



WILDEARTH GUARDIANS & SIERRA CLUB

182 IBLA 100

Decided March 27, 2012



United States Department of the Interior  
Office of Hearings and Appeals  
Interior Board of Land Appeals  
801 N. Quincy St., Suite 300  
Arlington, VA 22203

WILDEARTH GUARDIANS  
& SIERRA CLUB

IBLA 2011-191

Decided March 27, 2012

Appeal from a decision of the Colorado State Office, Bureau of Land Management, approving a lease by application for the mining of Federal coal adjacent to and as a continuation of an existing underground coal mine. COC-70615.

Decision affirmed.

1. Environmental Quality: Environmental Statements-- National Environmental Policy Act of 1969: Environmental Statements--National Environmental Policy Act of 1969: Environmental Impact Statement--Coal Leases

BLM properly approves a lease by application for mining coal adjacent to an existing underground mine, absent preparation of an EIS, where, in accordance with section 102(2)(C) of the National Environmental Policy Act of 1969, 42 U.S.C. § 4332(2)(C) (2006), it has taken a hard look at the environmental consequences of issuing the rights-of-way, considering all relevant matters of environmental concern, and made a convincing case that no significant impact will result therefrom or that any such impact will be reduced to insignificance by the adoption of appropriate mitigation measures. BLM's decision will be affirmed where the appellants fail to demonstrate, with objective proof, that BLM failed to consider a substantial environmental question of material significance to the proposed action, or otherwise failed to abide by the statute.

APPEARANCES: Edward B. Zukoski, Esq., and Michael A. Hiatt, Esq., Denver, Colorado, for Appellants; Robert Tuchman, Esq., R. Franklin Erisman, Esq., James F. Cress, Esq., and Thomas F. Cope, Esq., Denver, Colorado, for Oxbow Mining LLC; Kristen C. Guerriero, Esq., Office of the Regional Solicitor, U.S. Department of the Interior, Lakewood, Colorado, for the Bureau of Land Management.

## OPINION BY ADMINISTRATIVE JUDGE ROBERTS

WildEarth Guardians and Sierra Club (collectively, WildEarth) have jointly appealed from and petitioned for a stay of the effect of a June 7, 2011, Decision Record (DR) of the Acting State Director, Colorado State Office, Bureau of Land Management (BLM), approving a lease by application (LBA) submitted by Oxbow Mining LLC (Oxbow)<sup>1</sup> for coal seams in the Elk Creek East Tract (ECET or Tract), containing approximately 786 acres of Federal coal adjacent to Oxbow's existing leases at the Elk Creek Mine (Mine), in the North Fork Valley area near Somerset, Colorado.<sup>2</sup> The DR and a separate Finding of No Significant Impact (FONSI) were based on a June 2011 Environmental Assessment (June 2011 EA or EA) (DOI-BLM-CO-150-2008-0053), which was prepared pursuant to section 102(2)(C) of the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. § 4332(2)(C) (2006). For the following reasons, we affirm BLM's decision.

*I. BACKGROUND*

Oxbow is the owner and operator of the Elk Creek Mine, currently a 5,099-acre underground coal mining operation situated in Ts. 12 and 13 S., Rs. 90 and 91 W., Sixth Principal Meridian, Gunnison and Delta Counties, Colorado. On September 15, 2006, Oxbow filed an LBA (COC-70615), pursuant to the Mineral Leasing Act (MLA), 30 U.S.C. §§ 181-287 (2006), and the LBA regulations at 43 C.F.R. Subpart 3425.<sup>3</sup> The LBA would allow Oxbow to expand its operations into

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<sup>1</sup> By order dated July 13, 2011, we granted Oxbow's motion to intervene in the pending appeal.

<sup>2</sup> In a Jan. 21, 2011, DR, BLM approved an LBA for the Tract. WildEarth appealed that decision. By order dated Mar. 14, 2011, styled *WildEarth Guardians*, IBLA 2011-107, the Board vacated and remanded the case to BLM for further review.

<sup>3</sup> Oxbow is currently operating the Mine under an MLA mining plan approved by the Department. The operation is also subject to a surface coal mining permit, along with a mining and reclamation plan, approved by the Office of Mined Land Reclamation (OMLR), Colorado Division of Reclamation, Mining and Safety, and a construction permit, approved by the Air Pollution Control Division (APCD), Colorado Department of Public Health and Environment (CDPHE). OMLR regulates surface coal mining operations on Federal and non-Federal lands in Colorado under the Surface Mining Control and Reclamation Act of 1977 (SMCRA), 30 U.S.C. §§ 1201-1328 (2006), subject to oversight by the Office of Surface Mining Reclamation and Enforcement (OSM). APCD regulates emissions affecting air

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the ECET, consisting of approximately 786 acres of Federal coal east of and adjacent to the Mine. The coal, found in the “D-Seam,” is described as high Btu, low sulfur bituminous coal.<sup>4</sup>

Oxbow states that, absent leasing the coal, “the Mine, which began operation in 2002, would shut down when the economically recoverable coal reserves accessible without the ECET are exhausted, and the ECET coal would be bypassed.” Oxbow Opposition to NA/Petition (Oxbow Opposition) at 1. Oxbow explains that “coal in the ECET is unlikely to ever be developed as a stand-alone mine if it is not recovered by Oxbow, because more coal resources are required to justify the expenses of building a mine to recover this coal.” *Id.* at 23.<sup>5</sup> Oxbow expects the mining of the estimated 3.96 million tons of Federal coal in the Tract to extend current operations up to 1 additional year, based on a current rate of extraction of 5 million tons per year, beginning in 2012. Mining would take place in accordance with the existing mine plan and would utilize, for the most part, the same production and transportation facilities and infrastructure as the existing Mine.<sup>6</sup> The recovered coal

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<sup>3</sup> (...continued)

quality in Colorado under the Clean Air Act (CAA), 42 U.S.C. §§ 7401-7671q (2006), subject to oversight by the Environmental Protection Agency (EPA).

<sup>4</sup> The LBA originally covered a 1,412.75-acre tract but was modified on Aug. 15, 2008, to the current 786 acres. The 786-acre tract, situated in secs. 3-5, T. 13 S., R. 90 W., Sixth Principal Meridian, Gunnison County, Colorado, contains what is described as a “logical extension” to the east of the existing Mine. EA at 1; FONSI at 2; BLM Opposition to Notice of Appeal and Petition for Stay (NA/Petition) (BLM Opposition) at 2.

<sup>5</sup> See Declaration of Steven Weist, Special Projects Manager, Oxbow, dated Aug. 6, 2011 (Ex. 9 attached to Oxbow Opposition), ¶¶ 3-12 at 1-4, 24; BLM Opposition at 27 (“[B]y the time Oxbow could obtain a lease and comply with all permitting requirements, it will need to be in the ECET coal. If not, the ECET will be bypassed.”); EA at 1, 5; FONSI at 2; Combined Geologic and Engineering Report (GER) and Maximum Economic Recovery Report (MER) (GER/MER), BLM, dated May 2009 (NA/Petition, Ex. 4 at 6) (“It is entirely unlikely that a third party would deem the coal resource in the ECET either substantial or valuable enough for them to initiate new surface and underground facilities.”).

<sup>6</sup> In addition to existing facilities, a series of up to 15 “gob vent boreholes” (GVB), used to vent dangerous methane gas from the underground mining workings, would be drilled into the Tract from 9 temporary drill pads, after the construction of access roads and well pads and the erection of drilling rigs. See EA at 2-4, 9 (Fig. 2 (Detailed Project Location)). The wells, which will affect a surface area totaling

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would continue, for the foreseeable future, to be sold for the generation of electricity in coal-fired power plants.

In order to address the potential environmental impacts of leasing 786 acres of Federal lands in the ECET, BLM prepared the 68-page EA.<sup>7</sup> Under the Proposed Action Alternative, mining the coal was considered to be the logical consequence of leasing the coal. For purposes of assessing environmental impacts, BLM assumed that Oxbow would be the successful bidder for the lease, thus resulting in development of the coal in conjunction with its Mine. *See* EA at 2. The EA considered the individual and cumulative impacts not only of mining the coal, but also of burning the coal in dispersed coal-fired electrical power plants in the United States.<sup>8</sup> In the EA, BLM also considered a no-action alternative.

In her June 2011 DR, the Acting State Director approved Oxbow's LBA, thus providing for offering the 786 acres of Federal coal adjacent to the Mine for competitive coal leasing. The DR approved leasing the coal, subject to numerous mitigation measures, to the highest qualified bidder at the lease sale, provided that the highest bid met or exceeded the FMV of the coal, and that all of the other lease requirements were met.<sup>9</sup> The Acting State Director concluded that the decision

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<sup>6</sup> (...continued)

5.63 acres, will operate during mining operations, and for up to 1 year after the conclusion of mining. *See id.* at 2, 4; Oxbow Opposition at 19.

<sup>7</sup> BLM originally issued an EA on Feb. 3, 2010, that was later revised and reissued on Jan. 20, 2011. Following the Board's Mar. 14, 2011, remand, BLM prepared a revised draft EA on Apr. 22, 2011, offering it for a 14-day public comment period. After considering comments by WildEarth Guardians, Sierra Club, and others, BLM amended the revised draft EA, issuing it in final form on June 7, 2011.

