



southern
utah
wilderness
alliance

HAND DELIVERED

December 4, 2008

Selma Sierra – State Director
Utah State Director, Bureau of Land Management
440 West 200 South, 5th Floor
P.O. Box 45155
Salt Lake City, Utah 84145-0155

Re: Protest of Bureau of Land Management's Notice of Competitive Oil and Gas Lease Sale to Be Held on December 19, 2008

Greetings,

In accordance with 43 C.F.R. §§ 4.450-2 and 3120.1-3, the Southern Utah Wilderness Alliance, Grand Canyon Trust, National Parks Conservation Association, Natural Resources Defense Council, Sierra Club, and The Wilderness Society (collectively "SUWA") hereby timely protests the December 19, 2008, offering, in Salt Lake City, Utah, of the following 92 parcels in the Fillmore, Moab, Price, Richfield, and Vernal field offices:

Fillmore: UT1108-36 (UTU86824) (1 parcel)

Moab Field Office: UT1108-159 (UTU86887); UT1108-162 (UTU86893); UT1108-164 (UTU86899); UT1108-166 (UTU86901); UT1108-167 (UTU86902); UT1108-168 (UTU86903); UT1108-169 (UTU86904); UT1108-170 (UTU86905); UT1108-171 (UTU86906); UT1108-174 (UTU86909); UT1108-175 (UTU86910); UT1108-176 (UTU86911); UT1108-177 (UTU86912); UT1108-180 (UTU86916); UT1108-181 (UTU86917); UT1108-182 (UTU86918); UT1108-183 (UTU86919); UT1108-184 (UTU86920); UT1108-185 (UTU86921); UT1108-186 (UTU86922); UT1108-187 (UTU86923); UT1108-196 (UTU86930); UT1108-197 (UTU86931); UT1108-201 (UTU86935); UT1108-202 (UTU86936); UT1108-203 (UTU86937); UT1108-204 (UTU86938); UT1108-205 (UTU86939); UT1108-206 (UTU86940); UT1108-207

**(UTU86941); UT1108-208 (UTU86942); UT1108-209 (UTU86954);
UT1108-210 (UTU86955); UT1108-211 (UTU86956); UT1108-212
(UTU86957); UT1108-242 (UTU86985); UT1108-243 (UTU86986);
UT1108-244 (UTU86987) (38 parcels)**

**Price Field Office: UT1108-328 (UTU86850); UT1108-329 (UTU86849);
UT1108-330 (UTU86851); UT1108-331 (UTU86852); UT1108-332
(UTU86853); UT1108-335 (UTU86860); UT1108-337 (UTU86878);
UT1108-338 (UTU86879); UT1108-339 (UTU86880); UT1108-340
(UTU86881); UT1108-341 (UTU86882); UT1108-342 (UTU86883);
UT1108-343 (UTU86896); UT1108-345 (UTU86898); UT1108-348
(UTU86862); UT1108-349 (UTU86884); UT1108-350 (UTU86885);
UT1108-355 (UTU86886); UT1108-361 (UTU86888); UT1108-368
(UTU86889); UT1108-369 (UTU86890); UT1108-370 (UTU86891) (22
parcels)**

**Richfield Field Office: UT1108-56 (UTU86842); UT1108-57 (UTU86843) (2
parcel)**

**Vernal Field Office: UT1108-83 (UTU86856); UT1108-84 (UTU86859);
UT1108-86 (UTU86875); UT1108-87 (UTU86876); UT1108-90
(UTU86944); UT1108-91 (UTU86946); UT1108-93 (UTU86948);
UT1108-94 (UTU86949); UT1108-96 (UTU86950); UT1108-97
(UTU86951); UT1108-98 (UTU86952); UT1108-101 (UTU86970);
UT1108-106 (UTU86975); UT1108-109 (UTU86976); UT1108-110
(UTU86977); UT1108-111 (UTU86978); UT1108-112 (UTU86979);
UT1108-115 (UTU86981); UT1108-116 (UTU86982); UT1108-117
(UTU86983); UT1108-130 (UTU86995); UT1108-131 (UTU86996);
UT1108-136 (UTU87000); UT1108-137 (UTU86701); UT1108-143
(UTU87009); UT1108-144 (UTU87010); UT1108-146 (UTU87012);
UT1108-158 (UTU87024); UT1108-295 (UTU87025) (29 parcels)**

