

**UNITED STATES DEPARTMENT OF THE INTERIOR
OFFICE OF HEARINGS AND APPEALS
BOARD OF LAND APPEALS**

Wyoming Outdoor Council, Upper Green River Valley Coalition, The Wilderness Society, Greater Yellowstone Coalition,	* * * * *	Appeal of the Record of Decision for the Jonah Infill Drilling Project, Sublette County, Wyoming
Appellants	* *	BLM Wyoming State Office

CORRECTED PETITION FOR STAY PENDING APPEAL

This is a petition for a stay pending appeal pursuant to 43 C.F.R. §§ 4.21(b) and 3165.4(c) of an adverse decision made by the State Director, Bureau of Land Management (“BLM”), Wyoming State Office, on March 14, 2006. The challenged decision is the Record of Decision for the Jonah Infill Drilling Project, Sublette County, Wyoming.

The Jonah Infill project authorizes the year-round drilling of 3,100 additional oil and gas wells within the existing Jonah field of the Upper Green River Valley, located south of Yellowstone and Grand Teton National Parks in western Wyoming. This extensive new development threatens to dramatically increase emissions and resulting concentrations of air pollutants, including ozone and small particulate matter that pose significant health risks to the people who live and work in the project area and surrounding communities. Available data generated by the BLM and other agencies indicate that the Jonah Infill project’s predicted emissions will violate federal Clean Air Act standards established to protect air quality and human health. As a result, the historically pristine air in western Wyoming will become dangerous to breathe, and some of our nation’s most iconic landscapes will be obscured by haze and smog.

In an effort to avoid these air pollution impacts to the extent possible pending the resolution of this appeal, appellants request a stay to prohibit BLM from approving any activities associated with the Jonah Infill project that would violate health-based standards for nitrogen dioxide (“NO₂”), ozone, and very fine particulate matter (“PM_{2.5}”) under the Clean Air Act, 42 U.S.C. § 7470 et seq., and its implementing regulations. Appellants do not seek to halt all development activities associated with the Jonah Infill project, but instead seek to ensure that the region’s gas resources are developed in a manner that does not sacrifice the health of people living and working in the area and obscure views in Yellowstone and Grand Teton National Parks and surrounding wilderness lands.

Appellants reserve the right to file an additional Statement of Reasons within 30 days of this Appeal, as allowed by rule. See 43 C.F.R. § 4.412. This Petition for Stay and the accompanying Notice of Appeal are filed within 30 days of service of the challenged decision, and are therefore timely. See 43 C.F.R. § 4.411.

I. BACKGROUND

A. The Jonah Infill Project

This appeal challenges BLM’s approval of the Jonah Infill project, located in the existing Jonah gas field approximately 32 miles southeast of Pinedale, Wyoming. See BLM, Final Environmental Impact Statement, Jonah Infill Drilling Project (Jan. 2006) (“FEIS”), at 1-1 (Exhibit 1); see also id. at 1-2 (map of Jonah Infill project area). The Jonah field encompasses approximately 30,500 acres. See id. (Ex. 1). The Jonah field is already heavily developed. See id. at 2-13 (Map 2-1) (Ex. 1). Previous BLM decisions have authorized surface disturbance in the Jonah field from 533 wells on 497 well pads occupying 4,209 acres, including roads, pipelines, and other facilities. See id. at 1-3, 2-12 to 2-14 (Ex. 1).

Now, pursuant to a Record of Decision issued on March 14, 2006, BLM has authorized a

dramatic expansion of energy development in the field. The Jonah Infill project will authorize an additional 3,100 wells in the Jonah field. See BLM, Record of Decision, Jonah Infill Drilling Project (Mar. 14, 2006) (“ROD”), at 1 (Exhibit 2). BLM assumes this development will go forward at a pace of 250 wells drilled per year, a rate of development that translates to approximately 20 drill rigs operating in the field year-round for approximately 13 years. See id. at 12, 14 (Ex. 2). This new level of development will extend surface development in the Jonah field across a total maximum of 20,334 acres, with as much as 14,030 acres impacted at any one time. See id. at 1-2 (Ex. 2). BLM expects this level of development to yield nearly 8 trillion cubic feet of natural gas. See id. at 1 (Ex. 2).

B. Air Quality Impacts

While the Jonah Infill’s anticipated natural gas recovery is extraordinary, so are the project’s likely impacts on air quality in Wyoming’s Upper Green River Valley. Oil and gas development activities cause major pollution emissions as a result of construction activities, well completion and testing, drilling rig exhaust, well production equipment, pipeline compression engine exhaust and fugitive dust, among others. See FEIS at 4-4 (Ex. 1). The Upper Green River Basin already holds 2,530 oil and gas wells in BLM’s Pinedale Resource Area alone. See FEIS at 1-10 (Ex. 1). Pollutant emissions from these existing energy developments have already impacted air quality in the region. See Mark Story et al., Greater Yellowstone Area Air Quality Assessment Update 4 (Nov. 2005) (reporting that managing emissions associated with southwest Wyoming oil and gas development “is currently the most pressing air quality issue in the [Greater Yellowstone Area]”) (Exhibit 3). The Jonah Infill threatens a massive new addition of

pollutants to the region's air, including, among others, the following:¹

Particulate matter – Particulate matter consists of extremely small particles and liquid droplets. See <http://www.epa.gov/oar/particlepollution/> (Exhibit 5). Federal standards group particle pollution into two categories for purposes of regulatory controls: (1) coarse particles ranging in size from 2.5 to 10 micrometers in diameter (“PM₁₀”), and fine particles with diameters smaller than 2.5 micrometers (“PM_{2.5}”). See id. (Ex. 5). Because of their small size, these particles can penetrate deep into the lungs and cause significant health problems, including decreased lung function, aggravated asthma, chronic bronchitis, and premature death in people with heart or lung disease. See <http://www.epa.gov/oar/particlepollution/health.html> (Ex. 5). Children and the elderly are especially vulnerable. See id. (Ex. 5). In addition, fine particles in particular are a leading cause of haze that reduces visibility. See id. (Ex. 5). BLM predicts that the Jonah Infill project, as approved by the agency, will emit 281.3 tons per year of PM₁₀ and 128.1 tons per year of PM_{2.5}. See TRC Env'tl. Corp., Final Air Quality Technical Support Document for the Jonah Infill Drilling Project (Jan. 2006) (“Final Air Quality TSD”), Vol. 1 at 14 (Table 2.3) (Exhibit 4). Because PM_{2.5} particles may “remain suspended in the atmosphere from days to weeks and be transported many thousands of kilometers,” these PM_{2.5} emissions from the Jonah Infill project pose serious health risks to people in communities well outside the project area. National Ambient Air Quality Standards or Particulate Matter; Proposed Rule, 71 Fed. Reg. 2,619, 2,625 (Jan. 17, 2006) (Exhibit 6).

Nitrogen oxides – Nitrogen oxides (“NO_x”) are a group of highly reactive gases containing nitrogen and oxygen in varying amounts, including nitrogen dioxide (“NO₂”). See <http://www.epa.gov/air/urbanair/nox/what.html> (Exhibit 7). They typically form when fuel is

¹These pollutants and their impacts are discussed in more detail where they are addressed in appellants' arguments on the merits, infra.

burned at high temperatures. See id. (Ex. 7). NO_x reacts with other compounds in the atmosphere to form ozone, which poses serious human health and environmental threats, as well as small particles such as PM₁₀ and PM_{2.5} that, as discussed above, present their own threats to human health and impair visibility. See <http://www.epa.gov/air/urbanair/nox/hlth.html> (Ex. 7). BLM predicts that the Jonah Infill project will emit 696.7 tons per year of NO_x. See Final Air Quality TSD, Vol. 1 at 14 (Table 2.3) (Ex. 4).

Ozone – The American Lung Association has identified ozone as a “powerful respiratory irritant” that can lead to reduced lung function, “greatly increas[ing] the risk of asthma attacks, need for medical treatment and for hospitalization in persons with asthma.” American Lung Association, “Ozone Fact Sheet” at 1 (2006) (Exhibit 8). The Environmental Protection Agency (“EPA”) cautions that “even at very low levels” ground-level ozone “triggers a variety of health problems including aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses like pneumonia and bronchitis.” U.S. Environmental Protection Agency, “Six Common Air Pollutants, Chief Causes For Concern” at 1-2 (2006) (Exhibit 9) (emphasis added). Further, several studies have linked ozone pollution with premature human mortality. See Declaration of Jana Milford at Exhibit B, pages 2-3 (“Milford Report”) (Exhibit 10) (discussing the severe impacts of ozone on human health). Ozone is a particular threat to people with respiratory conditions or diseases, senior citizens, people who work outdoors, and children. See id.; Ex. 9 at 2. Symptoms of ozone exposure include wheezing, coughing, and pain when breathing. See Ex. 9 at 2.

In addition to these severe human health impacts, ozone damages plants and ecosystems, making them “more susceptible to disease, insects, other pollutants, and harsh weather.” See id. at 2 (Ex. 9). In this way, ozone can “ruin[] the appearance of cities, national parks, and

recreation areas.” Id. (Ex. 9). Because ozone can also blight crops and forest yields, it can have major adverse economic impacts. See id. (Ex. 9). Finally, ozone is a primary chemical agent that contributes to formation of the brown haze that obscures visibility in many areas, even remote wilderness areas and National Parks. See id. at 3 (Ex. 9); Milford Report at 3-4 (describing the effects of ozone on visibility, including secondary particles and aerosols created due to reactions with ozone, which scatter light, reducing visibility and increasing haze) (Ex. 10).

Already background ozone concentrations in the Jonah Infill project area have reached nearly 94 percent of the maximum level permitted under the National Ambient Air Quality Standard (“NAAQS”) established by EPA for ozone. See FEIS at 3-8 (Ex. 1). Indeed, air quality monitors in the Jonah Field and a nearby area recorded three exceedences of the NAAQS for 8-hour ozone average concentrations in 2005, without any infill development in the Jonah Field.² Once the newly approved wells are drilled, BLM predicts that the Jonah Infill project will emit 696.7 tons of NO_x each year and an additional 14,084.5 tons per year of volatile organic compounds (“VOCs”). See Final Air Quality TSD, Vol. 1 at 14 (Table 2.3) (Ex. 4). These NO_x and VOC emissions will combine in the atmosphere to form substantially increased ozone concentrations. See Milford Report at 5-7 (explaining ozone formation) (Ex. 10). Because ozone forms at a regional scale and can impact air quality substantial distances from facilities emitting ozone-forming pollutants, increased ozone concentrations threaten significant human health impacts among workers in the Jonah field and residents of nearby communities such as Pinedale, Boulder, and Farson, Wyoming. See Milford Report at 6-9, 15, 22-23 (Ex. 10).

² Whether the 8-hour standard is violated is determined based on the three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration. See 50 C.F.R. § 50.10(b), 62 Fed. Reg. 38,890; see also Milford Report at 1 n.1 (Ex. 10). The standard is exceeded, but not necessarily violated, on any day when an 8-hour average concentration exceeds 157 µg/m³.

In addition to human health threats, the Jonah Infill project threatens to spread a haze over some of our nation's most revered and iconic landscapes, including Yellowstone and Grand Teton National Parks and wilderness areas in the dramatic Wind River Mountains. Based on a prediction that the Jonah Infill's air quality impacts would peak in the year 2017, when impacts from the final year of project construction are combined with nearly full-field gas production, see Final Air Quality TSD, Vol. 2 at G-4 (Exhibit 12), BLM predicted that the Jonah Infill project itself would cause three days of noticeably poorer visibility in the Bridger Wilderness Area in the Wind River Mountains. See FEIS App. J at J-13 (Table J-18) (Exhibit 11). However, when BLM calculated potential impacts of the first few years of development of the Jonah Infill project – i.e., those impacts likely to occur during the intense drill-rig activity characterizing the first phase of infill development – together with similar impacts of other oil and gas development activities occurring nearby during the same timeframe, the agency predicted far more severe visibility deterioration, including 94 days of noticeably reduced visibility at the Bridger Wilderness Area, 31 days of noticeably reduced visibility in Grand Teton National Park, and 16 days of noticeably reduced visibility in Yellowstone National Park. See Final Air Quality TSD, Vol. 2 at G-E-30 (Table G-E.8.4) (Ex. 12). Thus, BLM's calculation indicated that the Jonah Infill and nearby developments will cause a dramatic increase in haze over such well-known natural features as the Teton Range in Grand Teton National Park, the southern portions of Yellowstone National Park including parts of Yellowstone Lake, and Cirque of the Towers in the Wind River Mountains.

Taken together, these air quality impacts represent a major change — and a major concern — for many people who live and work in the Upper Green River Valley area, as summarized by one of appellants' standing affiants, Linda Baker:

For fifteen years I lived just north of the Jonah Field in Boulder, Wyoming, with a view of more than 100 miles. From my house I could look south at night to what is now the Jonah Field and see nothing but a dark sky filled with stars. During the day I could see almost the entire 100-mile long Wind River Range. ... The yellow/brown smudge I now see coming from the Jonah Field is extremely distressing to me. It harms and degrades the values and uses that I have made of public lands in the Upper Green River Valley, and additional future air pollution will only increase the harm I feel from these activities. ... Because my family has a history of lung cancer, mid-field air pollution, which would encompass my home near Pinedale, is also a grave concern to me, especially with a predicted 113 days per year of air quality degradation.

Declaration of Linda F. Baker ¶¶ 7, 11, 19.³

C. BLM's Decision-Making Process

BLM's decision-making process for the Jonah Infill project got underway with issuance of a Draft Environmental Impact Statement in February 2005, pursuant to the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 *et seq.* In response to inter-agency and public concerns that the air quality impact analysis in the Draft EIS was inadequate, BLM issued a supplemental Draft Air Quality Impact Analysis in August 2005.

After taking comment on these documents, BLM issued its FEIS for the Jonah Infill project in January 2006. In the FEIS, BLM made clear that its preferred alternative for the Jonah Infill was a project development plan reflecting an 80 percent reduction in air pollutant emissions from the level of such pollutants that would be emitted through unmitigated project development. See FEIS at 2-18 to 2-19 (Ex. 1). This clarification reflected comment on the Jonah Infill project proposal from the EPA, which stated that all alternatives considered by BLM posing greater air quality impacts than the 80-percent reduction alternative "would have been rated

³ BLM's modeling of cumulative air quality impacts during the early stages of the Jonah Infill project predicts 113 days of noticeably reduced visibility in Pinedale, Wyoming, along with 131 days of noticeably reduced visibility in Boulder, Wyoming, and 108 days of noticeably reduced visibility in Big Sandy, Wyoming. See Final Air Quality TSD, Vol. 2 at G-ix (Table G-ES-4) (Ex. 12).

environmentally unsatisfactory” because of their visibility impacts. Letter from Robert E. Roberts to Kathleen Clarke (Oct. 7, 2005), at 2 (“EPA Comment Letter”) (Exhibit 13).

However, even under this 80-percent reduction alternative, the Jonah Infill project remains a severe threat to air quality. First, as set forth in appellants’ merits arguments infra, even under this 80-percent reduction alternative the Jonah Infill project will increase concentrations of pollutants to levels that violate regulatory standards and established thresholds for protecting human health and the environment.⁴

Second, BLM still has not identified any plan to achieve the 80-percent reduction of emissions identified in its preferred alternative while still developing the Jonah Infill project at a pace of 250 wells per year, as BLM contemplates.⁵ BLM’s FEIS included substantial modeling and discussion of the air quality impacts that would result from an 80-percent reduction of emissions, see, e.g., FEIS at 4-19 to 4-10 (Ex. 1), but almost no detail as to how that result could be accomplished. BLM considered the use of drilling rigs utilizing EPA Tier II diesel engines, which emit less pollutants than standard diesel engines. See FEIS at 5-5 (Ex. 1). However, Tier II technology is not widely available at this time. EPA Comment Letter at 3 (availability of Tier II technology “uncertain”) (Ex. 13). Moreover, BLM recognized that additional mitigation, even beyond exclusive use of Tier II technology on Jonah Infill drilling rigs, would be required to achieve an 80-percent emissions reduction. See id.; see also EPA Comment Letter at 3 (Tier II engines “will reduce NOx emissions by approximately 75 percent from uncontrolled diesel

⁴ The increased emissions of PM₁₀, PM_{2.5}, and NO_x, and increased concentrations of ozone discussed in Point B of appellants’ Background discussion all reflect predicted outcomes under BLM’s 80-percent reduction alternative.

