ozone concentrations from a small portion of the total VOC, NO_x and CO emissions anticipated to arise with the project. This is clearly inadequate. Like secondary PM and regional haze, ozone forms over scales of hundreds of kilometers. BLM must use a state-of-the-science, “mid-field” to “far-field” model to assess the expected cumulative regional ozone impacts of existing emissions sources, the Jonah Infill project, and other reasonably foreseeable projects. BLM’s response to this comment (comments 15 and 16) is to argue that better ozone models would be too expensive and time-consuming to apply and that “the data and analyses provided in the EIS and AQTSD are adequate for assessment.” The January 2006 Final Support Document also states that “The models that are available for estimating ozone formation are applicable for urban areas where high temperature, summertime, stagnant conditions can persist and are conducive to ozone formation.” This statement is simply incorrect. So-called “regional-scale” ozone models, which can be applied to domains ranging from the size of an urban area to the scale of a state or continent, and which apply to both rural and urban conditions, are widely used to model emissions scenarios and meteorological

conditions like those affecting southwestern Wyoming. These models are relatively time-consuming and expensive to run compared to the Scheffe nomograph, but so is the Calpuff model. Regional-scale ozone impacts on human health and on vegetation are no less important than impacts on visibility, for which Calpuff was used. BLM's statement that "the data and analyses provided in the EIS and AQTSD are adequate for assessment" is simply unsupported.

Likewise, our earlier comments discussed the fact that in its near-field ozone analysis, BLM incorrectly added a long-term average ozone concentration from the Green River Basin Visibility Study to the ozone concentration it estimated with the Scheffe model to derive total ozone concentrations for comparison to the NAAQS and WAAQS. BLM has failed to correct this error, again using a long-term average background concentration for comparison with the standards. FEIS at J-3 (Table J-6). As discussed in our previous comments, the ozone standards are short-term standards, based on 8-hour and 1-hour average concentrations, respectively. The background concentrations used to estimate total concentrations for comparison to the standards must therefore reflect the same averaging times. The January 2006 Final Support Document states that it would be "overly conservative" to add background concentrations that reflect short-term averaging times to results from the Scheffe screening model, presumably because BLM believes the screening model overestimates ozone concentrations. However, BLM has not provided any support for the suggestion that the screening model is biased in this direction, let alone any estimate of the magnitude of the bias. BLM must use an adequate model in the first place, and not arbitrarily adjust the background concentration downward in hopes of correcting for some purported bias in the model.

In addition to using a long-term average background ozone concentration instead of the appropriate short-term average background levels, BLM has apparently failed to consider background ozone concentrations from monitors located closer to the Jonah Infill project. In the EIS for the Powder River Basin, BLM used ozone data from Pinedale to estimate background concentrations. Final Environmental Impact Statement and Proposed Plan Amendment for the Powder River Basin Oil and Gas Project at 3-94 (Table 3-93). BLM must explain why data from this location, which is much closer to the Jonah field than the Green River station, could not be or should not be used in the Jonah Infill analysis.

The major modification BLM made to its ozone analysis between the DEIS and FEIS was to substantially reduce its estimates of NO_x and VOC emissions associated with the subset of 128 wells that it considered in the analysis. (Compare pages 38-39 of the Draft Support Document with page 33 of the Final Support Document.) The VOC adjustments were apparently based on operator-reported estimates of the fraction of well site storage tanks and dehydrators that have controls. Final Support Document at 33. No documentation of the nature of the controls, the reductions they achieve, or the likelihood that they will be continued into the future is provided. Additionally, BLM also applied a declining emissions curve to the VOC emissions estimates. This curve is shown in as Table B.2.23 in the Final Support Document, but no source is provided for the

information. BLM should not rely on unsubstantiated and apparently unenforceable control assumptions or undocumented emissions adjustments in projecting the consequences of its actions. As noted several times in these comments, under the NEPA regulations BLM has an independent duty to confirm the reliability of information submitted to it by a project proponent.