The June 2011 EA was tiered to the Iron Point Final Environmental Impact Statement (February 2000) (2000 FEIS, Iron Point FEIS, or FEIS), which had been prepared to address the environmental ramifications of issuing, *inter alia*, a competitive coal lease (COG-61357) for the Elk Creek Tract, which Oxbow had applied for in November 1997, and which covered the original Mine.

<sup>8</sup> BLM evaluated the quantity, quality, and MER of the coal in the Tract, as well as its fair market value (FMV) since BLM is required to ensure that a lease is awarded, at the competitive sale, to the highest bid that meets or exceeds the FMV of the coal.

<sup>9</sup> The DR was signed on June 7, 2011, by both the Field Manager, Uncompahgre (Colorado) Field Office, BLM, who recommended approval, and the Acting State Director, who accepted the recommendation, approving BLM's decision "to offer for  
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conformed to the applicable land-use plan (the 1989 Uncompahgre Basin Resource Management Plan), and properly balanced the opportunity to make Federal coal available for development, by extending the life of the Mine, with protection of other resources and uses of the affected lands. *See* DR at 1. She also concluded, in the separate FONSI, that leasing the Federal coal was not likely to significantly affect the quality of the human environment, considering the context and intensity factors of 40 C.F.R. § 1508.27, and thus that BLM was not required by section 102(2)(C) of NEPA to first prepare an EIS before deciding whether to approve leasing. WildEarth appealed the Acting State Director's DR and FONSI.<sup>10</sup>

## II. SUMMARY OF WILDEARTH'S ARGUMENTS ON APPEAL

WildEarth contends that BLM violated section 102(2)(C) of NEPA by failing to adequately consider the environmental impacts of greenhouse gas (GHG) and other gaseous emissions likely to occur as a consequence of leasing and developing the Tract for Federal coal, and reasonable alternatives to such emissions, or at least appropriate mitigation measures to address unavoidable adverse impacts of such emissions.<sup>11</sup> *See* NA/Petition at 30-39, 42-61. WildEarth focuses on the impacts to air quality attributable to mining and/or burning the coal, in particular emissions of carbon dioxide equivalent (CO<sub>2</sub>e), nitrogen dioxide (NO<sub>2</sub>), nitrogen oxide (NO<sub>x</sub>)/volatile organic compounds (VOC) (likely to contribute to the formation of O<sub>3</sub> (ozone)), and particulate matter (PM<sub>2.5</sub>). WildEarth's challenge to the DR/FONSI is based upon the expected exceedance and/or violation of National Ambient Air Quality Standards (NAAQS) and Colorado Ambient Air Quality Standards (CAAQS), and the expected impacts to the human environment associated with global climate change.

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<sup>9</sup> (...continued)

lease the coal seams in the Elk Creek East Tract Coal Lease." DR at 6. The Acting State Director also stated that she "approve[d] the FONSI." *Id.*

<sup>10</sup> WildEarth also requested a stay of the effect of the Acting State Director's DR and FONSI. By order dated Feb. 6, 2012, the Board denied the request for a stay.

<sup>11</sup> As discussed below, WildEarth specifically argues that BLM was required to consider, either as reasonable alternatives to the proposed leasing and development of the Tract, or, at least, as measures designed to avoid or mitigate the adverse environmental consequences of discharges of methane from underground workings into the atmosphere, three potential methods, obtaining carbon offsets for the methane, capturing and eliminating the methane, and flaring the methane.

### III. ANALYSIS

[1] A BLM decision to proceed with a proposed action, absent preparation of an EIS, will be upheld under section 102(2)(C) of NEPA, where the record demonstrates that BLM has considered all relevant matters of environmental concern, taken a “hard look” at potential environmental impacts, and made a convincing case that no significant impact will result therefrom or that any such impact will be reduced to insignificance by the adoption of appropriate mitigation measures. *Cabinet Mountains Wilderness v. Peterson*, 685 F.2d 678, 681-82 (D.C. Cir. 1982); *Santa Fe Northwest Information Council*, 174 IBLA 93, 107 (2008); *Nez Perce Tribal Executive Committee*, 120 IBLA 34, 37-38 (1991). An appellant seeking to overcome such a decision must carry its burden of demonstrating, with objective proof, that BLM failed to consider a substantial environmental question of material significance to the proposed action, or otherwise failed to abide by section 102(2)(C) of NEPA. *Santa Fe Northwest Information Council*, 174 IBLA at 107; *Southern Utah Wilderness Alliance*, 127 IBLA 331, 350, 100 I.D. 370, 380 (1993); *Red Thunder*, 117 IBLA 167, 175, 97 I.D. 263, 267 (1990); *Sierra Club*, 92 IBLA 290, 303 (1986).

In deciding whether BLM has taken a hard look at the likely environmental consequences of a proposed action, we will be guided by the “rule of reason,” as expressed in *Don’t Ruin Our Park v. Stone*, 802 F. Supp. 1239, 1247-48 (M.D. Pa. 1992):

An EA need not discuss the merits and drawbacks of the proposal in exhaustive detail. By nature, it is intended to be an overview of environmental concerns, *not* an exhaustive study of all environmental issues which the project raises. If it were, there would be no distinction between it and an EIS. Because it is a preliminary study done to determine whether more in-depth study analysis is required, an EA is necessarily based on “incomplete and uncertain information.” *Blue Ocean Preservation Society v. Watkins*, 767 F. Supp. 1518, 1526 (D. Hawaii 1991) . . . . So long as an EA contains a “reasonably thorough discussion of . . . significant aspects of the probable environmental consequences,” NEPA requirements have been satisfied. *Sierra Club v. United States Department of Transportation*, 664 F. Supp. 1324, 1338 (N.D. Ca. 1987), . . . quoting *Trout Unlimited v. Morton*, 509 F.2d 1276, 1283 (9th Cir. 1974). [Footnote deleted.]

See 40 C.F.R. § 1508.9; 46 Fed. Reg. 18026, 18037 (Mar. 23, 1981); *Scientists’ Institute for Public Information v. Atomic Energy Commission*, 481 F.2d 1079, 1092 (D.C. Cir. 1973); *Santa Fe Northwest Information Council*, 174 IBLA at 107; *Missouri Coalition for the Environment*, 124 IBLA at 219-20. As we said in *Oregon Natural Resources Council*, 116 IBLA 355, 361 n.6 (1990):

[Section 102(2)(C) of NEPA] does not direct that BLM take any particular action in a given set of circumstances and, specifically, does not prohibit action where environmental degradation will inevitably result. Rather, it merely mandates that whatever action BLM decides upon be initiated only after a full consideration of the environmental impact of such action.

We have previously considered most of WildEarth's NEPA violation claims in the context of challenges to LBAs in the Powder River Basin of Wyoming, which is situated roughly 260 miles directly north of the Tract, as advanced by WildEarth Guardians, the Sierra Club, or other entities. *See Powder River Basin Resource Council*, 180 IBLA 119, 127-29, 132-38 (2010); Order, *WildEarth Guardians*, IBLA 2011-130 (July 19, 2011) (hereinafter cited as Order, *WildEarth Guardians*), at 6-9.

Our consideration of WildEarth's claims, repeated in the context of the current challenge to Oxbow's LBA, leads us to conclude that WildEarth has failed to carry its burden of demonstrating a violation of section 102(2)(C) of NEPA. WildEarth has failed to make an "affirmative showing that BLM failed to consider a substantial environmental question of material significance," but has "pick[ed] apart [the] record with alleged errors and disagreements." *Arizona Zoological Society*, 167 IBLA 347, 357-58 (2006) (quoting *In re Stratton Hog Timber Sale*, 160 IBLA 329, 332 (2004)). WildEarth has failed to make any *affirmative showing* that BLM failed to consider a substantial environmental question of material significance.

Nor has WildEarth properly challenged the professional opinion of BLM's experts, concerning likely environmental impacts, upon which BLM relied in deciding to approve the leasing and development of the Tract. We follow the well-established rule that BLM is entitled to rely on the professional opinion of its technical experts, concerning matters within the realm of their expertise, which is reasonable and supported by record evidence, and an appellant challenging such reliance must demonstrate, by a preponderance of the evidence, error in the data, methodology, analysis, or conclusion of the experts. *Fred E. Payne*, 159 IBLA 69, 77-78 (2003). WildEarth does not offer any expert opinion or evidence that substantiates the alleged errors, omissions, or deficiencies in the EA, or, more importantly, that establishes that any potential environmental impact specifically attributable to the proposed leasing and development of the ECET was other than assessed by BLM. We consider Oxbow's arguments, in light of the record, more fully below.

#### A. BLM's Alternatives Analysis

The difficulty we have encountered in addressing WildEarth's arguments with regard to the deficiencies it perceives in BLM's alternatives analysis is that, as Oxbow and BLM argue, the "alternatives" that WildEarth argues were not adequately

considered in the June 2011 EA are not in fact alternatives requiring analysis as such, but are properly treated as possible measures for mitigating impacts alleged by WildEarth to result from GHG emissions and global warming. In fact, the alternatives for reducing GHG emissions that WildEarth argues should have been addressed in more detail in the EA appear again as mitigation measures later in WildEarth's Statement of Reasons (SOR) for appeal.