⁵ EPA specifically noted in its comments on BLM’s draft air quality analysis for the Jonah Infill project that BLM’s modeling predictions indicated achievement of the 80 percent reduction at “well development rates of 50 and 75 wells per year.” EPA Comment Letter at 5 (Ex. 13). As EPA pointed out, “[t]he DEIS does not demonstrate how emissions could be reduced by 80 percent if development remained at 250 wells per year.” Id. at 5-6 (Ex. 13).

engines”). Nevertheless, BLM’s FEIS failed to specify what additional mitigation measures could be effectively applied to bridge this gap. See FEIS at 5-5 (Ex. 1).

When BLM issued its ROD approving the Jonah Infill project, the agency still had not resolved this problem. BLM decided to adopt its preferred alternative – the 80-percent reduction alternative – with minor modifications. See ROD at 1 (Ex. 2). BLM recognized that so-called “performance-based mitigation requirements” would be required to address the “potential significant adverse visibility impacts” of this alternative. Id. at 5 (Ex. 2).⁶

When it came to specifying such requirements, however, BLM was short on details. In an Appendix A of the ROD addressing mitigation measures, BLM specified that “Tier II or equivalent diesel engine emission technologies will be required for all drill rigs at the earliest possible date.” ROD at A-3 (Ex. 2). However, BLM imposed no limit on gas well development in the Jonah field until such Tier II technology becomes available. As EPA had earlier pointed out, “the immediate availability of these new engines will be uncertain.” EPA Comment Letter at 3 (Ex. 13).

Again, BLM also recognized that even greater mitigation beyond the use of Tier II diesel engines – even if such engines were to become available – would be required to achieve an 80-percent emissions reduction. See ROD at A-3 (Ex. 2). However, BLM did not prescribe any such mitigations above and beyond Tier II technology. On the contrary, the agency called for a 12-month “Demonstration Period” during which “the Operators in the Jonah field will conduct

⁶ As this statement makes clear, BLM calculated all of its air quality mitigation measures for the Jonah Infill project solely to address visibility impacts, rather than the human health and environmental impacts that are also associated with increased emissions and concentrations of the pollutants discussed above. Indeed, the agency explicitly stated that “BLM plans no additional mitigation focused on potential concentrations” of pollutants. FEIS at 5-3 (emphasis added) (Ex. 1). Accordingly, the Jonah Infill’s contribution to dangerously high concentrations of PM_{2.5} and ozone addressed in appellants’ merits arguments, infra, receives no targeted mitigation under BLM’s decision.

emission tests on various drilling engine technologies” and will be “required to demonstrate that the impact levels from the proposed project will be less than the impact levels of the 80% emission reduction scenario.” Id. (Ex. 2). Yet, while this “Demonstration Period” goes forward, it is entirely unclear whether emissions actually will be reduced below the 80% emissions reduction threshold, how BLM will track emissions, and what, if anything, will happen in the event the operators fail to make the necessary “demonstrations” of emissions reductions. First, BLM’s mitigation plan sets no limits on development utilizing existing non-Tier II diesel engine drilling technology. See id. (Ex. 2). Second, if the prescribed demonstration process proves unsuccessful at achieving the targeted emissions reduction, the mitigation plan does not set forth any requirements designed to bring emissions into compliance with Clean Air Act standards. See id. Third, BLM has never specified a ceiling on emissions based upon the 80% reduction scenario that can be compared with emissions approved in plans of development and individual permits to drill. Thus, BLM provides no effective mechanism for tracking compliance with the 80% emissions reduction scenario. Based on the agency’s mitigation plan, there is no basis to assume that BLM will successfully control pollution that threatens human health and visibility in areas where appellants live, work, and enjoy the outdoors.

II. INTERESTS OF THE PARTIES AND SHOWING OF ADVERSELY AFFECTED PARTY STATUS

The **Wyoming Outdoor Council** (“WOC”) is a non-profit conservation organization with approximately 1,000 members in Wyoming, other states, and abroad. WOC is dedicated to the protection and enhancement of Wyoming’s environment, communities, and quality of life. WOC’s members live in and near the Pinedale Field Office. WOC is based in Lander, Wyoming. WOC members regularly utilize land and water resources in and near the Jonah Infill project area for hiking, fishing, camping, recreational, and aesthetic uses.

The **Upper Green River Valley Coalition** (“UGRVC”) advocates responsible, sustainable management of the wildlife, waters, and air quality of Wyoming's Upper Green River Valley, a vital portion of the Greater Yellowstone Ecosystem. It does not oppose natural gas development, but wants to see it carefully controlled so that the Valley’s abundant natural resources and local communities are not harmed. With rapidly escalating development now occurring, the UGRVC challenges land managers, industry, and citizens to create and implement management plans that safeguard key wildlife habitats and movement corridors, while ensuring that any new development is done responsibly.

Founded in 1935, **The Wilderness Society** (“TWS”) works to protect America’s wilderness and to ensure the wise and balanced management of our public lands through public education, scientific analysis, and advocacy. TWS works closely with the local Upper Green River Valley Coalition and has made it a top priority to watchdog projects in this area and highlight needed safeguards. Nationally, there are more than 200,000 members of the Wilderness Society, with several hundred members in Wyoming. Several of these members have a direct personal stake in the management of the BLM lands in the Pinedale Field Office area. They use the area and the wildlife it supports for business, recreational, spiritual, or other needs.

The **Greater Yellowstone Coalition** (“GYC”) is dedicated to the protection of the land, air, and waters of the Greater Yellowstone Ecosystem. In the Upper Green River Valley, the Coalition works to protect wildlife habitat and migration, water quality and the wilderness qualities of clean air, scenic vistas, and solitude. The GYC has members and supporters throughout the Greater Yellowstone Ecosystem in Wyoming, Idaho, and Montana, including in the Upper Green River Valley of Wyoming.

To bring this appeal Appellants must (1) be a party to the case; and (2) be adversely affected by the decision being appealed. 43 C.F.R § 4.410(a); National Wildlife Federation v. BLM, 129 IBLA 124, 125 (1994). To be a party to the case, a person or group must have actively participated in the decision-making process regarding the subject matter of the appeal. See 43 C.F.R. § 4.410(b) (defining “party to a case”). Here all appellants submitted comments to BLM concerning the Jonah Infill project proposal during the public comment periods provided by the agency. Specifically, appellants submitted scoping comments on the Jonah Infill project on May 12, 2003; comments on the Draft EIS on April 9, 2005; comments on the Air Quality Impact Analysis Supplement on September 26, 2005; and comments on the FEIS on February 13, 2006, with supplements on February 16 and 20, 2006. Appellants’ comments are attached as Exhibit 14. Thus, appellants satisfy the “party to a case” qualification. See id. (“party to a case” includes “one who has ... participated in the process leading to the decision under appeal ... by commenting on an environmental document”).

To demonstrate that it will “be adversely affected by the decision being appealed,” a party must demonstrate a legally cognizable “interest” and that the decision appealed has caused or is substantially likely to cause injury to that interest. Glenn Grenke v. BLM, 122 IBLA 123, 128 (1992); 43 C.F.R. § 4.410(d). This requisite “interest” can be established by cultural, recreational, or aesthetic uses as well as enjoyment of the public lands. Southern Utah Wilderness Alliance, 127 IBLA 325, 326 (1993); Animal Protection Institute of America, 117 IBLA 208, 210 (1990). This Board does not require a showing that an injury has actually occurred. Rather, a colorable allegation of injury suffices. Powder River Basin Resource Council, 124 IBLA 83, 89 (1992).

Moreover, it is not necessary for parties to show that they have actually set foot on an

impacted parcel to establish use or enjoyment for standing purposes. Rather, “one may also establish he or she is adversely affected by setting forth interests in resources or in other land or its resources affected by a decision and showing how the decision has caused or is substantially likely to cause injury to those interests.” The Coalition of Concerned National Park Retirees, et al., 165 IBLA 79, 84 (2005).

Attached as Exhibit 15 is the declaration of Linda Baker. It shows she is a member of WOC, UGRVC, TWS and GYC. Her declaration also shows she has personally used areas within the Jonah Field for purposes of wildlife viewing and nature appreciation, and that she depends upon the air quality of the Upper Green River Valley region for her aesthetic and recreational interests, as well as her interest in her own personal health. Ms. Baker’s declaration establishes that WOC, UGRVC, TWS, and GYC would be adversely affected by BLM’s decision to approve the Jonah Infill project.

Attached as Exhibit 16 is the declaration of Andy Blair, a member of WOC. Mr. Blair’s declaration shows he has visited the Jonah Field to view wildlife and enjoy the public lands, and that he depends upon the air quality of the Upper Green River Valley region for his aesthetic and recreational interests. Mr. Blair’s declaration further establishes that WOC would be adversely affected by BLM’s decision in this matter.

Attached as Exhibit 17 is the declaration of Lloyd Dorsey, a member of GYC. Mr. Dorsey’s declaration establishes that he has frequently visited the Jonah Field and that he depends upon the air quality of the Upper Green River Valley for his aesthetic and recreational interests. Mr. Dorsey’s declaration further establishes that GYC would be adversely affected by BLM’s decision in this matter.

Attached as Exhibit 18 is the declaration of Peter Aengst, a member of TWS. His

declaration shows that he has visited the Jonah Field on at least ten occasions and depends upon the air quality of the Upper Green River Valley for his aesthetic and recreational interests. Thus, his declaration further establishes that TWS would be adversely affected by BLM's decision in this matter. Thus, his declaration further establishes that TWS would be adversely affected by BLM's decision in this matter.

III. THE BOARD SHOULD GRANT A LIMITED STAY OF THE JONAH INFILL PROJECT

The Board should stay implementation of the Jonah Infill project as set forth in appellants' Requested Stay below. To receive a stay of the Jonah Infill project, the appellants must show sufficient justification based on the following standards:

- (i) The relative harm to the parties if the stay is granted or denied,
- (ii) The likelihood of appellant's success on the merits,
- (iii) The likelihood of immediate and irreparable harm if the stay is not granted, and
- (iv) Whether the public interest favors granting the stay[.]

43 C.F.R. §§ 4.21(b)(1), 3165.4(c). In determining whether an appellant has met the criteria for a stay, the IBLA has stated that:

In balancing the movant's likelihood of success on the merits against the potential impact of an injunction on the parties, we have also noted that the appellant's probability of prevailing on the merits need not be free from doubt to justify at least an interim stay.

Jan Wroncy, 124 IBLA 150, 152 (1992).⁷ Here, appellants more than satisfy this governing standard.

A. Appellants Are Likely To Succeed On The Merits

In approving the Jonah Infill, BLM set in motion a massive gas development project threatening major emissions of regulated air pollutants, including pollutants, such as ozone and

⁷Wroncy was decided shortly before the current stay regulations were finalized. See 43 C.F.R. § 4.21. However, the Board's holding relied on the draft proposed regulations, which tracked the current regulations in all significant respects. See Wroncy, 124 IBLA at 152 n.5.

PM_{2.5}, that present well-documented threats to the health and even the lives of people working in the Jonah Field and living in nearby communities. Yet rather than identifying and addressing these threats in a forthright and responsible manner, BLM cut corners in land management planning, “cooked the books” in its air quality analysis to avoid finding violations of governing standards, and simply omitted consideration of obviously relevant and significant air quality impacts. In so doing, BLM violated its statutory and regulatory duties.

1. The BLM Violated FLPMA In Approving Oil And Gas Development That Far Exceeds Governing Land Use Plan Objectives

BLM’s approval of the Jonah Infill project authorizes 3,100 new oil and gas wells in the agency’s Pinedale Resource Area. Yet BLM’s land use plan for this area allows no more than 900 wells, and BLM did not amend the plan in order to approve the Jonah Infill project. BLM violated the Federal Land Policy and Management Act (“FLPMA”), 43 U.S.C. §§ 1701 *et seq.*, and its implementing regulations by authorizing thousands of new oil and gas wells in the Pinedale Resource Area without undertaking big-picture planning.

a. FLPMA Requires BLM To Follow Its Own Land Use Plans

FLPMA is premised on Congress’ understanding that “the national interest will best be realized if the public lands and their resources are periodically and systematically inventoried and their present and future use is projected through a land use planning process.” *Id.* § 1701(a)(2). To this end, FLPMA mandates that BLM “shall manage the public lands ... in accordance with ... land use plans.” *Id.* § 1732(a) (emphasis added); *see also id.* § 1712 (requiring BLM to “develop, maintain, and, when appropriate, revise land use plans which provide by tracts or areas for the use of public lands”).

In keeping with FLPMA’s statutory requirements, BLM’s planning regulations provide

that “[a]ll future resource management authorizations and actions ... and subsequent more detailed specific planning, shall conform to the approved plan.” 43 C.F.R. § 1610.5-3(a) (emphases added). Thus, before the agency can approve a proposal that is inconsistent with the governing land use plan, BLM must amend its land use plan. See id. § 1610.5-3(c) (“If a proposed action is not in conformance, and warrants further consideration before a [land use] plan revision is scheduled, such consideration shall be through a plan amendment.”) (emphasis added); see also id. § 1610.5-5 (“An amendment shall be initiated by the need to consider ... a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan.”) (emphasis added).

As the Supreme Court recently summarized, “[t]he statutory directive that BLM manage ‘in accordance with’ land use plans, and the regulatory requirement that authorizations and actions ‘conform to’ those plans, prevent BLM from taking actions inconsistent with the provisions of a land use plan. Unless and until the plan is amended, such actions can be set aside as contrary to law pursuant to 5 U.S.C. § 706(2).” Norton v. Southern Utah Wilderness Alliance, 542 U.S. 55, 69 (2004); see also Pennaco Energy, Inc. v. U.S. Dep’t of Interior, 377 F.3d 1147, 1151 (10th Cir. 2004) (explaining that “[i]n the context of oil and gas development, the BLM is initially charged with determining ... consisten[cy] with the RMP”).

From a practical standpoint, FLPMA’s land-use planning and conformity requirements serve to ensure that ad hoc decision-making does not undermine important values such as preservation of air quality and wildlife habitat on public lands.⁸ Thus, for individual “resource

⁸ See 43 C.F.R. § 1701(a)(8) (mandating that “the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values ... that will provide food and habitat for fish and wildlife and domestic animals; and that will provide outdoor recreation and human occupancy and use”).

areas” such as the Pinedale Resource Area, the BLM is required to develop overarching resource management plans or “RMPs.” 43 C.F.R. §§ 1601.0-5(j),(n); see also 43 U.S.C. § 1712(c).

These RMPs identify sensitive areas that must be closed to extractive uses, and, in less sensitive areas, they prescribe the “[a]llowable resource uses (either singly or in combination) and related levels of production or use to be maintained.” 43 C.F.R. §§ 1601.0-5 (n)(2), (3). In addition, they specify the overall “[r]esource condition goals and objectives to be attained” in the resource area. 43 C.F.R. § 1601.0-5(n)(3); see also 43 U.S.C. § 1712(c). At a minimum, RMPs must set limits on development that “prevent unnecessary or undue degradation of the lands” and “provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans.” Id. §§ 1732(b), 1712(c)(8); see also 43 C.F.R. § 1610.3-2 (similarly requiring consistency with state, federal, and tribal resource protection plans and standards).

Once BLM has developed an adequate RMP, the agency can achieve desired conditions in the resource area by conforming all site-specific decisions to its master plan. However, when proposed development exceeds the “levels of production or use” contemplated in the RMP, the agency can no longer assume that it will meet its desired “[r]esource condition goals and objectives,” including compliance with federal and state air quality standards. 43 C.F.R. §§ 1601.0-5(n)(2),(3). At this point, FLPMA requires a plan amendment to the RMP. See id. §§ 1610.5-3(c), 1610.5-5 (requiring initiation of amendment process to address any “change in the scope of resource uses” within the resource area).

During the amendment process, the agency considers whether it is possible to approve more intensive land use without compromising resource values such as air quality that are entitled to protection under FLPMA and other federal laws and regulations. For example, in the

oil and gas context, BLM might decide that it can accommodate intensified development, but only if more protective stipulations are attached to future oil and gas leases and if future application for permit to drill (“APD”) approvals are conditioned on implementation of more stringent mitigation measures. Alternatively, BLM might conclude that phased development is necessary to avoid unacceptable environmental impacts. Indeed, BLM might conclude that certain development proposals cannot be approved under any circumstances because there is no way to reconcile them with important land management objectives. As explained by the BLM in the Pinedale RMP:

Amendments for actions not in conformance with plan objectives would be considered but not automatically initiated. Where analysis determined that the objectives established in the plan are the desired objectives, the plan would not be amended, and nonconforming actions would not be allowed.