As explained below, the Bureau of Land Management's (BLM's) decision to sell the 92 parcels at issue in this protest violates, among other federal laws and regulations, the National Environmental Policy Act, 42 U.S.C. §§ 4321 *et seq.* (NEPA), the National Historic Preservation Act, 16 U.S.C. §§ 470 *et seq.* (NHPA), the Federal Land Policy and Management Act, 43 U.S.C. §§ 1701 *et seq.* (FLPMA), and the regulations and policies that implement these laws.

SUWA requests that BLM withdraw these 92 lease parcels from sale until the agency has fully complied with all the federal laws, regulations, and executive orders discussed herein. Alternatively, the agency could attach unconditional no surface occupancy stipulations to each parcel and proceed with the sale of these parcels.

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I. PRELIMINARY ISSUES

A. BLM Has Never Considered the No Leasing Alternative

NEPA requires that BLM prepare a pre-leasing NEPA document that fully considers and analyzes the no leasing alternative *before* the agency engages in an irretrievable commitment of resources, i.e., the sale of non-surface occupancy oil and gas leases. *See S. Utah Wilderness Alliance v. Norton*, 457 F. Supp. 2d 1253, 1262-1264 (D. Utah 2006); *Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228-30 (9th Cir. 1988) (requiring full analysis of no leasing alternative even if an environmental impact statement (EIS) not required); *Mont. Wilderness Ass'n. v. Fry*, 310 F. Supp. 2d 1127, 1145-46 (D. Mont. 2004); *S. Utah Wilderness Alliance*, 164 IBLA 118, 124 (2004) (quoting *Pennaco Energy, Inc. v. U.S. Dep't of the Interior*, 377 F.3d 1147, 1162 (10th Cir. 2004)). Importantly, BLM's pre-leasing analysis must be contained in its already completed NEPA analyses because, as the Interior Board of Land Appeals recognized in *Southern Utah Wilderness Alliance*, "[determinations of NEPA adequacy (DNAs)] are not themselves documents that may be tiered to NEPA documents, but are used to determine the sufficiency of previously issued NEPA documents." 164 IBLA at 123 (citing *Pennaco*, 377 F.3d at 1162).

The Moab, Price, Richfield and Vernal DNAs fail to adequately consider the no leasing alternative. The DNAs must quantify the environmental and socio-economic costs and benefits of adopting such an alternative. Furthermore, the Oil and Gas Leasing in the Fillmore Field Office, Environmental Assessment UT-010-08-050 (November 2008) (Fillmore EA), does not adequately consider the no leasing alternative. The

discussions of the no leasing alternatives do not meet the “rule of reason” test applied by both the Interior Board of Land Appeals and the courts.

i. None of the DNAs Adequately Consider the No Leasing Alternative

None of the four DNAs at issue here—the Moab, Price, Richfield, or Vernal DNAs—adequately considered the no leasing alternative. Each of these four DNAs relies on its respective resource management plan (RMP) and final environmental impact statement (EIS). *See* Moab Field Office, Worksheet Documentation of Land Use Plan Conformance and Determination of NEPA Adequacy 2 (Nov. 5, 2008) (Moab DNA); Price Field Office, Worksheet Documentation of Land Use Plan Conformance and Determination of NEPA Adequacy 2 (Nov. 4, 2008) (Price DNA); Richfield Field Office, Worksheet Documentation of Land Use Plan Conformance and Determination of NEPA Adequacy 3 (Oct. 31, 2008) (Richfield DNA); Vernal Field Office, Worksheet Documentation of Land Use Plan Conformance and Determination of NEPA Adequacy 2 (Nov. 3, 2008) (Vernal DNA). The Vernal DNA and Richfield DNA also rely on additional NEPA documents; however, these documents also fail to adequately analyze the no leasing alternative. *See* Vernal DNA at 2; Richfield DNA at 3.