WildEarth's central argument is that in deciding to lease the ECET, BLM failed to analyze reasonable alternatives to reduce methane or GHG emissions, and thereby violated section 102(2)(C) of NEPA. WildEarth states that "[d]espite the LBA's substantial GHG emissions, the June 2011 EA failed to analyze in sufficient detail alternatives that would reduce these emissions." SOR at 5. WildEarth asserts that "Oxbow will annually emit at least 1.2 million tons of CO<sub>2</sub>e [carbon dioxide equivalent] directly into the air, without controls or effective mitigation," and that "[t]his is significant," given that both the U.S. Environmental Protection Agency (EPA) and the Council on Environmental Quality (CEQ) "have concluded that projects and sources with GHG emissions far less than 1.2 million tons of CO<sub>2</sub>e are significant and should be subject to controls and increased analysis." *Id.* According to WildEarth, "BLM . . . has likely significantly underestimated the magnitude of the LBA's direct methane emissions," and "has turned a blind eye to data indicating that the LBA's direct methane emissions will likely be sharply higher than the EA predicts." *Id.* at 6.

Under section 102(2)(E) of NEPA, BLM is required to consider "appropriate alternatives" to the proposed action that would accomplish its intended purpose, are technically and economically feasible, and have a lesser impact. *Headwaters, Inc. v. BLM*, 914 F.2d 1174, 1180-81 (9th Cir. 1990); *Oregon Chapter Sierra Club*, 176 IBLA 336, 351 (2009); *Bales Ranch, Inc.*, 151 IBLA 353, 363 (2000); see 40 C.F.R. § 1508.9(b). Alternatives not advancing the purpose of the project are not "reasonable or appropriate." *Native Ecosystem Council v. U.S. Forest Service*, 428 F.3d 1233, 1247 (9th Cir. 2005). Section 102(2)(E) of NEPA requires consideration of a reasonable range of alternatives to a proposed action, including a no-action alternative. An EA which considers a range of alternatives and gives reasons for BLM's rejection of the alternatives not selected will be upheld when BLM has assessed alternatives that will avoid or minimize the adverse impacts of the proposed action. *Biodiversity Conservation Alliance*, 169 IBLA 321, 347 (2006); *Defenders of Wildlife*, 152 IBLA 1, 9 (2000); *Southern Utah Wilderness Alliance*, 122 IBLA 334, 338-40 (1992). For alternatives which BLM eliminates from detailed study, BLM must "briefly discuss the reasons for their having been eliminated." *Rocky Mountain Pipeline Trades Council*, 149 IBLA 388, 403 (1999); see 40 C.F.R. § 1508.9(b).

Our review of the record confirms that BLM reasonably defined the objectives of its action, which are "to evaluate the expanded development and mine operations

of the [ECET], to continue producing coal at, or near, current levels for approximately 1 additional year.” EA at 1. BLM identified an alternative (*i.e.*, the “Proposed Action Alternative”) appropriate for meeting the objectives of an expanded mining operation that was defined as “short term, lasting approximately 1 year.” *Id.* at 4. The EA explains that because of the short term nature of the operation and its economic limitations, “the Proposed Action Alternative includes venting methane gas directly into the atmosphere via GVBs [gob vent boreholes] and the mine ventilation system.” *Id.* The EA states that such “[v]enting of the potentially explosive gasses for the safety of the miners is the overriding consideration for the Proposed Action Alternative.” *Id.* at 2. The EA explains that Oxbow is required “to continue to evaluate the technical and economic feasibility of converting or using gas resources that will be released to the atmosphere by the mine ventilation system,” and to submit a report after one year “outlining the technical and economic feasibility of mitigating, capturing, or using the CMM [coal mine methane] being vented, as applicable to the ECET.” *Id.* at 4.

In its EA, BLM provided brief discussions of two alternatives it considered but eliminated from detailed analysis: CMM capture, and methane flaring. *Id.* at 5-7. BLM eliminated CMM capture from detailed analysis because it was viewed as technically and economically infeasible, and would result in increased environmental impacts. *Id.* at 6-7. BLM also eliminated methane flaring as an alternative because of the complex regulatory requirements involved with approval of flaring by the Mine Safety and Health Administration (MSHA), as well as potential increased emissions of other air pollutants, including nitrogen oxides and carbon monoxide, which are criteria pollutants and regulated gases. *Id.* We agree with Oxbow that “[i]t is within BLM’s discretion to determine that the project’s limited production and short timeline render both of these alternatives inappropriate and unreasonable.” Oxbow’s Answer at 9 (citing *Utah Environmental Cong. v. U.S. Forest Service*, 439 F.3d 1184, 1194 (10th Cir. 2006)).

In accordance with CEQ and BLM guidance, BLM studied the “no action” alternative, under which “there would be no surface disturbance, ventilation of explosive gases, removal of coal, [or] any other impacts associated with the activities described under the Proposed Action Alternative.” EA at 9-10. As noted by Oxbow, WildEarth does not challenge BLM’s analysis of the no action alternative. *See* SOR at 4-16.

### 1. Oxidation of Ventilation Air Methane

WildEarth complains that the EA fails to analyze oxidation of ventilation air methane (VAM) as a reasonable alternative to reduce the LBA’s methane pollution. WildEarth states that “VAM would account for about 900,000 tons of CO<sub>2</sub>e over the LBA’s life.” *Id.* at 7. WildEarth asserts that “VAM mitigation measures are technically

and economically feasible,” and “have been adopted at coal mines elsewhere in the United States and around the world.” *Id.* at 8. WildEarth argues that the EA “failed to consider an alternative that would require Oxbow to mitigate or eliminate VAM emissions despite the multiple examples of successful VAM mitigation measures highlighted by Appellants in the record.” *Id.* at 9. WildEarth states that “[d]ata demonstrates that VAM reduction technologies are likely technically feasible at the Elk Creek Mine,” since data “shows that the Mine is producing methane in sufficient concentrations to operate a VAM oxidizer.” *Id.*

We agree with BLM that more detailed analysis of VAM as an alternative was outside the scope of the EA. BLM’s Answer at 11. In its Order in *WildEarth Guardians*, the Board specifically rejected similar arguments, holding that methane flaring and carbon offsets, as alternatives, would not achieve the intended purpose of an LBA in Wyoming, and thus, BLM did not need to consider them. The Board recognized that these are measures designed to minimize or offset the effects of methane emissions from the mining or burning of coal, and are mitigation measures as opposed to alternatives. *See* Order, *WildEarth Guardians*, at 8. The same considerations apply to leasing the ECET.

Oxbow responds that WildEarth’s argument that BLM should have considered VAM oxidation as a reasonable alternative “fails immediately because VAM oxidation is not an alternative means of accomplishing the LBA’s objectives but, instead, is a mitigation measure.” Oxbow’s Answer at 12. Oxbow states that VAM oxidation does not achieve the LBA’s objectives (*i.e.*, “to continue producing coal at, or near, current levels for approximately 1 additional year” (EA at 1)) because “its purpose is solely to mitigate the environmental consequences of methane emissions from a mine’s ventilation system.” *Id.* Oxbow argues that VAM oxidation is actually a means of reducing the LBA’s methane pollution, *i.e.*, a mitigation measure, rather than a reasonable alternative requiring study in the EA. *Id.* at 12-13.

We agree with Oxbow that even if VAM oxidation qualifies as an alternative, WildEarth has not met its burden of proving that “VAM oxidation is a feasible alternative for reducing methane emissions from the ECET.” *Id.* at 13. Oxbow is correct that WildEarth “provide[s] no financial or cost information at all to justify construction of this expensive, capital-intensive technology.” *Id.* With regard to WildEarth’s assertion that VAM oxidation measures have been adopted at coal mines elsewhere in the United States and around the world, Oxbow states that none of the four VAM oxidation projects identified in the EPA’s Coalbed Methane Project Presentation (October 2010) “establishes the economic and technical feasibility of implementing such technology in the ECET.” *Id.*; *see* NA/Petition, Ex. 24 at 5. Oxbow attributes “[t]his gap in Appellants’ evidence” to “the radically different circumstances in which VAM oxidation was applied.” *Id.* Two of the projects (CONSOL’s Windsor Mine and JWR Mine No. 4) are demonstration projects, with the

Windsor project funded by EPA and the Department of Energy. Oxbow's Answer at 13; *see* Oxbow's Response to NA/Petition (Oxbow's Response), Exs. 11, 12. Each of the other two projects (CONSOL's McElroy and Enlow Fork Mines) produces approximately 10 million tons of coal per year, on an ongoing basis. *See* Oxbow's Response, Ex. 13. Oxbow states that by contrast, "mining the ECET is expected to produce 3.96 million tons of coal over the course of approximately *one year only*." Oxbow's Answer at 13; *see also* BLM's Answer at 12 ("None of these projects provide a similar situation to the ECET or any mines in the Western United States for that matter. The terrain, amount of coal mined, and length of the life of the mine are vastly different.") (citing *IMC Chemical Inc.*, 155 IBLA 173, 199 (2001)).