U.S. Department of Interior, Pinedale Resource Management Plan, 5 (1988) (emphasis added) (“Pinedale RMP”) (Exhibit 19). Thus, the amendment process forces BLM to stop and consider its options in light of its stewardship responsibilities. In this way, the conformity requirement serves as a check on land-use decisions that might otherwise result in “undue degradation” of public lands or preclude approval of future development proposals. 43 U.S.C. § 1732(b).

b. BLM Failed To Comply With Its RMP In Approving The Jonah Infill Project

In approving the Jonah Infill project, BLM entirely bypassed the FLPMA planning process and its safeguards for preventing undue degradation of the Pinedale Resource Area. BLM therefore violated FLPMA. As BLM acknowledges, the Jonah Infill entails extensive oil and gas development beyond the “levels of production or use” specified in the RMP. 43 C.F.R. § 1601.0-5(n)(2); see also FEIS at 1-10 (Ex. 1). Whereas the Pinedale RMP contemplates drilling of no more than 900 wells in the entire Pinedale Resource Area, see U.S. Department of

Interior, Draft Environmental Impact Statement, Pinedale Resource Management Plan, 191 (1988) (“Pinedale FEIS”) (Exhibit 20), the Jonah Infill project and other pending drilling proposals in the Pinedale Resource Area “could add approximately 3,310 more wells” to the resource area. See FEIS at 1-10 (Ex. 1). While this represents a major “change in the scope” of oil and gas development in the Pinedale Resource Area, 43 C.F.R. § 1610.5-5, BLM failed to amend its RMP so as to ensure that new drilling in the Jonah Field, along with other foreseeable activity in the resource area, can be accommodated without illegally degrading air quality and other natural resources.

Indeed, this is the second time that BLM has approved a large-scale oil and gas project in violation of its RMP. In 2000, BLM authorized drilling of 1,944 new wells as part of the Pinedale Anticline Oil and Gas Exploration and Development Project but failed to amend its RMP to accommodate all of these new wells. See U.S. Department of Interior, Record of Decision, Final Environmental Impact Statement For The Pinedale Oil and Gas Exploration and Development Project, Sublette County Wyoming, 34 (July 2000) (“Pinedale Anticline ROD”) (Exhibit 21); U.S. Department of Interior, Draft Environmental Impact Statement For The Pinedale Oil and Gas Exploration and Development Project, Sublette County Wyoming, 5-6 (Nov. 1999) (“Pinedale Anticline DEIS”) (Exhibit 22).⁹ Curiously, BLM states on its website that the Pinedale “RMP was amended in 2000 to revise the reasonably foreseeable development scenario (RFD) for oil and gas activity” in order to accommodate these 1,944 wells.

<http://www.wy.blm.gov/pfo/plan/pformp.htm> (last checked April 11, 2006) (Exhibit 23).

However, the Pinedale Anticline ROD expressly states that it “does not include any amendments

⁹ The Final EIS for the Pinedale Anticline EIS was a short-form document that adopted the text of the Draft EIS with only minor editorial changes. See BLM, “Dear Reviewer Letter” at 1 (May 10, 2000) (available at <http://www.wy.blm.gov/nepa/pfodocs/anticline/023dearreader.pdf> (last checked April 8, 2006) (Exhibit 24).

to decisions in the Pinedale Resource Management Plan (RMP). Any amendments to be made will be determined at a later date.” See Pinedale Anticline ROD at 34 (Ex. 21).¹⁰ Thus, even without the newly approved drilling in the Jonah Field, BLM has already approved more than a thousand wells beyond the number of wells permitted under the Pinedale RMP. Under these circumstances, approving more than 3,000 additional wells in the Jonah Field flies in the face of FLPMA’s conformity requirements. See Norton v. Southern Utah Wilderness Alliance, 542 U.S. at 69-70; Western Watersheds Project v. Bennett, 392 F. Supp. 2d. 1217, 1227-28 (D. Idaho 2005) (finding FLPMA violation where grazing permits were plainly inconsistent with provisions of land use plan).

BLM cannot justify its failure to complete an RMP amendment prior to approving the Jonah Infill project. Long before the project was even proposed, BLM knew it could not approve further oil and gas development based on its outdated 1988 RMP. As early as 2000, the agency alerted Congress that “BLM must revise or amend its planning and NEPA documents” in order to meet industry demand for oil and gas leases and APD approvals. U.S. Department of Interior, Report to Congress, Land Use Planning for Sustainable Resource Decisions, *7 (Feb. 2000) (Exhibit 25). As BLM explained:

The Department of Energy expects domestic drilling to continue its growth begun in 1997, especially for natural gas. Increasing industry interest in public oil and gas resources first manifested itself in demand for leasing, starting in 1992 and continuing through the present. Leasing requires significant new planning, use authorizations, and NEPA compliance. By law and regulation, the BLM cannot process actions or permits beyond the scope of the existing

¹⁰ The Pinedale Anticline ROD purports to “update[] the oil and gas reasonably foreseeable development scenario and the air quality cumulative impact analysis of the EIS for the Pinedale RMP.” Pinedale Anticline ROD at 34 (Ex. 21). However, BLM’s planning regulations unequivocally require a plan amendment for actions such as the 1,944-well Pinedale Anticline project that may result in a “change in the scope of resource uses.” 43 C.F.R. § 1610.5-5; see also id. § 1610.5-3(c).

planning/NEPA analysis.

Id. (emphasis added) (Ex. 25). Accordingly, BLM requested funding to “[a]ddress increased demand for oil and gas leasing by completing regional resource assessments and subsequent planning/NEPA actions in oil and gas and coal leasing areas in ... the Southwest region of Wyoming.” Id. at *12 (Ex. 25). For the Pinedale Field Office specifically, BLM requested funding to undertake a “resource assessment and subsequent plan amendment[.]” to address “[o]il and gas leasing, air and water quality, wildlife habitat, vegetation, [and] special status species.” Id. at *32 (Ex. 25).

In 2001, BLM renewed the same funding request, once again stating the pressing need to update its RMPs to accommodate growing industry demand:

Increased demand for oil and gas from federal lands ... ha[s] caused Reasonably Foreseeable Development (RFD) scenarios in many [land use plans] LUP's to be reached or exceeded. This means that LUP's in many areas of high industry interest for leasing and development no longer adequately analyze the full effects of such projected activities on the environment and socio-economic conditions. This increases the BLM's vulnerability to legal challenges and diversion of scarce resources to litigation costs. The additional funding will ensure that necessary NEPA and planning re-analysis is conducted.

U.S. Department of Interior, Budget Justifications and Annual Performances 2001, III-99 (2001) (Exhibit 26).

As this report to Congress makes clear, BLM was well aware of its legal obligations to amend its RMPs before authorizing further oil and gas development. Indeed, in August 2001, BLM published a “Preparation Plan” to amend its Pinedale RMP, stating that “[t]he boom in mineral development activity, combined with the age of the RMP, made the timing of the preliminary evaluation urgent.” Pinedale Field Office, Preparation Plan For Modification Of The Pinedale Resource Management Plan, 4 (Aug. 2001) (emphasis added) (Exhibit 27).

Nevertheless, the agency has leased tens of thousands of acres to oil and gas companies and

approved the drilling of thousands of new wells without ever completing the RMP revision process that was begun in 2003.¹¹

In an effort to explain away this ongoing FLPMA violation in the Jonah Infill context, BLM makes two arguments, both of which are meritless. First, BLM states that “[a]lthough the project may not be consistent with the RFD projections for number of new wells, it remains in conformance with the overall fluid minerals management objectives of the RMPs.” FEIS at 1-10 (also stating that “the proposed project is in conformance with the overall fluid minerals management objectives of the ... RMPs, even though it partially exceeds estimates of reasonably foreseeable development in the [Pinedale Field Office] PFO RMP (as updated in the [Pinedale Anticline ROD/FEIS])”) (Ex. 1). This is wrong. FLPMA’s conformity requirement does not allow BLM to pick and choose which RMP provisions it will abide by in approving major drilling projects. See 43 C.F.R. § 1610.5-3(a) (requiring that “[a]ll future resource management authorizations and actions ... and subsequent more detailed or specific planning, shall conform to the approved plan”) (emphasis added). Maximizing energy production is not a license to take actions that are “inconsistent” with the Pinedale RMP. Norton v. Southern Utah Wilderness Alliance, 542 U.S. at 69-70.

Second, BLM argues that “long-term surface disturbance” from the Jonah Infill project will be within limits set by the Pinedale Anticline Reasonably Foreseeable Development scenario (“RFD”) and that “the BLM considers long-term surface disturbance as the governing objective.” FEIS at 1-10 (Ex. 1). However, as discussed above, BLM cannot simply ignore one of the RMP’s most fundamental provisions for “levels of production and use” of oil and gas resources,

¹¹ As of this date — now four years after the BLM published its notice of intent to revise the RMP in the Federal Register — the draft environmental impact statement for revision of the Pinedale RMP still has not been released. See Notice, 67 Fed. Reg. 8,700 (Feb. 25, 2002) (Exhibit 28).

i.e., the number of new oil and gas wells to be drilled in the Pinedale Resource Area. 43 C.F.R. § 1601.0-5(n)(2). Well numbers and long-term surface-disturbance are not fungible measures of environmental impacts, most importantly because each well is a source of new air pollution emissions. Thus, even where the level of surface disturbance in the resource area remains largely unchanged, increasing the number and density of wells in the project area will likely degrade air quality. See Final Air Quality TSD, Vol. 1 at 8-12 (reporting that each well constructed will emit pollutants, including NO_x and VOCs, which have little or no relationship to the number of acres disturbed in the project area) (Ex. 4).

In any case, the level of surface disturbance projected in the Pinedale Anticline RFD is not the relevant measure for conformity with the RMP. Having explicitly declined to amend its RMP in order to approve the Pinedale Anticline project's 1,944 new wells and 6,300 acres of long-term surface disturbance, BLM cannot rely on the illegally "updated" RFD in the Pinedale Anticline project decision to establish consistency with the 1988 RMP. Because the Pinedale Anticline Project failed either to amend or to conform with the 1988 RMP, BLM is merely compounding an earlier FLPMA violation by seeking to conform the Jonah Infill project to the Pinedale Anticline RFD rather than the 1988 RMP. Compare Pinedale RMP DEIS at 191 (allowing for no more than 7,492 acres of net long-term surface disturbance across the planning area) (Ex. 20) with Pinedale Anticline DEIS at 5-8 (authorizing 6,300 acres of long-term disturbance in addition to 14,076 acres of existing long-term disturbance in the planning area for a total of 20,376 acres of long-term surface disturbance — 12,884 acres of surface disturbance in excess of the 1988 RMP provisions) (Ex. 22).

Finally, projected surface-disturbance from the Jonah Infill project does not fall within the scope of the Pinedale Anticline RFD. Even if this RFD "update" set forth the governing

land-use standard — which it does not — long-term surface disturbance from the Jonah Infill will apparently exceed the level of surface disturbance projected by BLM in 2000. The Pinedale Anticline RFD allows for a total of 20,376 acres of long-term surface disturbance in the planning area. See Pinedale Anticline DEIS at 5-8 (Ex. 22). In approving the Jonah Infill project, BLM is anticipating an additional 5,190 acres of long-term surface disturbance. See FEIS at 1-10 (Ex. 1). This would apparently allow for a total 25,566 acres of surface disturbance in the planning area — well above the level of cumulative surface-disturbance permitted in either 2000 (20,376 acres) or 1988 (7,492 acres).

Nevertheless, BLM asserts without explanation that surface disturbance from the Jonah Infill project will fall within the scope of the Pinedale Anticline RFD. Ostensibly, BLM relies on information from the Wyoming Oil and Gas Conservation Commission (WYOGCC) website, reporting 2,530 active wells in the resource area as of March 2004. See FEIS at 1-10 (Ex. 1). BLM extrapolates that this number of wells will “require approximately 8,572 acres of long-term disturbance.” Id. (Ex. 1). However, BLM never explains how these estimated 8,572 acres relate to the total acreage of long-term disturbance that currently exists in the planning area from both active and completed wells. More specifically, BLM fails to explain how these 8,572 acres of disturbance from currently active wells relate to the 14,076 acres of existing disturbance reported in 2000 and the additional 6,300 acres of long-term surface disturbance approved in 2000. Presumably, given the inherently long-term nature of “long-term” disturbance, these 8,572 acres are adding to the 14,076 acres reported in 2000. BLM makes no claim that long-term disturbance reported in 2000 has been eliminated through remediation efforts. Thus, it appears that there may be 22,648 acres (8,572 acres plus 14,076 acres) of long-term disturbance in the planning area even without the approved construction and drilling from the Jonah Infill project.

If this is indeed the case, surface disturbance is already exceeding projections in the Pinedale Anticline RFD, and the 5,190 acres of new disturbance from the Jonah Infill will significantly aggravate the problem. The BLM has failed even to assert, much less demonstrate, that the total acreage of existing disturbance in the resource area from abandoned wells, active wells, approved future wells and all of their associated roads and other infrastructure will fall within the scope of RFD projections made by the agency in 2000, much less the limits set by the RMP in 1988. For this reason too, the Jonah Infill project fails to comply with FLPMA.

2. BLM Violated Its FLPMA Duty To “Provide For Compliance” With Air Quality Standards For Nitrogen Dioxide And Ozone

In addition to violating FLPMA’s requirement to conform all action to the governing land-use plan, BLM’s approval of the Jonah Infill project violated FLPMA’s command for BLM to provide for compliance with air quality standards.

a. BLM Must Comply With Air Quality Standards

BLM must ensure that its approval of the Jonah Infill project complies with all applicable air quality standards. As BLM itself acknowledged, “under FLPMA and the Clean Air Act, BLM cannot authorize any activity that does not conform to all applicable local, state, tribal, and federal air quality laws, statutes, regulations, standards, and implementation plans.” FEIS at 4-3 (Ex. 1). This requirement flows from the FLPMA itself, which, as discussed above, requires that BLM’s development and revision of land use plans must “provide for compliance with applicable pollution control laws, including State and Federal air ... pollution standards or implementation plans.” 43 U.S.C. § 1712(c)(8). A FLPMA regulation extends this same requirement to all BLM leases, permits, and other land use authorizations. See 43 C.F.R. § 2920.7(b)(3) (requiring that BLM “land use authorizations shall contain terms and conditions which shall ... [r]equire compliance with air ... quality standards established pursuant to

applicable Federal or State law”). The FLPMA and its implementing regulations thus explicitly mandate that BLM provide for compliance with the Clean Air Act’s air quality standards when authorizing land management activities.

Reflecting these legal requirements, BLM’s Pinedale Resource Management Plan, which applies to most of the Jonah field, requires that “[a]ir quality will be maintained within or above required standards.”¹² BLM, Pinedale Resource Management Plan Record of Decision (“Pinedale RMP ROD”) at 15 (Ex. 19). All “resource management authorizations and actions” – such as BLM’s approval of the Jonah Infill project – must conform to this land use plan direction. 43 C.F.R. § 1610.5-3(a); see also 43 U.S.C. § 1732(a) (Secretary “shall manage the public lands ... in accordance with the land use plans”); Norton v. Southern Utah Wilderness Alliance, 542 U.S. at 69 (“The statutory directive that BLM manage ‘in accordance with’ land use plans, and the regulatory requirement that authorizations and actions ‘conform to’ those plans, prevent BLM from taking actions inconsistent with the provisions of a land use plan.”).

NEPA confers informational and disclosure obligations that supplement BLM’s duty to comply with substantive air quality standards. NEPA requires BLM to prepare an environmental impact statement with respect to all “major Federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). In preparing such an EIS, BLM must describe the environmental consequences of a proposed action, including impacts on air quality, see 40 C.F.R. § 1502.16, and must “state how alternatives considered in it and decisions based on it will or will not achieve the requirements of [NEPA] and other environmental laws and

¹² BLM’s Rock Springs Field Office’s Green River Resource Management Plan, which encompasses a small portion of the southeastern Jonah Infill project area, similarly requires that BLM “minimize emissions which may ... cause violations of air quality standards” and guarantees that “[s]urface disturbing activities will be managed to prevent violation of air quality regulations.” Bureau of Land Management, Record of Decision and Green River Resource Management Plan, 3 (1997) (Exhibit 29).

policies.” Id. § 1502.2(d) (emphasis added). Thus, NEPA requires BLM to determine whether its approval of an action that will create major emissions of air pollutants, such as the Jonah Infill development, conforms with the agency’s FLPMA duty to provide for compliance with air quality standards established by the Clean Air Act or other laws. In so doing, BLM must “insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements.” 40 C.F.R. § 1502.24; see also Utahns for Better Transp. v. U.S. Dept. of Transp., 305 F.3d 1152, 1181 (10th Cir. 2002) (holding that § 1502.24 “imposes an affirmative duty on federal agencies”).

b. Governing Air Quality Standards Limit Increases Of Pollutant Concentrations In The Jonah Infill Project Area

Part C of the Clean Air Act limits increases of pollutant concentrations, including NO₂, ozone, and PM_{2.5}, in any area designated as “attainment” or “unclassifiable” for that pollutant. 42 U.S.C. § 7471. The Jonah Infill project area is designated attainment or unclassifiable for each of the three named pollutants. See FEIS at 3-6 (Ex. 1). The Clean Air Act’s limits on increased concentrations of these pollutants flow from the statute’s Prevention of Significant Deterioration, or “PSD,” program. See 42 U.S.C. § 7470 et seq. “The PSD part of the statute, by its title and by its terms, is designed to prevent significant deterioration of air quality in the nation’s ‘clean air areas’ in general, those areas that have or are presumed to have air quality better than that specified in the applicable primary and secondary national ambient air quality standards (NAAQS).” Alabama Power Co. v. Costle, 636 F.2d 323, 361 (D.C. Cir. 1979).