SUWA submitted the following comments on the Moab RMP which illustrate that this document never adequately analyzed the no leasing alternative:

BLM has failed to consider a no leasing alternative in the [Moab Field Office, Proposed Resource Management Plan and Final Environmental Impact Statement (Moab PRMP)].¹ As part of its analysis

¹ The Moab PRMP and the Moab RMP (referring to the Moab PRMP as implemented and modified by the Record of Decision) are for the most part the same document. For this reason, any reference to the Moab PRMP is in essence a reference to the Moab RMP and vice versa. The distinctions between these documents are of little import in this protest. Thus, any reference to a PRMP in this document may be considered as a

BLM must consider a no leasing alternative—in addition to a no action alternative. Federal courts have made clear that a no leasing alternative should be a vital component in ensuring that agencies have all reasonable approaches before them. *See, e.g., Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228 (9th Cir. 1988). The Moab PRMP does not analyze the possibility of a no leasing alternative. The existing management plans, three different management framework plans, are not NEPA documents and thus do not constitute adequate pre-leasing analyses that considered a no leasing alternative. *Southern Utah Wilderness Alliance et al.*, 164 IBLA 118 (2004). Finally, the brief mention and rejection in the 1976 Oil and Gas Leasing Program, Moab District, Environmental Analysis Report (EAR) of the no leasing alternative was facially insufficient and cannot be relied upon now for that necessary analysis. *See [S. Utah Wilderness Alliance*, 457 F. Supp. 2d at 1262–64] (concluding that Price and Richfield EARs failed to adequately analyze the no leasing alternative). Hence, BLM has *never* had before it the possibility of totally abandoning oil and gas leasing in the Moab planning area, something it is required to consider. *See Bob Marshall Alliance*, 852 F.2d at 1228.

The Moab PRMP appears to ignore the difference between a no action alternative and a no leasing alternative. The no action alternative evaluated in the Moab Draft RMP, Alternative A, would simply be a continuation of the existing management plans. Moab Draft RMP at 2-2. The Moab PRMP dismisses the no leasing alternative by mischaracterizing its implications and conflating it with the no action alternative. *See* Moab PRMP at 2-118 to -119. The no leasing alternative does not require BLM to buy back all existing leases. *See* Moab PRMP at 2-118. It simply requires that BLM analyze a program in which no future leases are offered. This is not a useless exercise; it allows BLM to compare the difference in impacts between the no leasing alternative and the development alternatives. BLM must fully analyze the no leasing alternative. The present analysis is insufficient.

SUWA *et al.*, Protest of the Moab Field Office Proposed Resource Management Plan and Final Environmental Impact Statement 37 (Sept. 2, 2008) (SUWA *et al.* Moab PRMP Protest).²

The Price RMP failed to adequately analyze the no leasing alternative:

reference to the finalized RMP as implemented by the relevant record of decision, unless indicated otherwise.

² SUWA hereby incorporates the entirety of its protest of the Moab PRMP.