Oxbow argues that EPA's report titled *U.S. Underground Coal Mine Ventilation Air Methane Exhaust Characterization* (July 2010) undermines WildEarth's claims regarding the feasibility of implementing VAM technology at the ECET. Oxbow's Answer, Ex. 8. Oxbow states that "[n]ot only is the Mine conspicuously absent from EPA's list, but the list also fails to include *any* coal mine in MSHA District 9 (the district in which the ECET is located), which covers most states west of the Mississippi River." Oxbow's Answer at 14; *see id.*, Ex. 8 at 6 (Table 4). Oxbow further argues that the data in EPA's report indicates that VAM oxidation would not be economically feasible at the ECET.<sup>12</sup> Specifically, Oxbow states that 2008-2009 data from the Mine show that it produces methane in concentrations ranging from 0.31% to 0.56%, with an average of 0.46%, but that "in its '*Rules of thumb* for economical oxidation projects,' EPA's Coalbed Methane Project establishes a *minimum* methane concentration of 0.6% and recommends an ideal methane concentration of approximately 0.9% for maximum output and revenue." Oxbow's Answer at 14; *see* NA/Petition, Ex. 24 at 4. Oxbow argues further:

Thus, even at the high end of its range, VAM arising from Elk Creek coal does not meet the minimum methane concentration EPA recommends for oxidation. Further, EPA's report shows that Oxbow's average ventilation air flow, 712,680 cubic feet per minute ("cfm"), is much higher than the air flows that, to date, have been demonstrated as effective with VAM oxidation. *See* Ex. 8 at 11, 14, 15. Under these circumstances, it is speculative whether VAM oxidation would be effective at the ECET.

Oxbow's Answer at 14. We find nothing in the record that contradicts Oxbow's analysis and supporting authorities, and conclude that BLM was not required to study VAM oxidation as an alternative in the June 2011 EA.

<sup>12</sup> As we discuss *infra*, WildEarth also fails to demonstrate that VAM oxidation should have been analyzed and adopted as a mitigation measure for reducing methane emissions at the Mine.

## 2. Methane Flaring

WildEarth next argues that BLM failed to sufficiently analyze methane flaring as a reasonable alternative. WildEarth asserts that “[t]he Elk Creek Mine removes methane not only through ventilation systems (as VAMs), it also vents methane through drainage wells”; that “[c]oal mine methane from drainage wells can be combusted, or flared, before it enters the atmosphere, . . . result[ing] in 7.5 times fewer GHG emissions than venting methane directly into the atmosphere”; and that “[d]espite the potential benefits of methane flaring, BLM summarily dismissed flaring from detailed consideration in the June 2011 EA.” SOR at 10. WildEarth contends that “[m]ethane flaring . . . is a reasonable, practical, effective, and feasible alternative to reduce the LBA’s GHG emissions.” *Id.* According to WildEarth, “the EA should have analyzed a flaring alternative in detail because such an alternative would employ ‘different means’ and technologies to produce the coal and eliminate or reduce methane, while ‘accomplish[ing] the intended purpose’ and need of the project—mining the LBA coal.” *Id.* at 11 (quoting Order, *WildEarth Guardians*, at 7-8). WildEarth concludes that “BLM’s conclusory dismissal of a methane flaring alternative, based on no evidence and an arbitrary timeline, violates NEPA.” *Id.* at 14.<sup>13</sup>

Based upon our review of the record, we conclude that WildEarth has failed to substantiate its argument that flaring “[w]ould achieve the intended purpose of the proposed action.” *Powder River Basin Resource Council*, 180 IBLA 32, 48 (2010). Further, we agree with Oxbow that “[a]s was true for VAM oxidation, flaring is not an alternative means of accomplishing the LBA’s objectives of producing coal, but, instead, is a mitigation measure, and therefore did not require study in the EA’s analysis of alternatives.” Oxbow’s Answer at 15.

Oxbow states that “[f]laring would not achieve the intended purpose of the LBA because, as BLM explained, MSHA’s thorough review and approval of flaring would likely not occur prior to the development and operation of the Mine expansion.” *Id.*; see EA at 7. As Oxbow notes, “[c]orrespondence from MSHA confirms BLM’s conclusion.” Oxbow’s Answer at 15. Oxbow points to a February 25, 2008, letter to the U.S. Forest Service, in which MSHA reported that it had “determined that too many unknowns about this [flaring] system exist at the present time to approve such a system.” *Id.*, Ex. 14. This letter was sent to BLM and

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<sup>13</sup> WildEarth argues that the June 2011 EA improperly “eliminated flaring from detailed analysis because ‘[i]t is not likely that a thorough review, and approval [by MSHA], would occur prior to the development and operation of the mine expansion.’” SOR at 12 (quoting June 2011 EA at 7). In WildEarth’s view, “[a]n otherwise reasonable alternative is not an unreasonable alternative just because the approval and permitting process would take time.” *Id.*

attached as Appendix B to a prior version of the EA. Administrative Record (AR) at 7:02. In addition, as Oxbow notes, as recently as May 2010, MSHA District 9 (which covers virtually all states west of the Mississippi River (Oxbow's Answer, Ex. 6)) reported to BLM that, although "there is no specific prohibition in flaring gas," "flaring gas has not been done on active mine gobs in the past in this MSHA district." NA/Petition, Ex. 16.

In discussing WildEarth's failure to meet its burden to demonstrate that BLM should have analyzed methane flaring as an alternative, Oxbow states:

Appellants have submitted nothing to rebut BLM's conclusion that any possible, future approval of flaring would likely be untimely for ECET. They do not identify a single coal mine in the United States that flares methane over active workings where miners are working underground. See SOR at 10-14; Petition at 15-19. Nor do they offer a single document showing that MSHA has ever approved methane flaring at such active workings. See Petition, Exs. 29-37. Further, EPA concedes that the "coal mining industry in the United States has not adopted flaring as a standard safety practice" and that MSHA's Headquarters has reported that "its offices have never reviewed a request for 'methane flaring' at a coal mine." Petition, Ex. 15 at 5. Appellants' assertions that flaring is used outside the United States or in other industries are irrelevant to MSHA's decision-making to protect miners' lives in Colorado. See SOR at 11.

Oxbow's Answer at 16; *see also* BLM's Answer at 10.

Oxbow states that "[c]ompounding the lack of evidence to support any timely, future approval of flaring is the risk that flaring presents when balanced against its possible benefits in this case." *Id.* Oxbow notes that even WildEarth recognizes that "methane is explosive at concentrations less than 15 percent," and that the "major safety issue [with flaring] is obviously the construction of a system with an open flame over an active mining operation." *Id.*; *see* NA/Petition, Ex. 30 at 2 and Ex. 19 at 1. Further, Oxbow observes that WildEarth concedes that "only approximately 25% of the ECET's methane emissions would be suitable for flaring, . . . because approximately 75% of methane emissions result from VAM, and 'VAM cannot be flared.'" Oxbow's Answer at 16-17 (quoting SOR at 7-8); *see id.*, Ex. 8 at 1 (VAM is unsuitable for use with flares). As an additional reason for dismissing flaring from detailed analysis, BLM explained that methane flaring can potentially "result in the release of other air pollutants, including nitrogen oxides and carbon monoxide, which are criteria pollutants and regulated gases." EA at 7.

We agree with Oxbow that methane flaring did not require detailed study in the June 2011 EA, and that BLM properly decided not to carry forward an analysis of flaring as an alternative. See BLM's Answer at 10-11. The brief discussion offered in the EA suffices under 40 C.F.R. § 1502.14(a).

### 3. Carbon Offsets

As another alternative, WildEarth argues that BLM should have analyzed carbon offsets, which WildEarth describes as “a tested, feasible, and practical alternative to allowing the Elk Creek Mine to vent millions of cubic feet of methane into the atmosphere for the LBA without mitigation or control.” SOR at 14. WildEarth emphasizes that “EPA has repeatedly urged land management agencies to assess carbon offsets in EAs and EISs as a way to reduce climate change impacts of agency actions,” and that “EPA has specifically noted that offsets are a reasonable alternative to lessen the impacts of coal mine methane emissions.” *Id.* WildEarth asserts that not only does the June 2011 EA “fail[] to even *mention* carbon offsets,” it fails to “explain why BLM did not consider offsets as a reasonable alternative, given that EPA and state governments have repeatedly recognized carbon offsets as a reasonable way to limit climate impacts of projects such as this LBA.” *Id.* at 15. WildEarth concludes that “BLM’s failure to mention or analyze the reasonable alternative of carbon offsets violates NEPA’s mandate to study, develop, and describe all reasonable alternatives to the proposed action,” and that “BLM violated NEPA’s requirement that an agency provide a reasoned explanation why an alternative was eliminated from detailed analysis.”<sup>14</sup> *Id.* at 15 (citing *Native Ecosystems Council v. U.S. Forest Service*, 428 F.3d 1233, 1245-47 (9th Cir. 2005); *Wilderness Society v. Wisely*, 524 F. Supp. 2d 1285, 1309 (D. Colo. 2007)).

Again, we are persuaded by Oxbow’s arguments against the use of carbon offsets as a means of reducing methane emissions. Oxbow states that, like VAM oxidation and methane flaring, carbon offsets would constitute a form of mitigation, and in any event carbon offsets “are inconsistent with, and would impede, the LBA’s objective of continued coal mining at Elk Creek for an additional year.” Oxbow’s Answer at 18. Oxbow explains that requiring it to spend millions of dollars on offsets would make mining cost prohibitive and that, as an alternative (if carbon offsets could even be termed such), carbon offsets would not accomplish the project’s intended purpose. Oxbow argues that “there is no evidence that their purchase would reduce methane emissions from the ECET or any other project, or ‘limit

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<sup>14</sup> According to WildEarth, “[a] carbon offset alternative would simply require Oxbow to purchase carbon credits from a reputable vendor.” SOR at 15. Further, “offsets do not present BLM or Oxbow with an all-or-nothing scenario—Oxbow could offset less than 100% of its GHG emissions if offsetting all of the project’s GHG emissions is not economically feasible.” *Id.* at 16.

climate impacts.” *Id.* (quoting SOR at 15). Based upon the record, we agree with Oxbow and BLM that no study of an offsets alternative was required under NEPA. See *Powder River Basin Resource Council*, 180 IBLA at 136 n.22.