The statute seeks to achieve this goal in part by limiting increases in air pollution concentrations in such “clean air areas.” The allowable increases for ozone and PM_{2.5} are set by the national ambient air quality standards, or NAAQS, for these pollutants. See 42 U.S.C. § 7473(b)(4). The NAAQS establish the maximum concentration of regulated pollutants that is

permitted by law. See id.

NO₂ emissions are further limited by a “maximum allowable increase” (known as the “PSD increment”) established by EPA pursuant to 42 U.S.C. § 7476. See 40 C.F.R. § 52.21(c) (increments for nitrogen dioxide). “The increment concept incorporates the idea of a baseline from which deterioration is calculated, by models or monitors, to determine whether it is permissible.” Alabama Power Co., 636 F.2d at 374. This baseline is the ambient concentration of a relevant pollutant that exists “at the time of the first application for a permit by a major emitting facility.” Id.; see also 42 U.S.C. § 7479(4) (defining “baseline concentration”); 40 C.F.R. § 52.21(b)(13)(i) (same). A “major emitting facility” generally is any source with the potential to emit 250 tons per year or more of any air pollutant. See 42 U.S.C. § 7479(1). The date on which this first PSD permit application is submitted is known as the “minor source baseline date.” 40 C.F.R. § 52.21(b)(14)(ii). This baseline date then applies to the “baseline area,” which for NO₂ in Wyoming is the entire state. The Clean Air Act’s PSD requirements limit increases in the concentrations of certain pollutants over the level in the baseline area as of the baseline date. In Wyoming, the baseline date for NO₂ is February 26, 1988. See Till Stoeckenius et al., Summary Report, Southwest Wyoming NO₂ PSD Increment Consumption Modeling: Results for Sublette County, at S-3 (Sep. 15, 2005) (“WYDEQ NO₂ Increment Consumption Analysis”) (Exhibit 30).

Once the baseline is established the resulting increment limitation on increased pollutant concentrations applies to any source emitting the regulated pollutant, including the compressor stations, well-site production equipment, and other sources of the Jonah Infill development. See Natural Resources Defense Council v. U.S. Env’tl. Protection Agency, 937 F.2d 641, 647 (D.C. Cir. 1991) (“Although the PSD rules are triggered only by a major source, they require control –

to keep the affected area within permissible PSD ‘increments’ – of any source.”) (emphases in original); Alabama Power Co., 636 F.2d at 362-63 (holding that PSD increments apply to, inter alia, “increased emissions from unregulated minor sources”); see also FEIS, Public Comment Analysis Report, Part II, Table III-B at 93 (“Response to Public Comments”) (BLM acknowledging that, with regard to the Jonah Infill project, the agency “cannot conduct or authorize an action that would allow the PSD increments to be violated”) (emphasis added) (Exhibit 31).

c. BLM Failed To Ensure Compliance With The PSD Increment For Nitrogen Dioxide

The BLM erred in concluding that adding the pollutants associated with 3,100 new gas wells to the already degraded air of the Jonah project area will not exceed the Clean Air Act’s limit on increased NO₂ concentrations in this area. The BLM concluded that “[p]redicted NO₂ impacts from all project alternatives are less than” the Clean Air Act NO₂ limit. FEIS at 4-6 (Ex. 1). However, BLM reached this conclusion only by considering the new Jonah Infill NO₂ emissions against the backdrop of five-year-old NO₂ background data collected approximately 60 miles away from the Jonah site, rather than a far more recent and relevant Wyoming Department of Environmental Quality (“DEQ”) analysis of NO₂ emissions in southwest Wyoming between the statutory NO₂ baseline date of 1988 and 2004. In short, BLM declined to use the best available Wyoming DEQ data that accurately reflects growing development and corresponding deterioration in air quality in the Upper Green River Valley. Had BLM used this data to calculate baseline NO₂ concentrations, it would have found that added emissions from the Jonah Infill project will consume more than the NO₂ PSD increment in violation of the Clean Air Act.

It was unlawful for BLM to ignore the Wyoming DEQ analysis when the analysis was

available well before the final Jonah Infill EIS was completed and, indeed, was repeatedly referenced by BLM in the Jonah Infill EIS itself. BLM's selective reliance on outdated and remote information to engineer a finding of compliance with a key air pollution standard violates the agency's legal obligations under both NEPA and FLPMA. BLM violated NEPA by preparing an EIS that fails to disclose a likely violation of the Clean Air Act and its adverse consequences for air quality. The agency further violated its FLPMA duty to "provide for compliance with ... air ... pollution standards," 43 U.S.C. § 1712(c)(8), through its persistent refusal to consider key evidence of an apparent PSD increment violation.

The PSD increment for NO₂ in Class II areas, such as the Jonah Infill project area and surrounding communities, limits increases in NO₂ pollution over the baseline concentration to no more than 25 micrograms per cubic meter (µg/m³).¹³ See 40 C.F.R. § 52.21(c); see also FEIS at 3-8 (Table 3.7) (Ex. 1). Accordingly, BLM's duty to "provide for compliance" with governing air quality standards, 43 U.S.C. § 1712(c)(8), and to ensure that air quality is maintained "within or above required standards," Pinedale RMP ROD at 15 (Ex. 19), dictates that BLM cannot approve any development that would cause NO₂ concentrations in this Class II area to exceed the 25-µg/m³ PSD increment. As BLM itself acknowledged, "[t]he BLM cannot conduct or authorize an action that would allow the PSD increments to be violated." Response to Public Comments, Part II, Table III-B at 93 (emphasis added) (Ex. 31).

Here BLM calculated that, for purposes of comparison to the PSD increment, the "maximum predicted NO₂ impacts resulting from production activities" in the Jonah Infill project and surrounding lands under the agency's preferred alternative (which is the alternative

¹³ Class II areas constitute all portions of areas designated as attaining NAAQS standards under the PSD program except for large national parks, wilderness areas, and similar designations, which are Class I areas. See 42 U.S.C. § 7472.

ultimately selected by BLM) would be $18.9 \mu\text{g}/\text{m}^3$ — just $6.1 \mu\text{g}/\text{m}^3$ under the total increment allowance of $25 \mu\text{g}/\text{m}^3$. FEIS at 4-19, App. J at 1 (Table J-1) (Ex. 1). This calculation should have triggered careful analysis regarding violation of the PSD increment, particularly given that Wyoming’s formal increment consumption analysis had revealed that existing energy development already has consumed much of the “maximum allowable increase” in NO_2 concentrations in the Jonah Infill project Class II area. See WYDEQ NO_2 Increment Consumption Analysis at SR-3, SR-14 (Ex. 30).

In September 2005, the Wyoming DEQ issued an analysis of NO_2 PSD increment consumption in the Jonah field area. See WYDEQ NO_2 Increment Consumption Analysis (Ex. 30). Wyoming DEQ commissioned this analysis in response to concerns that “[o]il and gas exploration and production has increased significantly in southwestern Wyoming in recent years,” resulting in NO_2 emissions that “have consumed a portion of the annual average ambient NO_2 concentration increment available under EPA’s Prevention of Significant Deterioration (PSD) program.” Id. at SR-1 (Ex. 30). The analysis, based primarily on 2004 actual emission rates from a partial inventory of NO_2 sources that were permitted after the 1988 baseline date, determined that existing NO_2 increment consumption in the Jonah field Class II area is $11.5 \mu\text{g}/\text{m}^3$, see id. at SR-3, SR-14 (Ex. 30), with “[n]early all” of this increment consumption resulting from “the increase in oil and gas source emissions from the JPDA [Jonah-Pinedale Development Area].” Id. at 16 (Ex. 30). The greatest emissions contribution to increment consumption was found to occur in the same Jonah project area where BLM’s new Jonah Infill project will go forward. See id. at SR-19 (Ex. 30).

The Wyoming DEQ’s analysis that $11.5 \mu\text{g}/\text{m}^3$ of the $25\text{-}\mu\text{g}/\text{m}^3$ NO_2 PSD increment had already been consumed in the Jonah field area meant that the remaining increment available for

additional consumption amounted to only 13.5 $\mu\text{g}/\text{m}^3$ of increased NO_2 concentrations. Yet BLM calculated that emissions from the Jonah Infill project would add 18.9 $\mu\text{g}/\text{m}^3$ of NO_2 concentrations to the levels found by the Wyoming DEQ in this same Jonah field area. A simple calculation shows that adding the Jonah Infill's predicted 18.9- $\mu\text{g}/\text{m}^3$ modeled impact to the 11.5 $\mu\text{g}/\text{m}^3$ of NO_2 PSD increment already consumed in the Jonah Infill project area yields a total of 30.4 $\mu\text{g}/\text{m}^3$ of increased NO_2 concentrations in the relevant Class II area after the minor source baseline date. This amount is well in excess of the permissible increase of 25 $\mu\text{g}/\text{m}^3$ allowed under the Class II PSD increment.

Nevertheless, BLM concluded that “[p]redicted impacts from the Preferred Alternative source emissions would be below the applicable ... PSD increments.” FEIS at 4-19 (Ex. 1). In reaching this conclusion, BLM did not consider the modeled NO_2 impacts of the Jonah Infill project together with the existing NO_2 increment consumption documented by the Wyoming DEQ. Indeed, BLM failed to consider this Wyoming DEQ increment consumption information anywhere in its air quality analysis of NO_2 impacts in the Jonah Field Class II area. Instead, BLM examined the modeled Jonah Infill NO_2 impact against the backdrop of a much smaller existing NO_2 concentration recorded between January and December 2001 at an air quality monitoring site near Green River, Wyoming, approximately 60 miles south of the Jonah Infill project area. See Final Air Quality TSD, Vol. 1 at 22 (Table 3.1 n.2) (Ex. 4). BLM combined this smaller background NO_2 level — amounting to only 3.4 $\mu\text{g}/\text{m}^3$, see id. (Ex. 4) — with the 18.9- $\mu\text{g}/\text{m}^3$ modeled NO_2 impacts of the Jonah Infill project to arrive at a “Total Concentration” of 22.3 $\mu\text{g}/\text{m}^3$, which is less than the applicable NO_2 PSD increment of 25 $\mu\text{g}/\text{m}^3$. FEIS App. J at 1 (Table J-1) (Ex. 1).¹⁴

¹⁴ BLM's Jonah Infill FEIS is inconsistent with respect to treatment of this background NO_2

In disregarding the September 2005 Wyoming DEQ analysis of increment consumption in the Jonah Infill area in favor of the Green River monitoring site data, BLM failed to account for much of the existing pollution in the project area, contrary to the Clean Air Act. EPA's rulemaking to implement the PSD program explained the kind of information that must be obtained to determine whether new polluting sources may be added to an air shed. As EPA explained, the first step in analyzing the impacts of a proposed project is to:

perform an analysis to compute how much of the PSD increment remains available. ... Where a proposed project would cause a new violation of the increment or contribute to an existing violation, it cannot be approved. Existing violations must be entirely corrected before PSD sources which affect the area can be approved.

45 Fed. Reg. 52,678 (Aug. 7, 1980). In this case, BLM did not have to “compute how much of the PSD increment remains available,” *id.*; Wyoming DEQ had already done so, for the very reason that existing oil and gas development had already raised serious concern regarding increment consumption. See WYDEQ NO₂ Increment Consumption Analysis at SR-1 (Ex. 30). Thus, Wyoming DEQ provided BLM with the information that was necessary to determine whether the Jonah Infill project could be authorized consistent with BLM's FLPMA obligation to comply with the PSD increment for NO₂.

Unlike the Wyoming DEQ data, which provides the only available assessment of the PSD

level. The text of the FEIS states that “[b]ackground NO₂ concentrations are not added to modeled concentrations for comparison to the PSD Class II increment for NO₂.” FEIS at 4-6 (Ex. 1). However, FEIS Table J-1 performs the very addition exercise that this statement disavows, combining the 18.9- $\mu\text{g}/\text{m}^3$ modeled Jonah Infill impacts with the 3.4- $\mu\text{g}/\text{m}^3$ Green River background concentration to calculate a 22.3- $\mu\text{g}/\text{m}^3$ total concentration for comparison to the 25- $\mu\text{g}/\text{m}^3$ NO₂ PSD increment. See FEIS App. J at 1 (Table J-1) (Ex. 11). For purposes of this argument, appellants will assume that BLM meant to treat the 3.4- $\mu\text{g}/\text{m}^3$ Green River background NO₂ concentration as a measure of existing increment consumption, because otherwise BLM made no attempt to consider the Jonah Infill's modeled NO₂ impact in light of the existing increment consumption.

increment consumption that has already occurred in the Jonah Infill project location, the Green River data did not even purport to constitute an increment consumption analysis. Moreover, the data gathered at the Green River monitoring site was five years old, and thus failed to reflect the substantial growth of NO₂ emissions related to extensive energy development in southwest Wyoming that has occurred since 2001. Further, given that the site is approximately 60 miles due south of the Jonah Infill project area and the prevailing winds come from the west and northwest, it is virtually impossible for data from the Green River site to provide an accurate reading of background NO₂ levels in the Jonah Infill project area and surrounding communities. See Lee Gribovicz, et al. *Visual Air Quality in the Green River Basin*, at 3 (map of the Green River monitoring site) (Exhibit 32); FEIS at 3-5 (prevailing winds chart) (Ex. 1). By contrast, the Wyoming DEQ report reflects NO₂ increment consumption as of 2004 in the area of the Jonah Infill project itself.

BLM offered no legitimate explanation for its refusal to consider the Wyoming DEQ's more comprehensive and reliable evidence of the amount of PSD increment already consumed in the Jonah Field, as opposed to the five-year-old, distant Green River data. First, when confronted regarding this issue during the public comment period on the Jonah Infill EIS, BLM asserted that "[d]ata collected through 2001 at the Green River Basin Visibility Study monitoring site was the most representative background value available at the time of the analysis." Response to Public Comments, Part II, Table III-B at 63 (Ex. 31). However, the Wyoming DEQ made its increment consumption report available to BLM well before the agency completed its EIS process for the Jonah Infill. Wyoming DEQ released its increment consumption analysis for the Jonah field area only a month after BLM published its supplemental draft air quality analysis for the Jonah Infill project, and four months before BLM issued its final air quality analysis for

the project. Numerous public comments on the draft air quality analysis cited the Wyoming DEQ document and asked BLM to incorporate its results into the Jonah Infill NEPA process. See Comment Letter from Vicki Stamper; Comment Letter from Robert E. Yuhnke (Exhibits 33 and 34). Moreover, BLM did cite the Wyoming DEQ increment consumption analysis in the Jonah Infill EIS when it suited the agency's purposes. See, e.g., FEIS at 4-5 (referencing and providing Internet address for Wyoming DEQ analysis) (Ex. 1). For example, BLM relied on the Wyoming DEQ increment consumption analysis to bolster its contention that there would be no violation of the Class I NO₂ PSD increment in the Bridger Wilderness Area. See Response to Public Comments, Part II, Table III-B at 69 (relying on Wyoming DEQ analysis of NO₂ PSD increment consumption in Bridger Wilderness Area) (Ex. 31). Indeed, in responding to public comments on the Jonah Infill project, BLM explicitly admitted that “[t]he BLM could compare the sum of the potential concentrations due to Jonah and the concentrations as calculated by WDEQ to the PSD increment.” Responses to Public Comments, Part II, Table III-B at 105 Part II (Ex. 31). Yet BLM failed to do so, presumably to avoid finding a violation of the NO₂ PSD increment.¹⁵ BLM's selective reliance on the Wyoming DEQ analysis when it supports a finding of compliance with PSD increments, but not when it indicates a violation, flouts the agency's FLPMA duty to provide for compliance with the Clean Air Act's air quality standards.