12. Alternative B Will Not Impact Air Quality To Nearly The Degree BLM Claims

As discussed in the Wildlife Issues section of these comments, Alternative B is the preferable alternative presented in the FEIS for a number of reasons. BLM claims that the air quality impacts of this alternative would be greater than other alternatives due to the greater use of directional drilling, but this claim is misplaced for a number of reasons. These reasons include but are not limited to the following:

- Construction emissions are included for every acre of disturbance presented in the FEIS, but no emissions estimates are included for reclaiming the disturbed acreage. Since increased use of directional drilling would required far less in the way of reclamation efforts, BLM is overestimating the air quality impacts associated with the use of directional drilling.
- Emissions for single well pad construction were applied to all wells in all scenarios. This significantly overstates the emissions attributed to directional wells because 8 or more wells can be drilled from a single pad.
- Wind erosion for pad, road, and pipeline construction was calculated for 2, 5 and 10 wells per pad, but a basic error was made. The erosion for the entire pad was attributed to each well. No matter if 5 wells or 10 wells were placed on the same 10 acre pad, the emissions per well were shown to be the same. This is clearly an incorrect assumption.
- The same rig move emissions were applied to all wells irregardless of whether there was 1 well per pad or 10 wells per pad. Each rig move requires 1-2 days of intense activity involving 4 or 5 heavy trucks. Only a small percentage of directional wells will involve a rig move. Instead they will only need to be skidded 10 – 20 feet.

Finally, even if directionally drilled wells would cause greater emissions, there are means to further reduce these emissions that BLM is not acknowledging. If directional drilling would lead to unacceptable air quality impacts, it is within BLM's authority to regulate the pace of develop, that is, it can required phased development. Coupling the increased use of directional drilling as called for in Alternative B with a phased approach to the number of wells being drilled in a give time is a valid way of reducing both surface impacts and air quality impacts while still allowing for full development of the natural gas resource.

Responses To Our Previous Letters

As noted above, we have submitted four previous comment letters to BLM during regular public comment periods on the Jonah Infill project. Here we will comment on several important issues we detected in our review of BLM's response to those comments in the Public Comment Analysis Report. This review is far from exhaustive, but it highlights several important issues. As noted above, all of the previous letters we have submitted are reincorporated into this letter, and we ask BLM to reconsider them and to reconsider the responses to them that are provided in the Public Comment Analysis Report. The comments here relate only to air quality issues; the lack of comment on other issues should not be construed as agreement with BLM's response to our previous comments on other issues. For simplicity, the four letters are addressed in turn by the code numbers that BLM assigned to them in the Public Comment Analysis Report

Table II-B, Submittal ID L-61. Comment 6: The claim that the "background levels used . . . are those levels approved by [DEQ] based on their monitoring" is an assertion, and in any event BLM has an independent duty to insure the integrity of information used in an EIS. That PM_{2.5} and PM₁₀ data happened to be available from the Cheyenne monitoring station does not meet BLM's duties under NEPA to engage in a thorough and technically competent analysis. Comment 8: BLM has a duty to independently evaluate information submitted by a project proponent. 40 C.F.R. § 1506.5(a). See also Utahans for Better Transp. v. U.S. Dep't of Transportation, 305 F.3d 1152 (10th Cir. 2002) (invalidating an EIS for failure to comply with this requirement). Furthermore, the Questar winter drilling NEPA documents from the Pinedale Anticline show the drill rig horsepower estimates are greatly underestimated. Comment 9: Here BLM admits that it cannot soon rely on Tier II technology. Comment 10: Again, BLM has an independent duty to confirm the validity of this information. Comment 15:²⁰ BLM has an independent duty to determine the needed modeling domain and cannot rely on an unidentified "stakeholders group," especially where the determination was not subject to public review. BLM has acknowledged that a number of additional Class I areas are implicated by this project, so the modeling domain must be sufficient to allow them to be fully considered. An assertion that meteorological conditions (wind?) "that could transport [Jonah Infill project] emission[s] to these areas are contained within the modeling domain" is insufficient. Comment 16: Here BLM admits that it is far more concerned with meeting an arbitrary, unstated, and unknown timeline than in meeting the requirements of the law (NEPA and FLPMA). But BLM has duties under NEPA and FLPMA that cannot be ignored; any schedules that BLM imposes on itself must be developed with these legal requirements in mind. BLM's claims that additional analysis was not possible due to its arbitrary deadlines and cutoff dates are refuted by the fact that BLM did engage in additional analysis between release of the DEIS and the FEIS—in fact it engaged in two additional analyses, the early project stage modeling and the revisions in the input data (particularly for ozone precursors) used in the FEIS modeling relative to the DEIS modeling. Comment 17: Again, BLM has an independent duty to verify this information and these claims and to make these kinds of assumptions available