### B. GHG Mitigation Measures

WildEarth next argues that BLM failed to include a reasonably complete discussion of GHG mitigation measures. WildEarth begins by quoting section 102(2)(C)(ii) of NEPA, which provides that an agency is required to provide a detailed statement of “any adverse environmental effects which cannot be avoided should the proposal be implemented.” 42 U.S.C. § 4332(2)(C)(ii) (2006). WildEarth states that “[f]or these unavoidable impacts, an agency is not required to implement mitigation measures, but it must adequately propose and discuss appropriate mitigation measures in an EA or EIS.” SOR at 16 (citing 43 C.F.R. §§ 1502.14(f), 1502.16(h), 1505.2(c), and 1508.25(b)(3)). WildEarth asserts that “[t]his discussion of mitigation measures is required ‘precisely for the purpose of evaluating whether anticipated environmental impacts can be avoided.’” *Id.* (quoting *South Fork Band Council of Western Shoshone v. U.S. Dep’t of the Interior*, 588 F.3d 718, 727 (9th Cir. 2009)). WildEarth argues that the “perfunctory description” of mitigation measures in the June 2011 EA, “without supporting analytical data analyzing their efficacy, is inadequate to satisfy NEPA’s requirements that an agency take a ‘hard look’ at mitigation.” SOR at 17 (quoting *Neighbors of Cuddy Mountain v. U.S. Forest Service*, 137 F.3d 1372, 1980-81 (9th Cir. 1998)).

WildEarth now argues that the previously discussed “alternatives” of VAM combustion, methane flaring, and carbon offsets are “practicable mitigation measures” that would “reduce the LBA’s GHG emissions and climate change impacts,” and that “BLM should have analyzed [those measures] in the June 2011 EA.” *Id.* WildEarth argues that BLM violated NEPA by failing to “analyze methane flaring in any detail,” and by failing “to consider at all elimination of VAM and carbon offsets.” *Id.* Further, WildEarth contends that “BLM’s failure to rationally explain why ‘practicable means to avoid or minimize environmental harm from the alternative selected’ were not adopted also violates NEPA.” *Id.* (quoting 40 C.F.R. § 1505.2(c)). WildEarth argues that “BLM approved the LBA without an adequate discussion of whether its GHG impacts could be avoided.” *Id.* at 18.

WildEarth faults BLM for discussing “adaptive management” as the only GHG mitigation measure, claiming that requiring Oxbow to submit a report to BLM within 1 year after lease approval outlining the technical and economic feasibility of mitigating, capturing, or using the methane being vented from the LBA amounts to “nothing more than a non-binding report on *potential* mitigation to be conducted *later*, if at all, after the lease is issued.” *Id.* WildEarth argues that “NEPA requires BLM to analyze mitigation measures and determine the technical and economic

feasibility of various methane capture alternatives *before* the LBA's approval, not after the fact." *Id.*

BLM's reasons for not conducting a detailed study of methane flaring, VAM oxidation, and carbon offsets as alternatives apply equally in our evaluation of WildEarth's argument that those measures would be effective in mitigating GHG emissions during operations in the ECET. We agree with Oxbow's assertion that "[t]his appeal does not present a situation where BLM failed to discuss the mitigation of some 'potentially significant impact' of its leasing decision, and therefore improvidently granted a FONSI." Oxbow's Answer at 19 (citing *Klamath Siskiyou Wildlands Center*, 157 IBLA 332, 338 (2002)).

The environmental impacts of concern to WildEarth in its discussion of mitigation are "GHG emissions and climate change." SOR at 17. In its EA, BLM concluded that the "calculated GHG emissions associated with the Proposed Action Alternative are negligible relative to any potential impacts on the global scale." EA at 22; *see also* EA at 59 (project would result in "minor cumulative contributions to the release of GHGs into the atmosphere"); FONSI at 3 ("Project would make a minor contribution to . . . release of methane and other [GHGs] during the mining process and subsequent fracturing of the overburden."). BLM recognized that the LBA's contribution to global climate change, if any, could not be "quantified or predicted." EA at 23. Given BLM's finding that GHG emissions from the LBA are not "significant," *see id.* at 22-23, we agree with BLM that "this is not a situation where mitigation is necessary to reach a FONSI." BLM's Answer at 15; *see National Wildlife Federation*, 126 IBLA 48, 62 n.9 (1993) (NEPA does not impose a substantive requirement to implement mitigation measures when an agency is "not relying upon mitigation as a basis for making a FONSI in lieu of preparing an EIS.").

We further agree with Oxbow that WildEarth does not show that BLM failed to "consider impacts and mitigation sufficient to allow an informed decision." Oxbow's Answer at 19 (citing *Powder River Basin Resource Council*, 180 IBLA at 137). The EA provides a limited discussion of CMM capture, but eliminated such measure from more detailed analysis because of its "economic and technical infeasibility" and the increased potential for environmental impacts. EA at 5-7. The EA considered methane flaring as a means to mitigate GHG emission, but eliminated such flaring from detailed analysis because MSHA review and approval would likely not occur prior to development and operation of the mine expansion, and, as noted previously, because flaring methane can release other regulated air pollution. *Id.* at 7. In light of its "overriding" concern for miner safety, BLM determined that GHG emissions associated with the LBA would be "negligible relative to any impacts on the global scale," and excluded measures for capture and use or conversion of CMM. *Id.* at 2, 22.

In evaluating WildEarth's argument that BLM should have conducted a detailed analysis of carbon offsets, VAM combustion, and methane flaring, as mitigation measures, Oxbow correctly states that the fundamental test is whether BLM's discussion of mitigation is "reasonable." *San Juan Citizens Alliance v. Stiles*, No. 10-1259, 2011 U.S. App. LEXIS 14909, at \*42 (10th Cir. July 21, 2011). We agree with Oxbow that WildEarth has "not produced evidence establishing that their three mitigation measures are 'practicable' or otherwise reasonable in the context of mining the ECET," or that those "measures would have a measurable impact on the environmental issue of importance to them—climate change." Oxbow's Answer at 21; *Powder River Basin Resource Council*, 180 IBLA at 137-38 (BLM decision not to consider or require mitigation measures suggested by appellant provided no basis to overturn BLM decision to lease coal tracts). The Board has stated that "[w]hile NEPA requires the agency to consider impacts and mitigation sufficient to allow an informed decision, it does not require BLM to consider all measures or alternative courses of action that might mitigate impacts." *Id.* Despite WildEarth's arguments to the contrary, BLM's June 2011 EA "appropriately considered mitigation measures in a multitude of areas including air and atmospheric values." BLM's Answer at 14.

We have previously noted, with regard to methane mitigation, that within 1 year after lease approval, Oxbow would be required "to submit a report to BLM outlining the technical and economic feasibility of mitigating, capturing, or using the coal mine methane being vented from the [ECET]," and to "update that original report annually thereafter." Decision at 2; EA at 4. In response to WildEarth's assertion that this requirement is ineffective because the report will be filed too late, since the ECET would add only approximately 1 year to the life of the mine, BLM states that while it may take only 1 year to mine the coal, "the process will [not] be complete a year from the date someone receives the lease." BLM's Answer at 14. BLM explains that lease issuance "is merely the first step"; that "[t]he successful bidder will then need to obtain appropriate permits which can take at least six months and will need to make preparations prior to entering the coal"; and that "[i]t is likely that the successful bidder will be just beginning to mine the ECET by the time the first report is due." *Id.*

With regard to WildEarth's argument that BLM's adaptive management requirement is "nothing more than a non-binding report," and that such requirement will not be "timely and informative," SOR at 18, Oxbow responds that the EA provides that "the most detailed analysis prior to mine development would occur after the lease is issued," and when Oxbow "submits its mine permit application and mining plan." Oxbow's Answer at 21 (quoting EA at 1-2); see BLM Opposition at 11 ("[F]urther review will take place when the lessee submits site-specific permit application."). We agree with Oxbow that NEPA does not in this case require BLM to analyze mitigation measures "before the LBA approval" rather than "after the fact," as argued by WildEarth. SOR at 18 (emphasis in original). Nonetheless, the EA shows

that BLM did in fact analyze mitigation measures to reduce GHG emissions, and provided plausible reasons for determining that none of those measures were currently feasible. EA at 2, 4-7. In addition, the record does not support WildEarth's argument that BLM's adaptive management measures "will be inadequate to accomplish their intended purpose." *Klamath Siskiyou Wildlands Center*, 157 IBLA at 338. We therefore conclude that there is no error in the mitigation analysis of the contested EA.

### C. Air Quality Impacts

WildEarth argues that the June 2011 EA fails to take a hard look at the air quality impacts of the LBA. According to WildEarth, BLM's approval of the LBA "will cause emissions of multiple pollutants degrading air quality," including "substantial amounts of NO<sub>x</sub> and particulate matter from drill rigs, processing equipment, diesel engines, dirt roads, ventilation shafts, and locomotives," as well as "uncontrolled venting through drainage wells." *Id.* at 19.