¹⁵ BLM sought to excuse its failure to perform this simple comparison by asserting that “this would be for information purposes only and would not constitute a regulatory PSD Increment Consumption Analysis.” Part II, Responses to Public Comments, Table III-B at 105 (Ex. 31). This assertion misses the point. While such a comparison might not constitute a “regulatory PSD Increment Consumption Analysis,” id. (Ex. 31), it would provide the information necessary for BLM to determine whether it is meeting its legal obligation to provide for compliance with the PSD increment. Indeed, BLM elsewhere acknowledged “its responsibility for the need to compare predicted impacts to applicable PSD increments,” and admitted that it “cannot conduct or authorize an action that would allow the PSD increments to be violated.” Id. at 93, 97 (Ex. 31). It is hard to fathom how BLM could seek to meet these requirements except by making the simple comparison discussed above.

Second, as to the increment violation that results from adding the modeled Jonah Infill NO₂ impacts to the Wyoming DEQ's analysis of existing NO₂ increment consumption in the Jonah field, BLM merely claimed that “[m]odeled concentrations such as those cited here for comparison to PSD Class II increments are not additive unless they occur at the same location and concurrently.” Response to Public Comments, Part II, Table III-B at 60 (Ex. 31). This contention is nonsensical. The Wyoming DEQ's data does involve NO₂ impacts “at the same location” as the Jonah Infill project. And while the Jonah Infill's NO₂ impacts have not yet occurred, the Clean Air Act demands that agencies consider future emissions in relation to existing background concentrations in order to prevent PSD violations. See, e.g. 40 C.F.R. Part 51, Appendix W (as revised by 70 Fed. Reg. 68,218 (Nov. 9, 2005)) ¶1.0.b (“the impacts of new sources that do not yet exist can only be determined through modeling”). Thus, BLM elsewhere admitted “its responsibility for the need to compare predicted impacts to applicable PSD increments.” Response to Public Comments, Part II, Table III-B at 97 (Ex. 31).

There is only one sensible way to make this required comparison based on the available data: the Wyoming DEQ data revealed the amount of NO₂ PSD increment that has already been consumed in the Jonah Infill area; BLM's analysis predicted the additional NO₂ increment consumption impacts of the Jonah Infill project itself. It is impossible for BLM to assess the Jonah Infill's impact on the NO₂ PSD increment without comparing these two values. Indeed, BLM itself added the modeled Jonah Infield NO₂ impacts to the Green River data to assess PSD increment compliance, see FEIS App. J, at 1 (Table J-1) (Ex. 11), despite the fact that the Green River data were gathered both farther away and longer ago than the Wyoming DEQ data. BLM's concerns with utilizing only NO₂ concentrations that “occur at the same location and concurrently” thus counsels in favor of using the Wyoming DEQ data over the Green River data,

not the other way around.

BLM's failure to assess its NO₂ PSD increment compliance based on the Wyoming DEQ data on existing increment consumption in the Jonah Infill project area violated FLPMA. BLM could not satisfy its duty to "provide for compliance with applicable pollution control laws," 43 U.S.C. § 1712(c)(8), and to ensure that "[a]ir quality will be maintained within or above required standards," including the PSD NO₂ increment, Pinedale RMP ROD at 15 (Ex. 19), when the agency failed to consider the best available information regarding the amount of NO₂ PSD increment that has already been consumed in the very same area where the Jonah Infill project is slated to go forward.

BLM's failure equally violates NEPA. BLM could not satisfy its NEPA obligations to state how its decision "will or will not achieve the requirements" of the PSD increment, 40 C.F.R. § 1502.2(d), and to "insure the professional integrity, including scientific integrity," of its EIS analysis, *id.* § 1502.24, when it disregarded this obviously pertinent information. See Seattle Audubon Soc'y v. Espy, 998 F.2d 699, 703-04 (9th Cir. 1993) (invalidating EIS that "rests on stale scientific evidence" where agency failed to take account of more recent and pertinent data). For this reason alone, BLM's approval of the Jonah Infill project is inconsistent with governing legal requirements and should be reversed.

d. BLM Failed To Provide For Compliance With The Air Quality Standard For Ozone

BLM equally violated its statutory duties in evaluating the Jonah Infill's compliance with the NAAQS for ozone. To protect public health and the environment from the potentially severe impacts of ozone pollution, EPA has developed National Ambient Air Quality Standards ("NAAQS") for ozone exposure pursuant to § 109(b) of the Clean Air Act. See 42 U.S.C. § 7409(b). The State of Wyoming has established identical standards for ozone, Wyoming

Ambient Air Quality Standards (“WAAQS”). See Wyoming DEQ, Standards and Regulations <http://deq.state.wy.us/aqd/standards.asp> (last checked April 11, 2006) (presenting Wyoming Air Quality Standards and regulations). For ozone, the NAAQS and WAAQS are set at 157 $\mu\text{g}/\text{m}^3$ for an 8-hour average concentration. FEIS at 3-8 (Table 3.7) (Ex. 1).¹⁶

These standards were established as “health-based criteria for the maximum acceptable concentrations of specific air pollutants at locations to which the public has access.” Id. at 3-6 (Ex. 1). Under the Clean Air Act, the NAAQS must be set at a level that is “requisite to protect the public health,” with an adequate margin of safety, and at a level “requisite to protect the public welfare.” 42 U.S.C. §§ 7409(b)(1)-(2). Thus, compliance with the NAAQS is necessary to avoid subjecting the public to untenable health risks.

Exceedances of the health-based standard for ozone have already been recorded in the Jonah Field, and BLM’s Jonah Infill project will greatly increase emissions of pollutants that contribute to ozone formation. Yet in the face of major human health threats and environmental impacts from ozone formation, BLM produced an analysis that was calculated to hide the Jonah Infill’s actual ozone impacts. As with its PSD increment analysis for NO₂, BLM was determined to engineer a finding that the Jonah Infill project will not push already high pollution levels over the NAAQS limits. To this end, BLM utilized a discredited methodology that is not approved by EPA to calculate the project’s ozone impacts, and then misapplied this deficient methodology to arrive at the desired result — an unjustified finding that the ozone NAAQS will not be violated. Thus, BLM failed to provide for compliance with the ozone NAAQS in violation of FLPMA. When it came to disclosing the major adverse health effects associated with increased ozone concentrations, BLM looked the other way in violation of NEPA.

¹⁶ For convenience, appellants will refer to the NAAQS and WAAQS collectively as the “NAAQS.”

i. BLM Unlawfully Failed To Utilize An EPA-Approved Model To Predict The Jonah Infill’s Ozone Impacts

BLM’s ozone impacts analysis stumbled at the outset by failing to utilize an ozone prediction methodology that has been approved by the EPA, the federal agency with statutory authority to establish which modeling tools are sufficient for determining whether new sources of emissions will comply with Clean Air Act standards. Instead, BLM used an out-of-date method developed nearly twenty years ago by Richard Scheffe—the Scheffe method. See FEIS at 4-6, Final Air Quality TSD, Vol. 1, App. A (Air Quality Impact Assessment Protocol) at App. A (Ex. 4). This method is not recognized by EPA, and for good reason, as it does not have the capacity to reliably predict conditions in the real world of the Jonah Infill project area.

A. EPA Regulations Do Not Permit Use Of BLM’s Ozone Model

Part C of the Clean Air Act requires that before new sources of emissions may be approved or authorized in an airshed that is currently in compliance with a NAAQS (known as a prevention of significant deterioration area, or “PSD” area), the authorizing agency must ensure that “the maximum allowable concentration of any air pollutant ... shall not exceed [either EPA’s specified] concentration for such pollutant for each period of exposure ... or the concentration permitted under the national primary ambient air quality standard.” 42 U.S.C. § 7473(b)(4). To ensure that such determinations of compliance with Clean Air Act standards are made using the best scientific modeling tools available, Congress directed EPA to promulgate regulations that “shall specify with reasonable particularity each air quality model or models to be used under specified sets of conditions for purposes of this part.” 42 U.S.C. § 7475(e)(3)(D); see also 42 U.S.C. § 7620.

In keeping with this statutory direction, EPA promulgated regulations establishing a

“Guideline on Air Quality Models” that specifies the models to be used for various applications. 40 C.F.R. Part 51, App. W, as revised (70 Fed. Reg. 68,218 (Nov. 9, 2005)) [“Guideline”].¹⁷

EPA explains that the models authorized in the Guideline are intended to be applied by federal land management agencies, such as BLM, as well as state and federal air management agencies:

a. The Guideline recommends air quality modeling techniques that should be applied ... to new source reviews (NSR), including prevention of significant deterioration (PSD). ... The guidance is appropriate for use by other Federal agencies and by State agencies with air quality and land management responsibilities. The Guideline serves to identify, for all interested parties, those techniques and data bases EPA considers acceptable.

Guideline ¶ 1.0.a. The Guideline explains the importance of models in the PSD context because “the impacts of new sources that do not yet exist can only be determined through modeling.” *Id.*,

¶ 1.0.b. The overriding objective of the Guideline is the selection of “[t]he model that most accurately estimates concentrations in the area of interest.” *Id.*, ¶ 1.0.d. “In all cases, the model applied to a given situation should be the one that provides the most accurate representation of atmospheric transport, dispersion, and chemical transformations in the area of interest.” *Id.*, ¶ 1.0.e.¹⁸

For ozone, the Guideline authorizes models for two different types of applications – multi-source and single source applications. *Id.* ¶ 5.2.1.a. and c. In the Jonah field where the primary ozone precursors – VOC and NO_x – will be emitted from operation of many drill rigs, 3,100 wells, and several compressor stations, the single source models are not appropriate. *See* Milford Report at 22 (Ex. 10). Instead, for applications, such as the Jonah Infill project,

¹⁷ EPA expressly makes clear that the provisions in its “Guideline” are binding regulations. *See* Guideline ¶ 1.0(g) (stating that “[a]ll changes to the Guideline must follow rulemaking requirements since the Guideline is codified in Appendix W of Part 51”).

¹⁸ Most models authorized by the Guideline, and “alternative models that can be used with case-by-case justification” are available for download from EPA’s website along with codes and user guides. *See* Guideline ¶ 2.3.

involving multiple sources of ozone precursor chemicals, EPA recommends a photochemical grid model, the Community Multiscale Air Quality model (CMAQ). Guideline ¶ 5.2.1.a; see also Milford Report at 9-10, 18, 22 (Ex. 10).

BLM, however, did not apply this EPA-authorized multi-source model to determine expected ozone concentrations in areas affected by emissions of ozone precursors from the Jonah Field. Nor, apparently, did BLM obtain formal EPA approval to use an alternative model for this purpose. EPA's Guideline provides for the selection of an alternative model that is not identified by EPA in the Guideline only upon a showing that: (1) "the model produces concentration estimates equivalent to the estimates obtained using a preferred model"; (2) "a statistical performance evaluation has been conducted using measured air quality data and the results of that evaluation indicate the alternative model performs better for the given application than a comparable model in Appendix A;" or (3) there is no preferred model for the application. Guideline ¶ 3.2.2.b. In the latter case, when no model has been approved, a proposed model cannot be used unless it has been peer-reviewed and satisfies numerous performance criteria prescribed by the Guideline ¶ 3.2.2.e. In short, the use of an alternative model is only permissible if it can be demonstrated that the model is both reliable and particularly well-suited to its proposed application.

Here, the BLM used the Scheffe method rather than EPA's preferred CMAQ model without making any attempt to demonstrate that the Scheffe method complies with the Guideline. See FEIS at 4-6 (Ex. 1). BLM undertook no investigation to demonstrate that the Scheffe method would perform as well as one of the EPA-preferred models, producing "concentration estimates equivalent to the estimates obtained using [EPA's] preferred" CMAQ model. Guideline ¶ 3.2.2.b. BLM undertook no "performance evaluation" using measured air quality

data to show that the Scheffe method performs better than the CMAQ model for multi-source applications such as the Jonah Infill project. Thus, BLM cannot establish that use of the Scheffe method was proper under the Guideline.

EPA's preferred model for evaluating ozone impacts from the Jonah Infill project was the CMAQ model. See Milford Report at 9-10, 18, 21 (Ex. 10). BLM failed to use this model, and that failing alone precludes BLM from providing for compliance with the Clean Air Act. BLM cannot guarantee compliance with the ozone NAAQS when it declines to use the preferred modeling tool specified by EPA, and fails to comply with regulations designed to prevent the use of alternative models that are unreliable.

Moreover, even if BLM had requested EPA approval to use an alternative model — which it did not — and even if BLM asserted that the CMAQ model is not the preferred model to calculate emissions from the Jonah Infill project — which it did not — the Scheffe method could never pass muster under the Guideline's provisions governing selection of an alternative model. Guideline ¶ 3.2.2.e. The Scheffe model has not been scientifically peer-reviewed. See Milford Report at 13-18 (explaining that the method is embodied in a draft document that was never finalized) (Ex. 10). Performance evaluations of the model have not been conducted. See id. at 16-18. And there has been no showing that the Scheffe method is applicable to the pollutant concentrations and atmospheric conditions in the Jonah field and in surrounding mid- and far-field areas. See id. (Ex. 10). Consequently, the Scheffe method cannot meet EPA's most basic criteria for approving the use of models.

The Clean Air Act does not authorize agencies to make determinations of PSD program compliance required by Part C — for instance, determinations of compliance with the ozone NAAQS — by using models not approved by EPA. Because Congress required BLM to

“provide for compliance” with the Clean Air Act, 43 U.S.C. § 1712(c)(8), and the Pinedale RMP further incorporates this statutory requirement, BLM must utilize the modeling tools prescribed by EPA for determining whether emissions from the Jonah Infill project will comply with the national standards for ozone. Moreover, under NEPA, BLM must “insure the professional integrity, including scientific integrity,” of an environmental impact statement. 40 C.F.R. § 1502.24; see also id. § 1500.1 (accurate scientific analysis “essential to implementing NEPA”). To demonstrate that emissions from the approved Jonah Infill project will actually comply with the ozone NAAQS and the CAA, BLM must analyze air pollution impacts using methods that comply with EPA regulations.

B. BLM’s Ozone Model Does Not Reliably Represent Real-World Conditions

The Scheffe Method not only fails to qualify for use under EPA’s regulations, but it also fails to reliably represent real-world conditions in the Jonah Infill area. “In order to be useful, a model must accurately predict the ‘behavior’ of the air system being modeled.” Ohio v. EPA, 784 F.2d 224, 228 (6th Cir. 1986).

An agency’s use of a model is arbitrary if that model “bears no rational relationship to the reality it purports to represent.” American Iron & Steel Inst. v. EPA, 115 F.3d 979, 1005 (D.C. Cir. 1997) (quotations and citations omitted). ... If ... ‘the model is challenged, the agency must provide a full analytical defense.’ Eagle-Picher Indus., Inc. v. EPA, 759 F.2d 905, 921 (D.C. Cir. 1985); see also Natural Resources Defense Council, Inc. v. Herrington, 768 F.2d 1355, 1385 (D.C. Cir. 1985). Furthermore, EPA “retains a duty to examine key assumptions as part of its affirmative burden of promulgating and explaining a non-arbitrary, non-capricious rule.” Small Refiner Lead Phase-Down Task Force v. EPA, 705 F.2d 506, 534 (D.C. Cir. 1983).

Columbia Falls Aluminum Co. v. EPA, 139 F.3d 914, 923 (D.C. Cir.1998).

In Ohio, the Sixth Circuit rejected EPA’s application of the CRSTER model to establish limitations on power plant emissions near Lake Erie because the validation studies EPA had

performed in other locations showed that the model consistently underpredicted 24-hour concentrations of the regulated pollutant, and because the model had not been validated under the meteorological conditions that prevail within the lake shore climate zone. 784 F.2d at 229-30. Given the agency's failure to show that the model was reliable and could be applied successfully in the Lake Erie context, the court found that "EPA's reliance on the CRSTER model without testing the model against any monitored emissions from the plants and ambient air quality data from the area around the plants is arbitrary under these circumstances. ... In the absence of reliable data of some type, the trustworthiness of CRSTER predictions cannot be assessed." Id. at 230.