²⁰ This comment also applies to BLM's response to the comment in Table III-B, Submittal ID 9, Comment No. 24.

for public comment. The claim that RFD could be limited to Wyoming because industrial development is “larger” is nothing but assertion and the fact it is closer than other areas is not dispositive; if emissions are occurring in the modeling domain they must be considered.²¹ BLM had a duty to determine the contribution of the Atlantic Rim and Seminoe Road projects to emissions because they were proposed and well defined when the Jonah Infill EIS was being prepared. As shown in Exhibit 2, these projects have defined development levels, so BLM must consider them before finalizing the FEIS in order to do a valid cumulative impacts analysis. Comments 2: While BLM may “prefer[] to leave the choice of mitigation measures to the industry,” it has an independent duty to determine what mitigation measures will be required. See 40 C.F.R. § 1505.3(a) (the lead agency shall “include appropriate conditions in grants, permits, or other approvals”).

Table III-B, Submittal ID 2. Comments 1 and 7: Here BLM makes a clear statement that it will abide by the NO_x tracking agreement with DEQ, yet in the FEIS it only commits to cooperating in this vital activity. FEIS at 5-3. BLM should make clear that it will fully abide by the tracking agreement in all relevant field offices. Comment 2: BLM is required to present in an EIS how both the alternatives presented in the EIS and decisions based on it will achieve the requirements of sections 101 and 102(1) of NEPA, as well as other environmental laws and policies. 40 C.F.R. § 1502.2(d). The FEIS fails to do this, so while BLM may respectfully disagree with this comment, it has provided no evidence it is doing anything other than what is claimed in the comment. Comment 5: We believe BLM’s authority and responsibility extends beyond mere analysis to affirmative obligations to protect air quality. As noted above, at a minimum FLPMA establishes substantive obligations to mitigate impacts. Comment 6: BLM’s response here is primarily along the lines that it need not do a more thorough and careful analysis; it does not deny the importance of these issues. But BLM’s responsibilities under NEPA for a thorough analysis are much broader than BLM acknowledges. 40 C.F.R. §§ 1500.1(b), 1502.22, 1502.24. Comment 12: This response confirms a major point we have been making. Since the DEQ regulatory increment consumption analysis has failed to consider a number of well defined future emissions sources (see, e.g., Exhibit 2), BLM must do that as part of its NEPA and FLPMA responsibilities. To meet those responsibilities BLM must do a valid increment consumption analysis (even if it is not “regulatory” for purposes of matters within DEQ’s jurisdiction). But the FEIS demonstrates that it still fails to provide a valid increment consumption analysis for many reasons, particularly due to the failure to determine the amount of increment consumed after the relevant baseline date (1988 for NO₂), instead still relying on much later dates. Comments 21 and 22: Here the BLM recognizes that 1 dv is the proper visibility standard, and thus as argued above the BLM must revise its analysis to show when visibility impacts will be greater than or equal to 1 dv, not greater than 1 dv.