The EA states that the ECET is in the Western Slope Region for air quality planning, a region that is in attainment for all NAAQS, and is located in a Class II Area under the CAA, 42 U.S.C. §§ 7401-7671q (2006). EA at 16. Class II designation "allows for moderate growth or degradation of air quality within certain limits above baseline air quality." *Id.* The primary sources of air quality impacts are fugitive dust from roads, agriculture, energy development, and vegetation burns. *Id.* Oxbow operates the Mine under a construction permit issued by CDPHE on July 29, 2009; the permit is valid for 5 years. *Id.* at 17. The permit sets limits for PM<sub>10</sub>, NO<sub>x</sub>, and carbon monoxide, and imposes limits on processing rates and diesel fuel consumption and specific control measures. *Id.*

The EA's analysis of air quality impacts is tiered to the air quality assessment for the Mine contained in the 2000 FEIS, at 3-2 to 3-16 and Appendix M (Air Quality Impacts Assessment). EA at 17-18. The 2000 FEIS air quality assessment includes an inventory that quantifies PM<sub>10</sub>, NO<sub>x</sub>, and SO<sub>2</sub> emissions. EA at 18; *see* Oxbow's Response, Ex. 5 at 3-12. The 2000 FEIS predicted no significant impacts to air quality from the Mine. EA at 18. The EA contains additional analysis of air quality impacts, including GHGs. EA at 15-24. Based upon this analysis, the EA concluded:

The total generation of air pollutants (including carbon monoxide, particulate matter, including PM<sub>2.5</sub>, PM<sub>10</sub>, oxides of nitrogen, and VOCs) would be less than (or, on a short-term basis, equivalent to) current emissions. Therefore, activities under the Proposed Action Alternative

are not anticipated to require a modification of the existing construction permit, and are not expected to exceed the NAAQS.

EA at 18.

Based upon the record, as discussed below, we conclude that BLM's analysis of air pollutants, either in the EA or in the 2000 FEIS to which the EA is tiered, satisfied the requirements of NEPA. The Board has often observed that NEPA requires analysis of substantial environmental questions of material significance: "In assessing the adequacy of an EA, the Board is guided by the 'rule of reason,' such that the EA need only briefly discuss the likely impacts of a proposed action: 'By nature, it is intended to be an overview of environmental concerns, *not* an exhaustive study of all environmental issues which the project raises.'" *Bales Ranch, Inc.*, 151 IBLA 353, 358 (2000) (quoting *Don't Ruin Our Park v. Stone*, 802 F. Supp. 1239, 1247 (M.D. Pa. 1992); see also *Powder River Basin Resource Council*, 180 IBLA at 47-48; *Great Basin Mine Watch*, 148 IBLA 1, 9 (1999) (absent objective proof to the contrary, NEPA does not require detailed analysis of impacts that BLM regards as insignificant).

### 1. Ozone Impacts

Of particular concern to WildEarth is ozone, which WildEarth states is a pollutant for which the Clean Air Act has established a NAAQS to protect public health and welfare. WildEarth states that "[i]t is particularly important for BLM to analyze and assess the LBA's impacts to ambient ozone concentrations in light of increasing ozone trends . . . and the link between rising ozone and increases in VOC and NOx emissions from oil and gas production and other activities." *Id.*

According to WildEarth, the June 2011 EA "fails entirely to *analyze and assess* the impacts to ambient concentrations of ozone air pollution resulting from the LBA," but states only that "ozone analysis is a 'complex process' and better analyzed on a regional basis, rather than for an individual project," and "tiers" to the 2000 FEIS for its ozone analysis. *Id.* at 20. WildEarth asserts that the 2000 FEIS "*did not analyze or assess impacts to ambient ozone concentrations.*" *Id.* at 21 (emphasis by WildEarth). WildEarth states that "even if the 2000 Iron Point FEIS had analyzed impacts to ambient ozone concentrations, that analysis would be outdated and not appropriate for tiering for the June 2011 EA." *Id.* at 21. WildEarth argues that BLM failed to adequately analyze the impacts to ambient ozone concentrations resulting from the LBA in either the site-specific EA or the tiered-to EIS, thus violating NEPA. *Id.* (citing *Te-Moak Tribe of Western Shoshone of Nevada v. U.S. Dep't of the Interior*, 708 F.3d 592, 605 n.13 (9th Cir. 2010); *Oregon Natural Resources Council v. BLM*, 470 F.3d 818, 822-23 (9th Cir. 2006); and *Klamath-Siskiyou Wildlands Center v. BLM*, 387 F.3d 989, 997-98 (9th Cir. 2004)).

In reviewing the record, we conclude that WildEarth offers no objective evidence to substantiate its assertion that the LBA will result in significant quantities of ozone. The EA states that “[t]he cumulative impacts to air quality in the Elk Creek Mine Area would primarily result in emissions of particulate matter, NO<sub>x</sub>, and SO<sub>2</sub> from current and future mining of coal.” EA at 58. These pollutants were quantitatively analyzed in the 2000 FEIS. Ozone, however, is not a potential concern. The EA explains that “the air quality analysis indicated that emission of ozone is very rare in permitted facilities,” and that, therefore, Colorado rarely regulates emissions in air quality permits, instead regulating ozone precursors, such as NO<sub>x</sub> and VOCs, to prevent the formation of unacceptable levels of ozone. *Id.* at 23. For Oxbow’s operation, the Mine’s air permit regulates NO<sub>x</sub> emissions in order to limit ozone formation. *Id.* at 23-24. We agree with Oxbow that WildEarth has failed to demonstrate, “by scientific analysis or conclusions by any experts, that this approach is inadequate or that the permitted level of NO<sub>x</sub> emissions has resulted in significant impacts to air quality, through ozone formation or otherwise.” Oxbow’s Answer at 25.

We see merit in Oxbow’s assertion that WildEarth mischaracterizes portions of the EA’s discussion of ozone. WildEarth asserts that BLM’s position is that “ozone analysis is too ‘complex’ to perform.” SOR at 20. What the EA actually says is that “[p]rediction of potential ozone formation is a complex process, involving analysis of significant quantities of VOCs and NO<sub>x</sub> emissions from various sources within a region and their interactions within the atmosphere and the associated meteorological conditions.” EA at 17. WildEarth also criticizes BLM’s statement in the EA that “ozone analysis will occur ‘when an adequate amount of data are available and where such analysis has been deemed appropriate.’” SOR at 21. We agree with Oxbow that “[w]hat BLM actually said is more sophisticated.” Oxbow’s Answer at 25. The EA stated:

Therefore, it is typically not appropriate to assess potential ozone impacts of a single project on potential regional ozone formation and transport. Rather, BLM Colorado assesses potential ozone impacts from its authorized activities on a regional basis, when an adequate amount of data are available and where such analysis has been deemed appropriate.

EA at 17. We agree with Oxbow that “BLM did analyze ozone impacts before decision making, at an appropriate level of detail, given its conclusion that ozone formation is not a significant impact of the Mine.” Oxbow’s Answer at 25 (citing EA at 17, 23-24, 58-59). We conclude that the EA’s analysis of potential ozone impacts was adequate under NEPA.

## 2. NOx Emissions

In addition, WildEarth asserts that “NOx is an important component in ozone formation”; that “NOx [] impairs visibility by contributing to regional haze and harms public health by causing respiratory disease, heart disease, and premature death”; and that the LBA will cause “significant quantities of NOx [to] be emitted by in-mine and above-ground diesel equipment, and the trucks and locomotives used to transport coal and mining equipment.” *Id.* at 23. WildEarth argues that “[d]espite the significant impact of NOx emissions on ambient ozone concentrations,” BLM “makes no effort to quantify the LBA’s NOx emissions” or to “analyze the impacts to air quality of the LBA’s NOx emissions.” *Id.* WildEarth challenges BLM’s assertions that “the June 2011 EA adequately ‘tiers’ to the 2000 Iron Point FEIS for its discussion of NOx emissions and impacts,” and that “State air permits for the Elk Creek Mine may substitute for a BLM NEPA analysis of NOx.” *Id.* WildEarth claims that the 2000 Iron Point FEIS is outdated, given that baseline oil and gas production and resulting NOx emissions have surged between 1998 and 2011, and that “BLM cannot rely on the State permitting process to substitute for the EA’s inadequate analysis of NOx emissions and ozone impacts.” *Id.* at 24.

Upon reviewing the record, we conclude that WildEarth fails to substantiate its claim that NOx emissions from the LBA will be significant, or that the 2000 FEIS is outdated for purposes of BLM’s NOx emissions analysis. The 2000 FEIS in fact provides a detailed, quantified analysis of NOx emissions, including their potential impact on visibility in the West Elk Wilderness Area and Black Canyon National Park. *See Oxbow’s Response*, Ex. 5 at 3-7, 3-11 to 3-12, M-3 to M-22. Oxbow notes that “[i]f anything, NOx emissions have declined since the 2000 FEIS, due to more stringent emission standards for locomotives and non-road diesel engines.” Oxbow’s Answer at 26 n.13; *see EA* at 18; Oxbow’s Response, Ex. 5 at 3-7. Oxbow refutes WildEarth’s argument that there has been an increase in natural gas production in Gunnison, Delta, Garfield, and Rio Blanco Counties, leading to increased NOx emissions. SOR at 24. According to WildEarth, “[s]imilar oil and gas booms” have caused ozone levels to “skyrocket.” *Id.* Oxbow counters that WildEarth fails to “demonstrat[e] that the other booms are in fact similar, or indeed that air quality around the ECET has been impacted by oil and gas production.” Oxbow’s Answer at 26-27. WildEarth complains that BLM uses the Mine’s air permit “to substitute for” its own analysis of NOx emissions and ozone impacts. SOR at 24-25. However, BLM relied upon the analysis of NOx emissions in the 2000 FEIS in concluding in its EA that the LBA would result in no significant impacts to air quality, and in fact that NOx emissions would decrease even further. *See EA* at 18, 48.