Similarly here, the Scheffe method has not been shown to reliably predict or conservatively over-predict the ozone concentrations expected to result from emissions of ozone precursors in the Jonah Field. See Milford Report at 15-19 (Ex. 10). Just the opposite: the Scheffe method has failed to replicate known exceedances of the ozone NAAQS that have already been documented in the Jonah Field area. By its own terms, the Scheffe method "is not intended to [be] substituted for a realistic photochemical modeling analysis; rather it is to be used only in the context of a first-step procedure which potentially can preclude further resource intensive analyses" when it is clear that violations of the ozone standards are unlikely. Final Air Quality TSD, Vol. 1, App. A at App. A at pages 3-4 (Ex. 4). Accordingly, in this case, where violations of the ozone NAAQS are likely in light of recent exceedances, the Scheffe method is not the proper tool for obtaining an accurate calculation of ozone concentrations. See id. (Ex. 4). As in Ohio, the BLM cannot establish the "trustworthiness" of its modeling tool. 784 F.2d at 229-30

The report of Dr. Jana Milford, attached as Exhibit 10, provides a detailed description of

the deficiencies of the Scheffe method as a means of predicting the Jonah Infill's ozone impacts. See Milford Report at 15-22 (Ex. 10). Dr. Milford identifies several factors that undermine the Scheffe method's ability to provide a reliable replication of ozone formation in the Jonah context including the method's failure to account for: (1) the variation in ozone precursor concentrations that will be transported into the Jonah region from other source regions; (2) the chemistry of the atmosphere caused by local sources of precursor emissions; and (3) the effects of continuing ozone formation as emissions from the field are transported downwind from the Jonah Field. These deficiencies preclude the Scheffe model from predicting real-world ozone concentrations and resulting health risks from the Jonah Infill project's emissions, and the BLM has never even tried to demonstrate otherwise.

Under similar circumstances, the D.C. Circuit found that EPA erred in failing to establish a credible link between model assumptions and the health risks the model was intended to predict:

When the EPA eliminated the proposed 'reality check' in the final rule, it did not substitute any other mechanism by which to validate the predicted level of human exposure to a pollutant by reference to actual emissions; instead it applied the generic air dispersion model inflexibly to all 189 hazardous air pollutants without regard to whether the basic assumptions of the model comported, within an acceptable margin of error, to the physical characteristics of the chemicals modeled.

Chemical Manufacturers' Assn. v. EPA, 28 F.3d 1259, 1265 (D.C. Cir. 1994). BLM's ozone analysis is similarly devoid of any such "reality check." The fact that BLM's application of the model provides no indication that emissions in the region are now sufficient to cause exceedances of the ozone NAAQS proves the point. Given that two different air quality monitors in the Jonah region recorded exceedances in 2005, see EPA, Response To FOIA Request (Ex. 36); Jonah Real Time Image, www.wyvisnet.com (Ex. 37), BLM was on notice that

its method does not reliably replicate ozone formation in the area. BLM cannot provide for compliance with the ozone NAAQS when the agency fails to use EPA-approved modeling tools and fails to demonstrate that despite its glaring deficiencies, its chosen ozone impacts model is capable of reliably predicting ozone under the conditions found in the Upper Green River Valley.

ii. BLM Failed To Properly Evaluate Ozone Impacts Even Under Its Own Chosen Model

Even assuming for the sake of argument that the Scheffe method was an appropriate screening tool for conservatively over-estimating the impacts from ozone pollution in the Jonah field — which it was not — BLM corrupted the method’s application to the Jonah Infill by selectively applying emissions data and background ozone levels to obscure an apparent violation of the 8-hour NAAQS for ozone. BLM achieved this result by severely undercounting both the background ozone concentrations in the project area and the predicted amount of ozone to be generated by the Jonah Infill project.

A. BLM Failed To Apply The Appropriate Background Ozone Concentration

In assessing whether the 8-hour NAAQS for ozone will be violated by emissions from the Jonah Infill project, BLM was required to look at the three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration. See 50 C.F.R. § 50.10(b), 62 Fed. Reg. 38,890; see also Milford Report at 1 n.1 (Ex. 10). The standard is exceeded, but not necessarily violated, on any day when an 8-hour average concentration exceeds $157 \mu\text{g}/\text{m}^3$.

In determining compliance with the 8-hour ozone NAAQS, BLM first erred by failing to apply the appropriate background ozone concentration in its impact analysis. BLM’s stated method for determining concentrations of criteria pollutants such as ozone in the Jonah field was to add “[b]ackground concentration data collected for criteria pollutants at regional monitoring

sites” to ozone “concentrations modeled in the near-field analysis.” Final Air Quality TSD, Vol. 1 at 20 (Ex. 4). The BLM then compared this “total pollutant concentration ... to ambient air quality standards.”¹⁹ Id. (Ex. 4). In theory, this approach should yield a principled assessment of ozone concentrations in the project area. As stated in the DEIS, “[b]ackground air quality concentrations can be combined with modeled Project-related emissions for the same averaging time periods so that total predicted pollutant concentrations can be compared to applicable air quality standards.” DEIS at 3-4 (emphasis added) (Ex. 35). However, BLM failed to use the relevant data on background concentrations from the same 8-hour averaging time periods for comparison with the 8-hour NAAQS.

According to BLM, data from the monitoring station at the Green River Basin Visibility Study site is the “most representative” of existing ozone impacts on air quality in the Jonah Infill project area. See Final Air Quality TSD, Vol. 1 at 20 (Ex. 4). This monitoring station measured background concentration for ozone at 147 $\mu\text{g}/\text{m}^3$ for the 8-hour averaging period.²⁰ See FEIS at 3-8 (Ex. 1); see also Final Air Quality TSD, Vol. 1 at 22 (Table 3.1) (Ex. 4). BLM deemed this concentration to be “representative” of background conditions for the relevant 8-hour NAAQS averaging period, see FEIS at 3-6, and used this value to claim that air quality in southwestern Wyoming is currently in attainment relative to the ozone NAAQS. Id. In fact, BLM expressly affirmed that background concentrations reported in the FEIS are the “most representative monitored regional background concentrations available for criteria pollutants [including ozone] as identified by [the Wyoming Department of Environmental Quality-Air Quality Division].”

¹⁹ “Criteria pollutants” are air pollutants for which NAAQS have been established. See 42 U.S.C. §§ 7408, 7409; 40 C.F.R. Part 50. The criteria pollutants are ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), carbon monoxide (CO), particulate matter (PM_{10} and $\text{PM}_{2.5}$), and lead (Pb).

²⁰ A background of 147 $\mu\text{g}/\text{m}^3$ is nearly 94% of the 157 $\mu\text{g}/\text{m}^3$ ozone 8-hour NAAQS before contributions of the Jonah Infill project are even considered.

Final Air Quality TSD, Vol. 1 at 20 (emphasis added) (Ex. 4).

Using this background concentration for the 8-hour NAAQS and adding it to estimated near-field ozone concentrations from the Jonah Infill, BLM would have found a violation of the ozone NAAQS. The BLM estimated that the Jonah Project would generate $54.7\mu\text{g}/\text{m}^3$ of ozone in the “near-field” area with respect to the ozone 8-hour standard. See FEIS App. J at J-3 (Table J-6) (Ex. 11); Final Air Quality TSD, Vol. 1 at 34 (Table 3.7) (Ex. 4). If this $54.7\mu\text{g}/\text{m}^3$ were added to the $147\mu\text{g}/\text{m}^3$ 8-hour background deemed most representative by BLM, the predicted total concentration would be $201.7\mu\text{g}/\text{m}^3$, which would greatly exceed the ozone 8-hour NAAQS of $157\mu\text{g}/\text{m}^3$, indicating a significant threat to human health and the environment from the Jonah Infill project.

However, BLM did not use this “most representative” ozone background level in its Jonah Infill ozone impacts analysis. Instead of performing the simple addition set forth above, BLM found a lower background concentration to add to its predicted near-field concentration. Thus, rather than adding the 4th highest daily maximum background 8-hour ozone concentration ($147\mu\text{g}/\text{m}^3$) to the predicted 8-hour concentration ($54.7\mu\text{g}/\text{m}^3$) resulting from the Jonah Infill, the agency added a background long-term concentration based on 1-hour measurements to the predicted 8-hour average concentration. More specifically, instead of using the “most representative” $147\mu\text{g}/\text{m}^3$ 8-hour background concentration, which represents the 4th highest daily maximum 8-hour concentration that is relevant to the 8-hour NAAQS, BLM substituted $75.2\mu\text{g}/\text{m}^3$ as the background concentration.²¹ Final Air Quality TSD, Vol. 1 at 34 (Table 3.7)

²¹ BLM states that the $75.2\mu\text{g}/\text{m}^3$ concentration is the “Average 1-hour Background” concentration from the Green River Basin Visibility Study (“GRBVS”) site. Final Air Quality TSD, Vol. 1 at 34 (Table 3.7) (emphasis added) (Ex. 4). Thus, the background concentration used by BLM is the average of many 1-hour measurements. That is, it is a long-term average, which is how it will be referred to herein. Ozone is normally measured at one hour intervals.

(Ex. 4), FEIS at J-3 (Table J-6) (Ex. 11). Adding this long-term average to predict 8-hour average impacts of the Jonah project, BLM claimed that the total predicted 4th highest daily maximum 8-hour ozone concentration would be 129.9 µg/m³, which is less than the NAAQS. Id. (Ex. 11). In other words, BLM did not add concentrations “for the same averaging time period[]” — the 8-hour period that is relevant to the NAAQS standard. Put more simply, BLM added apples to oranges.²²

This was directly at odds with BLM’s announced approach of combining “[b]ackground air quality concentrations ... with modeled Project-related emissions for the same averaging time periods so that total predicted pollutant concentrations can be compared to applicable air quality standards.” DEIS at 3-4 (emphasis added). Indeed, in all other predictions of total pollutant concentrations, BLM used the background concentrations “from the same averaging time period[]” relevant to the applicable NAAQS. These values are presented in Table 3.7 of the FEIS and Table 3.1 of the Final Air Quality TSD. See FEIS at 3-8 (Ex. 1); Final Air Quality TSD, Vol. 1 at 22 (Ex. 4). For sulfur dioxide, nitrogen dioxide, carbon monoxide, and particulate matter, BLM used the background values for the relevant averaging period in these tables to make estimates of what the total predicted concentrations of the pollutants would be. See FEIS

See Milford Report at 1 n.1 (Ex. 10); see also EPA, Response To FOIA Request (Ex. 36) (ozone readings done on an hourly basis). Thus, 75.2 probably represents the average of the thousands of 1-hour interval measurements from the GRBVS, which ran from June 10, 1998 through December 31, 2001. See Final Air Quality TSD, Vol. 1 at 22 (Table 3.1, footnote 3) (Ex. 4). In any event, this “Average 1-hour Background” concentration by its own terms does not represent an 8-hour average, let alone the 4th highest daily maximum 8-hour average, which is what the NAAQS/WAAQS pertains to.

²² The use of this long-term average value to make predictions regarding the short-term 8-hour ozone NAAQS, which is based on peak values (i.e., 4th highest daily maximum average), was scientifically unsupported and unjustified. See Milford Report at 20 (“BLM’s substitution of a long-term average as the background concentration of ozone for estimating net effects of the JIDP is without any scientific foundation and violates the best scientific understanding of ozone formation.”) (Ex. 10).

at App. J at J-1 to J-3 (Tables J-1 to J-5) (Ex. 11); Final Air Quality TSD, Vol. 1 at 26-32 (Tables 3.3 to 3.6) (Ex. 4). But with ozone BLM deviated from this approach, presumably because it wanted to avoid finding a NAAQS violation.

BLM sought to justify its arbitrary math by claiming that the higher background concentration should not be used because it would be “overly conservative.”²³ Final Air Quality TSD, Vol. 1 at 33 (Ex. 4). However, it is hardly too “conservative” to utilize the higher background ozone concentration reflected in the 8-hour average when monitoring stations in the Jonah Field itself have recorded recent exceedances of the ozone NAAQS demonstrating that background ozone concentrations are in fact very high.²⁴ To be clear, “the 8-hour NAAQS is a short-term standard specifically because exposure to high ozone concentrations for short periods is associated with serious health effects.” Milford Report at 21 (Ex. 10). Compliance with this standard is crucial to ensuring public health in the Jonah Field and surrounding communities.

B. BLM Misapplied Its Chosen Model To Lower The Jonah Infill’s Predicted Ozone Impact

In addition to undercounting background ozone levels in the Jonah Infill area, BLM misapplied its own chosen Scheffe Method of predicting ozone impacts to engineer a lower near-field ozone impact finding for the Jonah Infill project.

The Scheffe Method is presented as an appendix (Appendix A) to BLM’s Air Quality Assessment Protocol, which is itself Appendix A to the Final Air Quality TSD. Fundamentally,

²³ When BLM uses the term “overly conservative” in this sentence it is intended to mean the method will over-estimate true concentrations of the air pollutant.

²⁴ The data from these monitoring stations shows that there were exceedances of the ozone 8-hour standard (80 parts per billion--ppb) on February 3 and 26, 2005 at the Jonah station (98 and 89 ppb, respectively), and on February 20, 2005 at the Boulder station (88 ppb reading). EPA, Response To FOIA Request (Ex. 36). And on February 27, 2006 there was another exceedance of the ozone 8-hour station at the Jonah measuring station when the ozone 8-hour average reached 91 ppb. Jonah Real Time Image (Ex. 37).

this method provides for the use of two separate tables to predict ozone levels in urban and rural areas respectively. See Final Air Quality TSD, Vol. 1 at App. A pages 9-10 (Ex. 4); Milford Report at 15 (Ex. 10). The basic input information needed to use the tables is the amount of VOC and NO_x that will be produced by the project, including the ratio of VOC to NO_x. Final Air Quality TSD, Vol. 1, App. A at pages 6-8 (presenting example of how to make calculations, specifically for a “rural area”) (Ex. 4).

For the Jonah Infill project, BLM described its application of the Scheffe model as follows. The basic input data that BLM used was 2,433.9 tons per year (tpy) of VOC and 87.1 tpy of NO_x, which produces a ratio of 28.0. Final Air Quality TSD, Vol. 1 at 33 (Ex. 4). Using this ratio and following the procedure outlined in the Scheffe method, BLM determined that the 1-hour ozone concentration was 0.040 parts per million (ppm), which converted to 78.2 µg/m³ for the 1-hour average and 54.7 µg/m³ for the 8-hour average. See id. (Ex. 4). Of critical importance here, BLM used the Scheffe “rural table” to make these estimates. See id., App. A, at App. A page 9 (presenting the rural area table) (Ex. 4).²⁵

²⁵ BLM does not state explicitly whether it used the rural table or the urban table to make its direct modeled impacts predictions. See Final Air Quality TSD, Vol. 1 at 33 (Ex. 4). Nevertheless, BLM used the rural table as demonstrated by back-calculating from the data BLM has provided and from the description provided in the Scheffe method itself.

As discussed above, the basic input data that BLM used in making its Scheffe method calculations were that the Jonah Infill project would generate 2433.9 tpy of VOC and 87.1 tpy of NO_x, for a ratio of 28.0. Id. at 33 (Ex. 4). On pages 7-8 of the Scheffe method, a numerical example is provided of how to apply the Scheffe method, specifically with respect to a rural area. Id. at App. A, App. A pages 7-8 (Ex. 4). Using the steps presented in Appendix A and the input data provided by BLM, the following calculations can be made using the rural table (with a ratio of VOC to NO_x of 28.0, one uses column 1 of the table to make estimates):

$$\frac{(2433.9 \text{ tpy VOC} - 2000 \text{ tpy VOC}) \times (4.8 \text{ pphm ozone} - 3.4 \text{ pphm ozone})}{(3000 \text{ tpy VOC} - 2000 \text{ tpy VOC})} + 3.4 \text{ pphm ozone}$$

$$= \frac{433.9 \text{ VOC} \times 1.4 \text{ pphm ozone}}{1000 \text{ VOC}} + 3.4 \text{ pphm ozone}$$

However, the Scheffe rural table is applicable only if there has never been an exceedance of an ozone standard in the project area. The Scheffe Method is clear that “the following steps should be used to choose the appropriate table:

- (1) If the source location and downwind impact area can be described as rural and where ozone exceedances have never been reported, choose the rural table.
- (2) If the source location and downwind impact area are of urban character, choose the urban area table.
- (3) If an urban based source potentially can impact a downwind rural area, or if a rural based source can potentially impact a downwind urban area, use the highest value obtained from applying both tables.

Final Air Quality TSD, App. A at App. A page 6 (emphasis added) (Ex. 4); see also id. at page 7 (presenting example of how to calculate ozone levels in a rural area but indicating that the calculation was based on a situation “where ozone exceedances have never been observed.”) (Ex. 4); Milford Report at 20 (noting it is “inappropriate” by the terms of the Scheffe method to use the rural table where exceedances of the ozone standards have been reported) (Ex. 10).