Table III-B, Submittal ID 9. Comment 3: BLM is putting too fine a point on this matter. DEQ has modeled how much increment has been consumed (11.5 µg/m³,

²¹ “BLM recognizes that activities in other states may impact areas potentially impacted by the [Jonah Infill project].” Table III-B, Submittal ID 9, Comment No. 26

meaning the Class II increment for NO₂ is now effectively 13.5 µg/m³ rather than 25 µg/m³). While in an ideal world all of this modeling would be done “under one roof” (not by DEQ and BLM separately), the fact of the matter is the best available information, as presented in the comment, shows the NO₂ Class II increment will be exceeded due to the impacts of the Jonah Infill project. Comment 9: Even assuming as a general proposition that BLM can use background monitoring data for some purposes, it must show the specific monitoring data used is valid for the purposes it is used for, which BLM has failed to do. Comment 10. BLM has provided no information showing that the Rock Springs SLAMS data would not be more representative of conditions in the Jonah field; it is certainly much closer than the Cheyenne station. Comments 13, 14, and 17. As noted above, the CEQ regulations require BLM to independently confirm data supplied by a project proponent. BLM has provided no evidence it has done so for drill rig sizes, well drilling times, or the level of additional compression. Comment 19: Baseline dates are firm and established. 40 C.F.R. §§ 51.166(b)(14) (establishing major source baseline dates and trigger dates—February 8, 1988 for NO₂). The State of Wyoming’s air quality regulations also establish these dates. Thus, BLM cannot claim the applicable baseline date has not already been established as a way for it to avoid the required analysis. Comments 20 and 22. Here and in a number of other responses to comments BLM claims it is not responsible for doing an increment consumption analysis. While BLM may not need to do a “regulatory” increment consumption analysis as it relates to DEQ authority and responsibility, under NEPA BLM has a responsibility to consider all relevant environmental impacts in order to do a valid cumulative impacts analysis and under FLPMA it must provide for compliance with the Clean Air Act. By refusing to make an estimate of predicted increment consumption, BLM is failing to meet these obligations. And again, baseline dates are firm and well established, so BLM is perfectly capable of estimating how much increment has been consumed after those dates (if DEQ has not done it), and how much will be consumed as a result of the project it is approving. Comment 25, 29, and 32. Volatile organic compounds with six or more carbon atoms may be a precursor to regional haze formation. In any case, volatile organic compounds are a major precursor to ozone formation, which as our previous comments make clear is also a regional problem. Therefore, BLM had a duty to include volatile organic compounds in its regional inventory so as to make reasonable estimates of ozone levels. Comment 26. Here BLM makes a candid admission of the nature of the air quality impacts. But it says that it does not have to consider them. In essence it is saying it does not have to do a cumulative impacts analysis. This it cannot do. Comment 4: Here BLM admits the project will cause violations of the PM₁₀ 24-hour Class II increment.²² The point is not that “regulatory” action must be taken as a result of these predicted violations, the point is the BLM must present, disclose, discuss, and analyze these likely impacts, which it has failed to do. Under FLPMA, it cannot “provide for compliance” with the Clean Air Act when it is setting in motion actions that will lead to exactly the opposite result. Given these predicted violations, BLM must seek out ways to avoid them, which it has failed to do, focusing only on visibility issues in Class I areas.

²² BLM also admits a PM₁₀ Class II increment violation in other responses. Table III-B, Submittal ID 10, Comments 18 and 6.