In response to WildEarth’s argument that BLM failed to determine whether the 1-hour nitrogen dioxide NAAQS would be exceeded (SOR at 25), Oxbow points out that the EA does in fact include the 1-hour standard and concludes that “activities

under the Proposed Action Alternative . . . are not expected to exceed the NAAQS.” Oxbow’s Answer at 27 (quoting EA at 15, 18). In the 2000 FEIS, BLM had determined that the annual NAAQS would not be exceeded and, from the extensive information about sources and quantities of NO<sub>x</sub> emission provided in that FEIS (*see* Table M-4), BLM’s Air Quality Specialist had sufficient information on which to base the conclusion, set forth in the EA at 18, that the 1-hour NAAQS is not expected to be exceeded. We conclude that more detailed analysis was not required of BLM.

### 3. Volatile Organic Compounds

WildEarth asserts that “VOCs are another important component in ozone formation.” *Id.* at 25. WildEarth states that BLM “almost certainly underestimated the LBA’s true rate of methane emissions,” and that “when this methane is emitted without any controls, significant quantities of other chemicals—including VOCs—are also likely emitted directly into the air.” *Id.* at 26. WildEarth states that, based upon data from the nearby West Elk Mine, the LBA will likely emit between 394 to 573 tons per year of non-methane hydrocarbons (*i.e.*, VOCs), and that, if applying the more recent methane rates for 2010, the LBA would emit approximately 865 tons per year of VOCs. WildEarth concludes that “under any scenario the LBA will likely emit substantial quantities of VOCs.” *Id.* WildEarth disagrees with BLM’s three reasons for “the EA’s failure to analyze and disclose VOC emissions,” *i.e.*, (1) the fact that the State of Colorado does not regulate VOCs “suggest[s] that VOC calculations were shown to be below the reportable limits”; (2) BLM’s reliance on the 2000 Iron Point FEIS for an analysis of air quality impacts, including VOCs; and (3) “the LBA would force Oxbow to mine coal at a slower rate than the rate of production assumed in the 2000 FEIS, and would thus result in fewer air emissions.” *Id.* at 27-28.

Oxbow counters that WildEarth’s assertion that “the LBA will likely emit substantial quantities of VOC’s” (SOR at 26) amounts to speculation on WildEarth’s part. Oxbow’s Answer at 28. Oxbow further states that VOCs are not a criteria pollutant and have no NAAQS, and that “[t]heir principal significance is that in the presence of sunlight VOCs can combine with NO<sub>x</sub> to form ozone.” *Id.*; *see* EA at 17. The EPA defines VOCs in terms of carbon compounds that “participate[] in atmospheric photochemical reactions,” and excludes organic compounds that have “negligible photochemical reactivity,” such as methane and ethane. 40 C.F.R. § 51.100(s)(1). Oxbow argues that WildEarth makes the error of equating VOCs with non-methane hydrocarbons. *See* SOR at 26 n.100. Oxbow states that “[e]thane is a non-methane hydrocarbon, but is not a VOC because it has ‘negligible photochemical reactivity,’ and thus is not a significant precursor of ozone”; that “[a]t the West Elk Mine, the hydrocarbon with the highest concentration other than methane is ethane”; and that “[b]y improperly including ethane, Appellants are able to state that ‘non-methane hydrocarbons (*i.e.*, VOCs)’ constitute ‘approximately 1% of the methane emissions from that mine’s methane drainage wells.” Oxbow’s Answer

at 28 (footnote omitted) (quoting SOR at 26 n.100). Oxbow asserts that “[t]he actual percentage of VOCs—that is, of organic compounds that are of concern as potential precursors of ozone—for the West Elk Mine are 0.466% and 0.273%.” Oxbow’s Answer at 28; Oxbow’s Response at 50-51.

The EA recognizes that ozone can be formed from NO<sub>x</sub> and VOCs, and that Colorado regulates ozone indirectly by setting limits for NO<sub>x</sub> or VOC emissions in air quality permits. EA at 23. The Mine’s construction permit regulates NO<sub>x</sub> emissions. *Id.* at 23-24. The EA states that “VOCs are not addressed in the permit, suggesting that VOC calculations were shown to be below reportable limits.” *Id.* at 24. We agree with Oxbow that WildEarth has failed to “demonstrate[], by scientific analysis or conclusions by any experts, that VOC emissions from the Mine have resulted in significant impacts to air quality through ozone formation or that the State’s approach of setting limits for NO<sub>x</sub> emissions is ineffective,” or that anticipated VOC emissions “require modification of the existing construction permit.” Oxbow’s Answer at 29.

#### 4. Analysis of PM<sub>2.5</sub> Impacts

WildEarth further argues that the June 2011 EA fails to include “*any analysis at all* of the LBA’s impacts to PM<sub>2.5</sub> concentrations, an oversight that violates NEPA.” *Id.* at 29. WildEarth states that the EA states merely that “Colorado does not regulate PM<sub>2.5</sub> in permits.” *Id.* (quoting June 2011 EA at 7). WildEarth asserts that BLM cannot rely upon Colorado’s “*failure* to regulate a pollutant in a permit as a proxy for NEPA compliance.” *Id.* Again, WildEarth states that PM<sub>2.5</sub> emissions were not addressed in the 2000 Iron Point FEIS, to which the June 2011 EA is tiered, and that “mining the LBA poses potentially significant impacts to PM<sub>2.5</sub> concentrations—impacts that BLM has not yet analyzed and assessed in accordance with NEPA.” *Id.* at 30.

Oxbow and BLM both respond that detailed analysis of PM<sub>2.5</sub> impacts was unnecessary given BLM’s analysis of PM<sub>10</sub> impacts. Oxbow quotes the following passage from the EA:

Particulate matter would be emitted when drill rigs and other vehicles associated with the mining activities travel on existing dirt roads or overland access routes to drilling locations. Additional emissions of particulate matter would be generated from processing equipment, transfer points, the train loadout, and ventilation shafts.

EA at 17. Oxbow explains that “EPA divides particulate matter into two categories, based on size: coarse particulate matter, or PM<sub>10</sub>; and fine particulate matter, or

PM<sub>2.5</sub>.” Oxbow’s Answer at 30. Thus, states Oxbow, “PM<sub>2.5</sub> is a subset of PM<sub>10</sub>.” *Id.*; see BLM’s Answer at 25.

The EA’s air quality analysis was tiered to the detailed air quality assessment in the 2000 FEIS, which includes an emissions inventory quantifying PM<sub>10</sub> emissions. EA at 17-18; see Oxbow Response, Ex. 3 at 3-6, 3-8 to 3-14, M-1 to M-6. Thus, all PM<sub>2.5</sub> emissions from the Mine are included within these quantities of PM<sub>10</sub> emissions. Oxbow points out that when the 2000 FEIS was prepared, standards for PM<sub>2.5</sub> were under development and did not then apply to any facility. 2000 FEIS at 3-5. Hence, there was no purpose to specify the quantities of PM<sub>2.5</sub> apart from PM<sub>10</sub>. Oxbow states that, contrary to WildEarth’s argument, the information in the 2000 FEIS with regard to PM<sub>10</sub> is relevant to the ECET, because the equipment for mining will be the same equipment used in the current mining operations. See EA at 18. Oxbow continues its reasoning as follows:

From the emissions inventory, the permitted mining processes in Table 3.1-5, and the detailed information about sources of PM<sub>10</sub> (and therefore PM<sub>2.5</sub>) emissions in Table M-4, BLM’s Air Quality Specialist had ample information to make a professional judgment about the quantity of PM<sub>2.5</sub> emissions and conclude that they were not, in the words of the Board, “a substantial environmental question of material significance,” and therefore did not require detailed analysis under NEPA’s rule of reason.

Oxbow’s Answer at 30 (quoting *Powder River Basin Resource Council*, 180 IBLA at 47-48). Based upon the record, we conclude that “BLM’s air experts properly concluded that PM<sub>2.5</sub> emissions would not amount to a substantial environmental question,” and that, therefore, BLM satisfied NEPA’s rule of reason standard in its analysis of PM<sub>2.5</sub> and PM<sub>10</sub> emissions. See BLM’s Answer at 25.

#### 5. *Visibility in Class I Areas*

WildEarth argues that the June 2011 EA violates NEPA because it fails to protect visibility of Class I areas as required by the Clean Air Act, 42 U.S.C. § 7475(d)(2)(B) (2006). WildEarth contends that BLM improperly tiers to the 2000 Iron Point FEIS with regard to visibility impacts, without conducting any further analysis, in concluding that the LBA’s air quality impacts will not be significant. According to WildEarth, even accepting as true the conclusion in the Iron Point FEIS that the Mine’s overall impacts would not be significant, that conclusion is not reasonable in 2011 without further analysis, and “BLM cannot assume that baseline visibility conditions have not changed since the 1990s.” *Id.* at 31. WildEarth concludes that “[w]hen the underlying environmental conditions and air quality baselines have changed since an earlier NEPA analysis, BLM cannot ‘tier’ to that

earlier EIS to avoid conducting up-to-date analysis that accurately gauges the environmental impacts of the current project.” *Id.* (citing *Klamath-Siskiyou Wildlands Center*, 387 F.3d at 997 n.3).