As discussed above, there have been several recent exceedances of the ozone 8-hour standard in and very near the Jonah field. See EPA, Response to FOIA Request (Ex. 36); Jonah Real Time Image (Ex. 37). BLM itself “agrees that the Boulder and Jonah stations recorded exceedances of the 8 hour ozone NAAQS.” Public Comment Analysis Report, Part II, Table III-B, Submittal ID 2, Comment No. 14 (Ex. 31); see also FEIS at 5-3 (same) (Ex. 1). Given these exceedances, BLM ignored specific instructions regarding use of the Scheffe method and improperly used the rural table to predict ozone concentrations resulting from the Jonah Infill

= 4.01 pphm ozone

And, $4.01 \text{ pphm} \times (1\text{ppm}/100\text{pphm}) = 0.0401 \text{ ppm ozone}$.
0.040 ppm ozone is exactly what BLM stated was the “estimated maximum potential 1-hour [ozone] concentration” resulting from its own Scheffe method calculation. Final Air Quality TSD, Vol. 1 at 33. Thus, it is clear the BLM used the rural table to make its ozone predictions.

project. See Milford Report at 20 (Ex. 10). Either the urban table should have been used or at a minimum the highest value obtained from applying both tables should have been used. See Final Air Quality TSD, Vol. 1, App. A at App. A page 6. But BLM nevertheless used the rural table alone to make its predictions.

If the urban table had been used or the highest value from either table had been selected, the predicted amount of ozone would have been 0.0814 ppm ozone, approximately twice as great a concentration as BLM predicted. See Milford Report at 20-21 (showing the ozone concentration lies between 0.071 and 0.095 ppm) (Ex. 10). This higher value should have been used by BLM as an estimate of ozone concentrations resulting from the Jonah Infill project. Using BLM's chosen metrics, a concentration of 0.0814 ppm converts to a 1-hour ozone concentration of 159.8 $\mu\text{g}/\text{m}^3$ and an 8-hour concentration of 111.9 $\mu\text{g}/\text{m}^3$. If this 8-hour concentration is then added to background concentrations — even BLM's selected background concentration of 75.2 $\mu\text{g}/\text{m}^3$ which was improperly used, as discussed above — the result would be a predicted total concentration of at least 187.1 $\mu\text{g}/\text{m}^3$, which greatly exceeds the ozone standard of 157 $\mu\text{g}/\text{m}^3$. In short, if BLM had applied the Scheffe method in the manner that the method itself prescribes, it would have predicted that the Jonah Infill project will potentially cause high enough ozone concentrations to violate the ozone 8-hour NAAQS.²⁶

In sum, BLM's misuse of the Scheffe method led the agency to greatly underestimate predicted ozone concentrations resulting from the Jonah project. In these circumstances, BLM has not provided for compliance with the governing ozone NAAQS, nor given the "hard look" to

²⁶ Moreover, if BLM had used the actual total VOC and NO_x emissions (14,000 and 700 tpy respectively) from the Jonah field in making its predictions of ozone concentrations based on the Scheffe method, rather than the inappropriately underestimated amounts based on a small 128-well "patch" of wells in the Jonah field (2433.9 and 87.1 tpy for VOC and NO_x respectively), the predicted ozone concentration would be even higher. See Milford Report at 20.

ozone impacts required by NEPA.

2. BLM Violated Its NEPA Duty To Disclose The Fine Particulate Matter And Cumulative Ozone Impacts Caused By The Jonah Infill

Finally, BLM's approval of the Jonah Infill project violated NEPA because the agency's EIS failed to disclose significant human health and environmental risks caused by the project's emissions of fine particulate matter, and by the project's ozone impacts together with other ozone-producing sources in the region.

a. BLM Failed To Disclose Serious Health Risks From The Jonah Infill's PM_{2.5} Emissions

As "our national charter for protection of the environment," NEPA requires agencies to consider the environmental impacts of proposed actions, including potential effects on human health. See 40 C.F.R. § 1500.1(a); see also 42 U.S.C. § 4332(2)(C); see 40 C.F.R. §§ 1502.16, 1508.8. Where, as here, proposed development will significantly increase air pollution, the BLM has a vital obligation to disclose the resulting human health risks. See 40 C.F.R. §§ 1502.16, 1508.8 (mandating discussion of effects on "health"); see also 40 C.F.R. § 1508.27(b)(2) (defining severity of environmental impacts in relation to "the degree to which the proposed action affects public health or safety"). Even a "marginal degradation of the quality of the air we breathe" is "environmentally significant for purposes" of NEPA. Public Citizen v. Department of Transp., 316 F.3d 1002, 1024 (9th Cir. 2003), rev'd on other grounds, 541 U.S. 752 (2004). Thus, NEPA requires agencies to consider "whether any negative health effects could be associated with increased ... emissions" from a proposed action. Id. (finding NEPA violation based on agency's "failure even to consider whether any negative health effects could be associated with increased diesel exhaust emissions from diesel trucks").

Here, the BLM violated NEPA in failing to consider negative health effects associated with increased emissions of fine particulate matter, or PM_{2.5}. Very fine particles classified as PM_{2.5} are “produced chiefly by combustion processes and by atmospheric reactions of various gaseous pollutants,” and they “can remain suspended in the atmosphere for days to weeks and be transported many thousands of kilometers.” National Ambient Air Quality Standards for Particulate Matter; Proposed Rule, 71 Fed. Reg. 2,619, 2,625 (Jan. 17, 2006) (Ex. 6).

Widespread dispersion of PM_{2.5} poses a major human health threat because these particles “contain[] microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems,” both in the human respiratory and cardio-vascular systems. EPA, Particulate Matter, “Health and Welfare” (available at <http://www.epa.gov/oar/particlepollution/health.html> (last checked April 10, 2006)) (Ex. 5).

Even short-term exposure to PM_{2.5} causes asthma (especially in children), other respiratory illnesses, heart attacks, and premature death (especially in people with heart or lung disease). See id. (Ex. 5); see also 71 Fed. Reg. at 2,627-49 (reviewing extensive scientific literature documenting health problems caused by PM_{2.5} exposure) (Ex. 6). Accordingly, the Clean Air Act requires EPA to regulate PM_{2.5} under NAAQS that are strong enough to ensure protection of public health, including the health of vulnerable populations such as asthmatics, children, and the elderly. See 42 U.S.C. §§ 7408(a), 7409.

In 1997, EPA set the NAAQS 24-hour concentration for PM_{2.5} at 65 µg/m³. See 71 Fed. Reg. at 2,623 (Ex. 6). However, in light of several recent studies on PM_{2.5}-related sickness and mortality, staff scientists at EPA concluded that “thousands of premature deaths” and “similarly substantial numbers of incidences of hospital admissions, emergency room visits, aggravation of asthma and other respiratory symptoms, and increased cardiac-related risk” may

occur nationally even when the current PM_{2.5} NAAQS are met. Id. at 2,643 (Ex. 6). EPA has therefore proposed a new rule to strengthen the 24-hour PM_{2.5} standard from 65 to 35 µg/m³, stating that “the current primary PM_{2.5} standards, taken together, are not requisite to protect public health with an adequate margin of safety and that revision is needed to provide increased public health protection.” Id. (emphasis added)

EPA must finalize its new standards for PM_{2.5} by September 17, 2006 under the terms of a court-ordered consent decree. See 71 Fed. Reg. at 2,624 (Ex. 6). In the meantime, the current PM_{2.5} NAAQS do not provide a reliable benchmark for evaluating impacts to public health. Based on the most recent health effects research that has become available since the PM_{2.5} standards were adopted in 1997, EPA has concluded that 24-hour PM_{2.5} concentrations over 35 µg/m³ pose a major human health risk. See id. at 2,649 (Ex. 6).

Judged against EPA’s currently pending 24-hour standard of 35 µg/m³, which stands as a surrogate for the massive body of health effects research published in the last nine years, the Jonah Infill project will create hazardous levels of PM_{2.5} pollution that can be expected to cause increased mortality, hospitalizations and other serious adverse health effects. Specifically, the FEIS reports that the total 24-hour concentration of PM_{2.5}, including background concentration and emissions from the project, will be 44.0 µg/m³ due to the impacts of the Jonah Infill project. See FEIS, App. J at Table J-5 (Ex. 11). Even worse, under the likely “early stage” development scenario modeled by BLM, 24-hour concentrations of PM_{2.5} from the “direct predicted impact” of the project together with background concentrations will be 49.4 µg/m³, and the cumulative total 24-hour concentration resulting from the Jonah Infill, other regional sources, and background concentration will be 62.4 µg/m³ — 27.4 µg/m³ over EPA’s proposed limit. See Final Air Quality TSD, Vol. 2 at G-E-21, G-E-22 (Tables G-E.5.1 and G-E.5.2) (Ex. 4).

Notwithstanding the fact that emissions from the Jonah Project will exceed EPA's proposed 24-hour standard for PM_{2.5}, with alarming implications for human health as demonstrated by extensive scientific studies, BLM provided no analysis of health impacts associated with public exposure to significantly increased concentrations of PM_{2.5}. BLM's Jonah Infill FEIS merely reports that PM_{2.5} emissions will be "below the applicable" NAAQS. FEIS at 4-19 (Ex. 1); see also id. at 4-8 (Ex. 1), App. J at Table J-5 (Ex. 11). However, BLM could not reasonably rely on the NAAQS to assume that PM_{2.5} emissions will be harmless to human health. Readily available information cited and discussed by EPA makes clear that PM_{2.5} levels below the current NAAQS have been demonstrated to pose a significant threat to human health. EPA is proposing to finalize its major NAAQS overhaul just five months from now based upon thousands of health studies published in peer reviewed journals that the agency has collected and screened based on their scientific rigor, and published in the latest revision of the Criteria Document for PM.

BLM has an obligation under NEPA to disclose this large body of compelling scientific evidence since anticipated PM_{2.5} emissions from the Jonah Infill Project will exceed levels shown by the research to cause significant serious adverse health effects. The public deserves to know that anticipated PM_{2.5} emissions from the Jonah Project will violate the 35- $\mu\text{g}/\text{m}^3$ standard that EPA now deems necessary to address unacceptable risks of asthma, lung disease, heart attacks, and premature death. The BLM's "failure even to consider" these serious "negative health effects" violates NEPA. Public Citizen, 316 F.3d at 1024 (where there was a "wealth of government and private studies showing that diesel exhaust and its components constitute a major threat to the health of children, contribute to respiratory illnesses such as asthma and bronchitis, and are likely carcinogenic," the agency violated NEPA in failing to

discuss health effects of increased diesel exhaust).

b. BLM Failed To Assess The Jonah Infill's Cumulative Ozone Impacts

i. NEPA Requires A Comprehensive Review Of Cumulative Effects

To ensure that the combined effects of separate activities do not escape consideration, NEPA requires BLM to consider cumulative environmental impacts in its environmental analyses. See Davis v. Mineta, 302 F.3d 1104, 1125 (10th Cir. 2002); see also TOMAC, Taxpayers of Michigan Against Casinos v. Norton, 433 F.3d 852, 864 (D.C. Cir. 2005); National Audubon Soc'y v. Department of the Navy, 422 F.3d 174, 196 (4th Cir. 2005); Grand Canyon Trust v. Federal Aviation Admin., 290 F.3d 339, 345-47 (D.C. Cir. 2002). As required by NEPA's implementing regulations, BLM's examination of "the environmental impacts of the alternatives including the proposed action" must include a discussion of "direct" and "indirect" effects. 40 C.F.R. § 1502.16(a), (b). Such effects include the "cumulative" impacts of BLM's action. See id. § 1508.8 (defining "effects"). "Cumulative impact," in turn, is

the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Id. § 1508.7.

Based on these regulations, an EIS must provide useful analysis of past, present, and future actions that pose cumulative impacts. City of Carmel-By-The-Sea v. U.S. Dept. of Transp., 123 F.3d 1142, 1160 (9th Cir. 1997); Muckleshoot Indian Tribe v. U.S. Forest Serv., 177 F.3d 800, 809-810 (9th Cir. 1999). The fact that a project may result in even a small incremental increase in the overall impacts to a resource is meaningless if "there is no way to determine . . . whether [this small increase] in addition to the other [impacts], will 'significantly

affect’ the quality of the human environment.” Grand Canyon Trust, 290 F.3d at 346.

A meaningful cumulative impact analysis must identify (1) the area in which the effects of the proposed project will be felt; (2) the impacts that are expected in that area from the proposed project; (3) other actions – past, present, and proposed, and reasonably foreseeable – that have had or are expected to have impacts in the same area; (4) the impacts or expected impacts from these other actions; and (5) the overall impact that can be expected if the individual impacts are allowed to accumulate.

Id. at 345 (citations omitted).

NEPA requires that BLM’s cumulative impacts analysis provide “some quantified or detailed information,” because “[w]ithout such information, neither the courts nor the public . . . can be assured that the [agency] provided the hard look that it is required to provide.” Neighbors of Cuddy Mountain v. United States Forest Service, 137 F.3d 1372, 1379 (9th Cir. 1998) (emphasis added); see also id. (“very general” cumulative impacts information was not the hard look required by NEPA). Moreover, “perfunctory references do not constitute analysis useful to a decisionmaker in deciding whether, or how, to alter the program to lessen cumulative environmental impacts.” Natural Resources Defense Council v. Hodel, 865 F.2d 288, 299 (D.C. Cir. 1988).

ii. BLM Failed To Perform Any Cumulative Impacts Analysis With Respect To Ozone Concentrations

Despite the significance of increasing ozone concentrations in western Wyoming as a threat to human health, BLM failed to undertake any assessment of the cumulative ozone impacts of the Jonah Infill project in combination with other ozone sources affecting the same area. The result is that while existing ozone concentrations in the Jonah Infill project area already have exceeded the relevant ozone NAAQS and all indications are that, if properly evaluated, the Jonah Infill project itself will create ozone concentrations that violate legal limits, see pages 37-54 supra, both BLM and the public were left with no information to assess the

threat of respiratory illnesses, asthma prevalence in children and other harms to human health that will arise when the Jonah Infill's ozone impacts are combined with the ozone impacts of other facilities affecting air quality in the region. This failure to consider one of the most critical environmental effects of the Jonah Infill project violates NEPA. See Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 351 (1989) (NEPA requires that "adverse environmental effects of the proposed action are adequately identified and evaluated").

BLM's approach in the Jonah Infill EIS precluded meaningful ozone cumulative impacts analysis because the agency failed to assess emissions of volatile organic compounds ("VOCs") from regional sources of pollution that will combine with pollution from the Jonah Infill project to form ozone in western Wyoming. Ozone is formed through a chemical reaction between VOCs, nitrogen dioxides and ultraviolet light (sunlight) in the atmosphere. See FEIS at 4-6 (Ex. 1). Thus, an inventory of VOC emissions is essential for any assessment of ozone impacts. Here BLM did consider VOCs when it inventoried pollutant emissions from the Jonah Infill project itself. See Vol. I, Air Quality Tech. Support Doc. at 8 (including VOCs among "criteria pollutants" inventoried "for construction activities, production activities, and ancillary facilities" of Jonah Infill project) (Ex. 4); see also, e.g., id. App. B at B-10 (inventorying VOC emissions from various well field sources) (Ex. 4). Yet when BLM turned to inventorying pollutant emissions from other regional sources that could combine with the Jonah Infill project to cumulatively impact air quality, the agency omitted VOCs from its analysis. See id. at 18 (omitting VOCs from regional pollutant inventory) (Ex. 4); see also id., App. C (omitting VOC emissions from inventory of regional state-permitted sources, reasonably foreseeable future actions and reasonably foreseeable development under NEPA-approved projects) (Ex. 4). As a result, the Jonah Infill FEIS's discussion of cumulative air quality impacts failed even to address

VOCs and, therefore, ozone. See FEIS at 4-20 to 4-24 (Ex. 1).