Table III-B, Submittal ID 10. Comment 18. As noted, the baseline dates are firmly set and widely available. Interestingly, here BLM seems to recognize the need to do an increment consumption analysis (even if not of a “regulatory” nature), which is in contrast to the position noted above. Comments 4 and 6. The claim that “[i]n cases where monitored levels of ozone are high, additional modeling is impractical and does not justify the expense” is an unsupported and unjustified assertion. Modeling is still needed to project what may occur from future development and to interpolate to locations without monitors. Comment 6. If BLM could sum the DEQ increment consumption for NO₂ with BLM’s predicted additional increase in NO₂ levels as it says it can do, it should do exactly that. That the resulting information would be for “information purposes only and would not constitute a regulatory PSD Increment Consumption Analysis” is irrelevant, because providing information is a primary purpose of NEPA. As we have noted in these comments and in other comments, when this is done, the best available data (the DEQ’s increment consumption analysis coupled with BLM’s predictions on future emissions concentrations) show that the NO₂ Class II increment will be exceeded. BLM’s claim that it cannot set caps is wrong. It has done so before in the Moxa Arch/Fontenelle EISs and the Pinedale Anticline EIS. While those caps may not be used for “regulatory” purposes, there is no bar to BLM setting such caps and making its decisions accordingly. DEQ cannot tell BLM what it can and cannot do with respect to BLM’s own decisions that DEQ has no authority over, such as whether to approve an APD or not. Thus, given the widespread and severe impacts that BLM is predicting it should set a cap in the ROD that will guide its decision making pursuant to the ROD, especially relative to the mitigation measures that BLM establishes. Comment 14. BLM claims that drill rigs are temporary sources of air pollution, but this is wrong. BLM is planning to have 20 drill rigs in operation in the Jonah field for 365 days per year for approximately 15 years. That is not a temporary source of emissions. Many of these drill rigs will be the same drill rigs and will be owned or controlled by the same operators. In many cases they will “move” hardly at all—a matter of a few feet for directionally drilled wells. They will be operating continuously for extended period of times on one or a few leases owned or controlled by the same entity (an operator has no incentive to maximize drill rig moves; where as here there is a virtual guarantee every well will be a producer the drill rigs will be kept on a particular lease and even a particular small area of a lease as long as possible). Many of the drill rigs operating in the Jonah field may be contracted to drill for extended periods of time. Thus, they are not “temporary” sources of emissions. We ask that BLM present information on these issues before it summarily claims that drilling is a “temporary” source of emissions. Comment 24. Here BLM attempts to say the law does not apply to it. But the goal in Section 169A of the Clean Air Act is a national goal, and thus it applies to BLM. It is not “their” goal—a reference to the U.S. Congress—as BLM claims. Does BLM really believe that legislation passed by the Congress and signed into law by the President establishing a “national goal” is “their National Visibility Goal” and does not apply to BLM? BLM must “provide for compliance” with the Clean Air Act, and therefore it cannot claim that achieving this goal is solely an EPA responsibility. BLM too must provide for compliance with this goal. While natural visibility conditions may not need to be achieved until 2064, in the meantime BLM must seek to ensure that “reasonable progress” is made toward that goal, which requires that there be “an improvement in visibility for the most impaired days . . .

and [assurance that there is] no degradation in visibility for the least impaired days.” 40 C.F.R. § 51.308(d)(1). The Wyoming state implementation plan must provide for this because the EPA regulations require it to do so. BLM has committed to abiding by the state’s regional haze state implementation plan, and thus it must meet this required standard which must be a component of the State’s regional haze rule. Comment 26. While BLM “chose not to accept” DATs as a significance criteria in the FEIS it did view them as a measure of significant impacts in the DEIS. It dropped them with no explanation in the FEIS, which is arbitrary and capricious. Comment 29. BLM provides nothing but an assertion here. While BLM may not be an expert on health issues related to air pollution it nevertheless has a responsibility under NEPA to consider such issues if they may result from the environmental impacts of its project. Protecting human health is an explicit policy established by NEPA, and BLM like all agencies has a duty to implement NEPA and its policies. 42 U.S.C. §§ 4321, 4331.

Last, a recurring theme in the responses to our various letters was that it was unnecessary, difficult, or impossible for BLM to update its air quality analyses based on new emissions data, particularly an updated regional emissions inventory. This claim is belied, however, by the fact that BLM did new analyses in the FEIS with updated data for the things it wanted to reanalyze, namely issues that were problematic for it in the DEIS (an example are the depletion curves used to re-estimate volatile organic compound emissions, allowing BLM to claim a reduction in predicted ozone emissions in the FEIS relative to the DEIS). See, e.g., Public Comment Analysis Report, Table III-B, Submittal ID 9, Comment No. 17 (“Following completion of the DEIS analysis and during preparation of the supplemental analysis, [compression level estimates were] changed”). Thus, there is no reason that BLM cannot provide a more up-to-date analysis on which to base its decision-making. This is particularly true relative to the numerous recent and specific proposals for oil and gas development that are currently undergoing NEPA review and which were the subject of our January 11, 2006 letter. Exhibit 2. As noted in the prior comments a number of times, June 30, 2003—nearly three years ago—is far too long ago to serve as the “end-date of the source inventory,” and BLM has shown by the updated analyses in the FEIS that it is perfectly capable of acquiring and updating emissions estimates, if it wants to. We request that it do so as requested in our prior comments and in Exhibit 2.