In response, Oxbow states that the Class I area nearest to the Mine is the West Elk Wilderness, approximately 10 miles southeast of the Somerset area, and that another Class I area is the Black Canyon of the Gunnison National Park, approximately 26 miles southwest of the Somerset area. Oxbow’s Answer at 31; Oxbow’s Response, Ex. 5 at 3-6. In the 2000 FEIS, to which the EA is tiered, BLM modeled visibility and acid deposition impacts on both these Class I areas due to particulate matter, NO<sub>x</sub> and SO<sub>2</sub> from sources along the floor of the North Fork of the Gunnison River Valley. *Id.* at M-3 to M-23. EPA’s conservative SCREEN3 regional haze model predicted imperceptible increases at the northwest corner of the West Elk Wilderness Area and at the northeast corner of the Black Canyon of the Gunnison. *Id.* at 3-15, M-7, M-12.

In the 2000 FEIS, BLM used the U.S. Forest Service’s significance threshold of a 5% increase in light extinction coefficient, a threshold well below the 10-20% increase necessary for a “just noticeable change” (JNC) in scene visibility, and therefore would not be considered significant for purposes of NEPA. *See id.* at M-10; *Deciview, A Standard Visibility Index*, IMPROVE, at 1, 2 (April 1993) (attached to Oxbow’s Answer as Ex. 10). Oxbow states that “BLM repeated the regional haze impact assessment . . . for the West Elk Wilderness,” and that “[t]he highest 24-hour day had a 19.7% increase in light extinction coefficient along the West Elk boundary . . . but the 95% percentile increase was only 4.3%.” Oxbow’s Answer at 32; *id.*, Ex. 5 at 3-15, M-16. BLM concluded, in the 2000 FEIS, that emissions from both the Bowie and Oxbow (the Mine) operations “would not cause any consequential acid deposition or visibility impacts at the nearby West Elk Wilderness Area.” *Id.* at 3-8; 3-11 (“The increased emissions of NO<sub>x</sub> and SO<sub>2</sub> would not have any significant impact on acid deposition or visibility at West Elk Wilderness.”).

WildEarth argues that BLM cannot assume that baseline visibility conditions have not changed, given oil and gas development in the region, and that BLM improperly relies on the visibility impacts analysis in the 2000 FEIS. *See* SOR at 31. However, we agree with Oxbow that WildEarth “still fail[s] to demonstrate . . . that BLM’s modeling of the Mine’s contribution to regional haze would be any different due to changes in baseline conditions.” Oxbow’s Answer at 32; *see* BLM’s Answer at 26-27.

#### *D. Cumulative Impacts of the LBA and Lease Modification COC-61357*

Next, WildEarth argues that the June 2011 EA fails to sufficiently analyze the combined cumulative impacts of the LBA and Lease Modification COC-61357. The

Lease Modification would add about 157 acres to Lease COC-61357, and would allow recovery of 35,000 tons of coal on those 157 acres. Oxbow's Answer at 32-33. The Lease Modification would "permit Oxbow to mine an additional 0.52 million tons of coal, and cause venting of millions of cubic feet a day of methane for the many additional weeks or months it will take to mine coal made accessible by the Lease Modification." SOR at 32; *see* Oxbow's Answer at 32-33. WildEarth asserts that the Lease Modification was proposed more than a year before BLM issued the June 2011 EA; that "BLM was *concurrently and simultaneously* reviewing two proposals to expand the Mine"; but that the EA for the LBA "failed to consider the cumulative effects of the two proposed expansions." SOR at 32. WildEarth states that "[t]he Lease Modification is only about *one mile* from the LBA tract; it would result in mining the same coal seam (the "D-Seam"); it would be mined by the same company; it would prolong the life of the same mining operation; and it underlies the same watershed." *Id.* at 33. WildEarth argues that "[b]y prolonging the Elk Creek Mine's life by several weeks, the Lease Modification will cause more air pollution, including more emissions of methane and ozone-forming pollutant," and "the Lease Modification will permit Oxbow to access an additional half-million tons of coal *outside* of the Lease Modification area, which will further extend the Mine's life by weeks or months." *Id.* (footnotes omitted). In addition, argues WildEarth, the Lease Modification "will almost certainly require additional road construction and methane drainage well construction adjacent to the Lease Modification area to access the additional half-million tons of coal," and such surface impacts will "compound[] erosion, soil, habitat disturbance and other impacts within the Elk Creek drainage in which both projects are located." *Id.*

Oxbow argues that BLM was not obligated to consider the cumulative impacts of the LBA and Lease Modification COC-61357 because each action can occur independently of the other, and that in the Tenth Circuit the relevant test is "whether the actions [are] so interdependent that it would be unwise or irrational to complete one without the other." Oxbow's Answer at 33 (quoting *Utahns for Better Transportation v. U.S. Dep't of Transportation*, 305 F.3d 1152, 1173-74 (10th Cir. 2002), *modified on other grounds*, 319 F.3d 1207 (10th Cir. 2003)). Oxbow argues that development of the ECET will be completed whether or not Lease Modification COC-61357 is approved. Oxbow's Answer at 33; Oxbow's Response, Ex. 2 (Declaration of Robert Thurman, Senior Financial Analysis, Oxbow, at ¶ 22). Further, Lease Modification COC-61357 "is spatially removed, and if issued, could occur independently of the ECET." EA at 56.

Oxbow states that even if the Board declines to apply the Tenth Circuit's independent utility test, WildEarth has not shown error in BLM's analysis of cumulative impacts. Oxbow asserts that in order to demonstrate a deficiency in BLM's analysis, "it is not sufficient merely to note the existence of other . . . projects . . . without concretely identifying the adverse impacts caused by such other . . .

projects to which the action being scrutinized will add.” Oxbow’s Answer at 33-34 (quoting *Backcountry Against Dumps*, 179 IBLA at 174). Oxbow states that WildEarth provides no evidence that the ECET and the land covered by the Lease Modification would be mined concurrently, and that “[i]n fact, just the opposite is true.” Oxbow’s Answer, Ex. 5 (Smith Decl. ¶¶ 13-14). Further, Lease Modification COC-61357 covers land in a roadless area and “[n]o surface disturbance other than very minor subsidence” is anticipated for such land. See SOR at 33 and Ex. 69; Smith Decl. ¶¶ 12-14. Thus, states Oxbow, “[n]o cumulative impacts to the surface will therefore result from mining the ECET and the land covered by the Lease Modification.” Oxbow’s Answer at 34; see Smith Decl. ¶ 14. Oxbow disputes WildEarth’s assertion that the Lease Modification will almost certainly require additional road construction, stating that “access to the 0.52 million tons of coal is expected to take place from the existing D-Seam reserves on the parent lease and other previously added tracts, and therefore will not require additional surface disturbance.” Oxbow’s Answer at 34; Smith Decl. ¶ 15. Oxbow concludes that mining the additional 0.52 million tons of coal is not expected to result in cumulative impacts with mining the ECET. *Id.*

Oxbow observes that the two projects are separated geographically by approximately 1-mile; that even though both projects underlie the same watershed, WildEarth makes no claim their either project individually or synergistically will impact water quality; that even though mining the Lease Modification area would prolong the life of the mine, WildEarth does not identify any cumulative impacts that result from such prolonged life; and that WildEarth does not show that the two projects will overlap in time. Oxbow’s Answer at 35. We conclude that WildEarth has failed to meet its burden of identifying the adverse impacts caused by Lease Modification COC-61357 to which the LBA will add, and that, accordingly, WildEarth has not shown error in BLM’s cumulative impacts analysis. *Id.*; see *Backcountry Against Dumps*, 179 IBLA at 174.

We see no merit to WildEarth’s claim that the EA contains “no detailed or quantitative analysis” of the reasonably foreseeable future impacts when the LBA is viewed together with Lease Modification COC-61357. SOR at 34. BLM determined that such impacts would be minor, and otherwise completed a comprehensive review of cumulative impacts. EA at 55-62. We reject WildEarth’s argument that BLM’s cumulative impacts analysis was deficient.

#### IV. CONCLUSION

Based upon the record, we conclude that WildEarth has not demonstrated, with objective evidence, that BLM failed to sufficiently analyze an alternative that would reduce the LBA’s GHG emissions; that BLM did not include a reasonably complete discussion of GHG mitigation measures; that BLM failed to take a “hard look” at many of the LBA’s air quality impacts; that BLM’s analysis of impacts to

visibility in Class I areas is inadequate; or that BLM failed to adequately analyze the cumulative impacts of the ECET together with Oxbow's Lease Modification COC-61357. WildEarth has not shown that BLM failed to consider a substantial environmental question of material significance. In most instances, WildEarth's challenges to the June 2011 EA amount to a difference of opinion that are not supported by the record or by WildEarth's submissions. WildEarth has failed to meet its burden to establish that BLM violated section 102(2)(C) of NEPA by approving the LBA filed by Oxbow.

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 C.F.R. § 4.1, the decision appealed is affirmed.

\_\_\_\_\_/s/\_\_\_\_\_  
James F. Roberts  
Administrative Judge

I concur:

\_\_\_\_\_/s/\_\_\_\_\_  
Christina S. Kalavritinos  
Administrative Judge