BLM's failure to consider cumulative ozone impacts represents a critical omission in the agency's NEPA analysis. Already monitoring of ozone in the Jonah field area has recorded concentrations exceeding the ozone NAAQS for an 8-hour average concentration on four occasions. See EPA, Response To FOIA Request (Ex. 36); Jonah Real Time Image (Ex. 375). Moreover, background ozone concentrations recorded at the Green River monitoring site, and used in BLM's analysis, indicate average 8-hour ozone concentrations of 147 $\mu\text{g}/\text{m}^3$ – which is 94 percent of the 8-hour ozone NAAQS – even before the Jonah Infill project adds more ozone to the region. See Vol. I, Air Quality TSD, at 22 (Table 3.1) (Ex. 4); FEIS at 3-8 (Ex. 1). And even under BLM's fatally flawed analysis of direct, near-field ozone impacts, see pages 32-54 supra, the agency estimates that ozone concentrations will reach 83 percent of the NAAQS. See FEIS at J-3 (Table J-6) (Ex. 11). Indeed, BLM itself has recognized “the importance of potential ozone concentrations resulting from the increase in natural gas development activities within and nearby the JIDPA,” and therefore “ozone monitoring was initiated in the Jonah Field area as well as near Daniel and Boulder.” FEIS at 4-6 (Ex. 1). Yet BLM failed to conduct the cumulative impacts analysis necessary to ascertain whether the Jonah Infill's ozone impacts, together with the ozone impacts of other polluting sources affecting the same area, would push ozone concentrations already hovering at 94 percent of the relevant NAAQS past legal limits to a level that will lead to a host of respiratory illnesses and other adverse consequences in western Wyoming. See Grand Canyon Trust, 290 F.3d at 346 (finding NEPA violation where agency analysis provided no means to determine whether even a slight increase in noise from park overflights will combine with “other noise impacts” to “‘significantly affect[]’ the quality of the human environment”).

BLM offered no legitimate reason for its failure to consider cumulative ozone impacts.

When confronted regarding this issue during the public comment process on the Jonah Infill EIS,

BLM offered the following explanation:

VOC emissions were not included in the regional inventory since the main purpose of developing regional inventories was to quantify cumulative emissions that could potentially impact air quality related values (acid deposition and visibility). SO₂, NO₂, PM₁₀ and PM_{2.5} are precursors to regional haze formation, whereas VOCs are not.

Responses to Public Comments, Part II, Table III at 78 (Ex. 31).

BLM's excuse is unavailing. First, nothing in NEPA or its implementing regulations limits BLM's cumulative impacts obligation to only those pollutants causing acid deposition and visibility impacts – as opposed to VOCs that contribute to the formation of ozone that threatens significant human health impacts. To the contrary, “NEPA places upon an agency the obligation to consider every significant aspect of the environmental impact of a proposed action.” Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 553 (1978) (emphasis added).

Second, to the extent that BLM intended to suggest that it was required to consider only cumulative impacts of pollutants threatening “air quality related values” of Class I areas such as large National Parks and wilderness areas, 42 U.S.C. § 7475(d)(2)(B), its analysis is flawed because ozone does threaten such “air quality related values,” including – but not limited to – visibility. Contrary to the implication of BLM's argument, “air quality related values” includes more than visibility threatened by regional haze and alpine lakes threatened by acid deposition.

As the Clean Air Act's legislative history makes clear:

the term “air quality related values” of Federal lands designated as class I includes the fundamental purposes for which such lands have been established and preserved by the Congress and the responsible Federal agency. For example, under the 1916 Organic Act to establish the National Park Service (16 U.S.C. § 1), the purpose of such national park lands “is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the

enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

S. Rep. No. 95-127, at 36 (1977). In addition to its human health impacts, ozone threatens the “air quality related values” of America’s premier National Parks and wilderness areas in western Wyoming by damaging plants and ecosystems, making them “more susceptible to disease, insects, other pollutants, and harsh weather.” EPA, “Six Common Air Pollutants, Chief Causes For Concern” at 3 (Ex. 9). The damage it causes can “ruin[] the appearance of ... national parks, and recreation areas.” Id. (Ex. 9). Ozone is also a principal contributor to smog, which threatens the very visibility impacts about which BLM expressed concern. See id. (Ex. 9).

Moreover, ozone formation can and does take place over a scale of hundreds of miles. See Milford Report at 6-9 (Ex. 10). There is therefore no basis for any suggestion that other regional VOC sources are too distant or would be minor and therefore can be ignored in a cumulative ozone analysis. To the contrary, some of the organic compounds that constitute VOCs associated with gas production (light alkanes) react to form ozone over many days, so their impact on ozone can occur many miles downwind.

It does not suffice to look at the impacts of emissions on ozone at nearby receptors and assume that because the receptor is close to the source it represents the worst effect. ... In the context of the Jonah Infill project, local communities and nearby Class I National Parks and Wilderness Areas (“mid” and “far-field” areas) might well have greater ozone concentrations than occur in the Jonah field itself due to these factors, at least under some conditions.

Milford Report at 9 (Ex. 10). Accordingly, BLM had no basis to exclude ozone from its cumulative impacts analysis.

In sum, increasing ozone levels in western Wyoming threaten to convert this region from a place where locals can breathe some of the cleanest air in our nation into a place where children require inhalers to treat asthma and adults face increased vulnerability to pneumonia and

bronchitis. NEPA does not permit BLM to turn a blind eye to such impacts when it conducts its cumulative impacts analysis for a project such as the Jonah Infill that poses major ozone impacts to the region. BLM's failure to consider the cumulative ozone impacts of the Jonah Infill project violates NEPA.

B. Appellants Will Suffer Immediate And Irreparable Harm Unless A Stay Is Granted

Implementation of the Jonah Infill project as authorized by BLM will inflict immediate and irreparable harm on the appellants' interests. "Environmental injury, by its nature, can seldom be adequately remedied by money damages and is often permanent or at least of long duration, i.e., irreparable." Amoco Production Co. v. Village of Gambell, 480 U.S. 531, 545 (1987). Moreover, "harm to the environment may be presumed" where, as here, "an agency fails to comply with the required NEPA procedure." Davis v. Mineta, 302 F.3d 1104, 1115 (10th Cir. 2002).

[T]he risk of irreparable harm is impossible to assess, because the studies that would quantify that harm are incomplete. Legal remedies are inadequate, however, because permitting construction to proceed before the NEPA studies have been completed would defeat the purpose of undertaking the studies, whose purpose is to make the agency aware of relevant environmental considerations before acting.

Sierra Club v. Hodel, 848 F.2d 1068, 1097 (10th Cir. 1988).

Here the environmental harm threatened by the Jonah Infill project will cause irreparable injury to the appellants' specific interests. As discussed above, the Jonah Infill project will significantly increase concentrations of pollutants such as ozone and PM_{2.5} that pose major threats to the health and even lives of the people who breathe them, including members of the appellant organizations who live in Pinedale and other nearby communities. Moreover, BLM's own analysis establishes that the project threatens to emit pollutants at dangerously high levels even at its earliest stages. For example, BLM's modeling of PM_{2.5} impacts during the earliest

stages of the project indicated in-field concentrations of 36.2 $\mu\text{g}/\text{m}^3$ from the Jonah Infill project alone – a level exceeding EPA’s proposed new $\text{PM}_{2.5}$ NAAQS and, thus, exceeding the level deemed by EPA to be dangerous to human health. See Final Air Quality TSD, Vol. 2 at G-E-21 (Table G-E.5.1) (Ex. 12). When combined with background $\text{PM}_{2.5}$ concentrations, the early stages of the Jonah Infill project threaten to push total $\text{PM}_{2.5}$ concentrations to 49.2 $\mu\text{g}/\text{m}^3$, see id. (Ex. 12), a level even more injurious to human health. The threat of aggravated asthma, chronic bronchitis, and even premature death posed by such concentrations is more than sufficient to demonstrate immediate and irreparable harm.

C. The Balance Of Harms And Public Interest Favor Granting A Stay

The balance of harms and public interest also favor granting the requested stay. BLM and the industry operators in the Jonah field cannot assert any interest that could outweigh the immediate and irreparable harms to human health posed by implementation of the Jonah Infill project as authorized by BLM. The operators’ interest is purely economic, which should not outweigh the human health and other environmental interests advanced by appellants. See Idaho Sporting Congress v. Alexander, 222 F.3d 562, 569 (9th Cir. 2000) (finding “possible financial hardship” outweighed by irreparable environmental harms); see also Beame v. Friends of the Earth, 434 U.S. 1310, 1313-14 (Marshall, Circuit Justice 1977) (denying motion to stay implementation of air pollution control plan; holding that “any adverse economic effect” of imposing pollution controls over short-term period “is balanced to some considerable extent by the irreparable injury that air pollution may cause during that period, particularly for those with respiratory ailments”).

Moreover, while appellants recognize the public interest in developing the extensive gas resources of the Jonah Field, this interest is largely addressed by the fact that appellants do not

seek to halt all Jonah Infill development, but rather seek to limit the amount of development that can occur at any one time so as to ensure compliance with applicable air pollution controls. See Sierra Club v. Hodel, 848 F.2d at 1097 (continuing award of injunctive relief in NEPA case where “[t]he injunction is shaped to permit construction to commence in areas” posing less serious environmental impacts). The stay requested by appellants does not place any gas resources off limits nor does it prevent the immediate development of such resources. Instead, it effectively extends the lifetime of the project by requiring a slower pace of development. This modest impact does not tip the balance of harms against appellants or frustrate the public interest; indeed, BLM recognized the possibility of an extended development timeframe even under the agency’s own flawed project authorization decision. See ROD at 14 (recognizing that “the actual pace of development may be limited by air quality impact restrictions and associated mitigation, which creates the potential to increase the duration of the field development phase”) (Ex. 2). Moreover, no energy development project – no matter how rich the resource involved – should be permitted to proceed at the cost of the health of people living in nearby communities or the severe degradation of air over some of our nation’s most revered lands. As Wyoming’s own federal district court recently stated:

The Court is cognizant of the importance of mineral development to the economy of the State of Wyoming. Nevertheless, mineral resources should be developed responsibly, keeping in mind those other values that are so important to the people of Wyoming, such as preservation of Wyoming’s unique natural heritage and lifestyle.

Wyoming Outdoor Council v. U.S. Army Corps of Engineers, 351 F. Supp. 2d 1232, 1260 (D. Wyo. 2005).

Finally, the public interest in vindicating congressionally established air quality policies and standards favors the requested stay. See California ex rel. Van de Kamp v. Tahoe Regional

Planning Agency, 766 F.2d 1319, 1324 (9th Cir. 1985) (finding that public interest may be defined “by reference to the policies expressed in legislation”) (citation omitted). Here Congress established the Clean Air Act’s PSD program, inter alia, (1) “to protect public health and welfare from any actual or potential adverse effect which in the Administrator’s judgment may reasonably be anticipate[d] to occur from air pollution,” (2) “to preserve, protect, and enhance the air quality in national parks [and] national wilderness areas,” and (3) “to insure that economic growth will occur in a manner consistent with the preservation of existing clean air resources.” 42 U.S.C. § 7470(1)-(3). Congress in the FLPMA further declared that BLM must “provide for compliance” with these purposes. 43 U.S.C. § 1712(c)(8). Issuing the requested stay will advance the policies established by Congress. Allowing the Jonah Infill project to proceed as authorized by BLM will frustrate them. The requested stay should be granted.

IV. REQUESTED STAY

Appellants do not request a stay of all activity authorized by BLM pursuant to its Jonah Infill ROD. Instead, appellants seek a limited stay to ensure that imminent Jonah Infill project activities do not cause violations of governing air quality standards, with commensurate human health and environmental impacts. See Wyoming Outdoor Council, 160 IBLA 387, 388, 397 n.10 (2004) (discussing limited stay that applied “to only coalbed methane (CBM) activities”). Appellants focus their requested stay on the impacts with respect to PM_{2.5}, NO₂, and ozone that are threatened at the earliest stages of the Jonah Infill project development, because BLM’s data indicate that the Jonah Infill project will emit these pollutants at levels that exceed air quality standards and/or levels established to be injurious to human health and the environment as early as this year. In addition, for PM_{2.5} and NO₂, reliable information is available to indicate a limit that the Board may reasonably impose on Jonah Infill project activities that will allow

development to go forward without endangering human health or threatening severe environmental harms related to air quality. For ozone, the flaws in BLM's analysis preclude such an assessment at this time, so appellants seek to address ozone impacts through alternative means. In addition, appellants anticipate that reductions in emissions of NO₂, which contributes to ozone formation, will help to mitigate ozone impacts.

Accordingly, appellants request a limited stay of the Jonah Infill project as follows:

(1) BLM shall not authorize any Jonah Infill project activities that, taken together, would have the potential to emit pollutants that will be expected to either:

(a) Cause PM_{2.5} concentrations in the Jonah Infill project area to increase by more than 22 µg/m³, or to exceed 35 µg/m³. Given BLM's measured background PM_{2.5} concentrations of 13 µg/m³, a 22-µg/m³ limit on increased PM_{2.5} concentrations will ensure that total PM_{2.5} concentrations remain at or below the 35-µg/m³ limit that current EPA data indicates is necessary to prevent unacceptable risks of asthma, lung disease, heart attacks and premature death; or

(b) Cause NO₂ concentrations in the Class II area located in and around the Jonah Infill project site to increase by more than 13.5 µg/m³, or to exceed 25 µg/m³ when added to the amount of PSD NO₂ increment that the Wyoming DEQ has determined to have been consumed already. Given Wyoming DEQ's recent analysis indicating 11.5 µg/m³ of existing PSD NO₂ increment consumption in this Class II area, a 13.5-µg/m³ limit on increased NO₂ concentrations will ensure that the total amount of NO₂ concentrations that have been added in this Class II area since the baseline date do not exceed the PSD increment of 25 µg/m³.

Based on BLM's existing air quality analysis, it is impossible to determine what level of Jonah Infill project activities may go forward consistent with these conditions. Accordingly,

BLM shall, within 30 days of the Board's order, submit a report to the Board and all parties to this appeal proposing a level of Jonah Infill project activities that present a level of emissions that may be added to existing emissions consistent with the limitations in (1)(a) and (b). BLM's report shall utilize background concentrations of PM_{2.5} reported in the FEIS and the existing NO₂ increment consumption in the Jonah Class II area reported in the Wyoming DEQ's NO₂ increment consumption analysis as the basis for its emissions analyses. The report shall include a detailed explanation for each pollutant of what level of project activities BLM proposes to allow to go forward consistent with the limitations in (1)(a) and (b); how BLM determined the additional emissions that may be allowed from these proposed activities; and how BLM will utilize emissions tracking to determine when emissions from proposed activities would meet or exceed the limitations in (1)(a) and (b). Within 20 days after BLM's submission of this report, appellants may respond to the report and, if appropriate, request modification of BLM's proposal for incorporation into a final stay order.

(2) BLM shall submit to all parties to this appeal annual reports identifying: (a) all permits to drill and other approvals issued by BLM to conduct activities pursuant to the Jonah Infill project that will result in emissions of PM_{2.5} and NO₂; (b) the potential to emit PM_{2.5} and NO₂ associated with each such permitted activity; (c) the total aggregate increase in the potential to emit PM_{2.5} and NO₂ allowed by the permits and other approvals issued during the annual reporting period; and (d) the total allowable emissions increases that remain for each pollutant pursuant to the limitations in (1)(a) and (b).

(3) BLM shall submit to all parties to this appeal annual reports on ozone monitoring results from all ozone monitoring stations established in the Jonah Infill project area, including, without limitation, the existing Jonah and Boulder stations. The Clean Air Act 8-hour ozone

NAAQS is violated when the three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration exceeds the established standard. See 50 C.F.R. § 50.10(b). Accordingly, if a fourth exceedance of the NAAQS is reported at any one station during any calendar year, BLM shall within 45 days of such a fourth exceedance prepare and submit to the Board and all parties to this appeal a mitigation plan establishing maximum emissions limits to ensure that ozone concentrations in the Jonah Infill project and surrounding areas remain in conformance with the governing ozone NAAQS. Within 20 days of BLM's submission of any such mitigation plan, appellants may respond to the plan and, if appropriate, request modification of the Board's stay order to ensure that ozone levels remain at or below the NAAQS.

Given this Board's de novo review authority over BLM's decisions, it is appropriate for this Board to impose a tailored stay sufficient to remedy on an interim basis the harms identified in this petition. See 43 C.F.R. § 4.1(a) (vesting Board with authority for "considering and determining, as fully and finally as might the Secretary, matters within the jurisdiction of the Department involving ... appeals and other review functions of the Secretary"). Appellants' requested remedy is appropriate in light of the circumstances presented here, where threats to human health are likely absent the requested stay.

CONCLUSION

For all the foregoing reasons, appellants request that the Board grant their Petition For Stay Pending Appeal.

Respectfully submitted this 12th day of April, 2006.

Timothy J. Preso
Abigail M. Dillen
Earthjustice
209 S. Willson Avenue
Bozeman, MT 59718
(406) 586-9699
Fax: (406) 586-9695

Robert E. Yuhnke, Esq.
Robert E. Yuhnke & Associates
2910-B County Road 67
Boulder, CO 80303
(303) 499-0425

Bruce Pendery
Wyoming Outdoor Council
444 East 800 North
Logan, Utah 84321
(435)-752-2111
Fax: (435)-753-7447

Attorneys for Appellants