DIRECTIONAL DRILLING ISSUES

Issues related to directional drilling and recoverable reserves are addressed in the accompanying comments entitled “Analysis of the Jonah Infill Drilling Project Final EIS Conclusions Concerning Reductions in Recoverable Reserves due to Directional Drilling,” which we incorporate into these comments by this reference. Additional comments on this issue are provided in the accompanying comments entitled “Jonah FEIS Comments Regarding The Use Of Directional Drilling To Minimize Surface Disturbance In The Jonah Infill Drilling Project And On The Content Of Jonah Infill Drilling Project Evaluation Of Directional Drilling”, which are also incorporated into these comments by this reference.

OTHER ISSUES

There are several other issues we would like to briefly address in these comments. BLM eliminated a number of alternative in the FEIS that had been considered in the DEIS. FEIS at 2-4 to 2-8. The elimination of Alternatives C and D was based on a misplaced view that they were not reasonable because resources would have been “stranded.” BLM has provided no analysis supporting this contention. We would note that even if BLM were to not allow all 3100 wells to be drilled as a result of this NEPA analysis, that does not mean it cannot allow those wells to be drilled through a future analysis. Thus, BLM’s claim that natural gas “would most likely never be recovered” is hyperbole. The elimination of these alternatives was inappropriate because their exclusion prevents BLM from having a full range of options at its disposal to allow for reasonable development of the natural gas resource while ensuring environmental protection.

Section 390 of the Energy Policy Act of 2005 allows BLM to utilize categorical exclusions from NEPA compliance in some circumstances. 42 U.S.C. § 15942. BLM has begun to use those exclusions in the Pinedale Field Office, at least on the Pinedale Anticline. Much of the mitigation that is discussed in the FEIS is based on the assumption that the mitigation will largely be based on further site-specific NEPA analysis at the APD stage of development. Yet if the Section 390 categorical exclusions were invoked, much of the development might escape future more refined NEPA analysis and development might occur absent the mitigations that are nominally called for. BLM must ensure this does not occur. If mitigation is contingent on decisions made in future NEPA analysis, BLM must commit to providing that future NEPA analysis. Even if BLM were to still require mitigation when an APD was filed, the lack of a NEPA process would exclude the public from any future role in decision-making. That is unacceptable. Alternatively, if BLM might indeed invoke categorical exclusions in the future and thus essentially eliminate the future decision-making process it is saying will occur in the FEIS, then the decisions regarding mitigation that are being postponed must be made in this NEPA process so that the public and other agencies can be fully informed and engaged in the decision-making process.

In our comments on the DEIS we pointed out that BLM was making decisions that would lead to unnecessary or undue degradation of the public lands in contravention of FLPMA. 43 U.S.C. 1732(b). That outcome is still apparent here. At a minimum the failure to fully employ directional drilling to reduce surface impacts and phased development so as to prevent air quality impacts will lead to unnecessary or undue degradation of the public lands.

Thank you for considering these comments, and we look forward to remaining involved in the Jonah Infill project.

Sincerely,

/s/ Bruce Pendery

Bruce Pendery,
Wyoming Outdoor Council
And on behalf of:

Tom Darin,
Jackson Hole Conservation Alliance

Jacob Smith,
Center for Native Ecosystems

Lloyd Dorsey,
Greater Yellowstone Coalition

Peter Aengst,
The Wilderness Society

Suzanne Lewis,
Biodiversity Conservation Alliance

Jana Milford,
Environmental Defense

Cathy Purves,
Trout Unlimited

Michael Saul,
National Wildlife Federation,

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