The Price [Field Office, Proposed Resource Management Plan and Final Environmental Impact Statement (Price PRMP)] does not analyze the possibility of a no leasing alternative. *See* Price PRMP at 2-13 to -14. The prior land use plans for the Price Field Office—the Price River [Management Framework Plan (MFP)] and the San Rafael RMP—never considered a no leasing alternative; a no action alternative is not a no leasing alternative. Management framework plans are not NEPA documents and thus the Price River [MFP] and any management framework plan predating the San Rafael RMP cannot constitute adequate pre-leasing analyses that consider a no leasing alternative. *See Southern Utah Wilderness Alliance*, 164 IBLA 118, 123-24 (2004). The Environmental Assessment Supplement on Cumulative Impacts on Oil and Gas Categories, Price River Resource Area (1988), fails to analyze the no leasing alternative. The 1975 Price Environmental Analysis Record does not contain sufficient no leasing alternative analysis and could not be relied upon now for that necessary analysis. *See Southern Utah Wilderness Alliance*, 457 F. Supp. 2d at 1263–64. Hence, the BLM has never had before it the possibility of totally abandoning oil and gas leasing in the Price planning area, something it is required to consider. *See Bob Marshall Alliance*, 852 F.2d at 1228. BLM must fully analyze the no leasing alternative. The present analysis is insufficient.

SUWA *et al.*, Protest of the Price Field Office Proposed Resource Management Plan and Final Environmental Impact Statement 62 (Sept. 29, 2008) (SUWA *et al.* Price PRMP Protest).³

None of the documents relied on in the Richfield DNA conducted a no leasing alternative analysis. The Richfield RMP also refused to fully analyze a no leasing alternative:

BLM has failed to consider a no leasing alternative in the Richfield [Field Office, Proposed Resource Management Plan and Final Environmental Impact Statement (Richfield PRMP)]. As part of its analysis BLM must consider a no leasing alternative—in addition to a no action alternative. Federal courts have made clear that a no leasing alternative should be a vital component in ensuring that agencies have all reasonable approaches before them. *See, e.g., Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228 (9th Cir. 1988). The Richfield PRMP does not analyze the possibility of a no leasing alternative. Management framework plans are not NEPA documents and thus the several MFPs that together comprise the current management regime for the Richfield field

³ SUWA hereby incorporates the entirety of its protest of the Price PRMP.

office do not constitute adequate pre-leasing analyses that consider a no leasing alternative. *See Southern Utah Wilderness Alliance*, 164 IBLA 118, 123-24 (2004). Finally, any brief mention and rejection in the 1975 Price Environmental Analysis Record (EAR); the 1982 Henry Mountain Management Framework Plan; and the 1988 Sevier River and Henry Mountain Supplemental Oil and Gas Leasing Environmental Analysis of the no leasing alternative was facially insufficient and cannot be relied upon now for that necessary analysis. *Southern Utah Wilderness Alliance v. Norton*, 457 F. Supp. 2d 1253, 1262–64 (D. Utah 2006). Such a failing also prevents the 1975 Richfield Oil and Gas Program Environmental Analysis Record (EAR) – from now being relied on by BLM for adequate analysis of the no leasing alternative. *See id.* (explaining that such non-NEPA analyses with cursory or inadequate analysis do not satisfy BLM’s NEPA obligation). Hence, the BLM has *never* had before it the possibility of totally abandoning oil and gas leasing in the Richfield planning area, something it is required to consider. *See Bob Marshall Alliance*, 852 F.2d at 1228.

The Richfield PRMP appears to ignore the difference between a no action alternative and a no leasing alternative. The no action alternative evaluated in the Richfield Draft RMP, Alternative N, would simply be a continuation of the existing management plans. Richfield Draft RMP at 2-3. The PRMP dismisses the no leasing alternative by mischaracterizing its implications and conflating it with the no action alternative. *See* Richfield PRMP at 2-5 to -6. The no leasing alternative does not require BLM to buy back all existing leases. *See* Richfield PRMP at 2-5. It simply requires that BLM analyze a program in which no future leases are offered. This is not a useless exercise; it allows BLM to compare the difference in impacts between the no leasing alternative and the development alternatives. BLM must fully analyze the no leasing alternative. The present analysis is insufficient.

SUWA *et al.*, Protest of the Richfield Field Office Proposed Resource Management Plan and Final Environmental Impact Statement 39 (Sept. 8, 2008) (SUWA *et al.* Richfield PRMP Protest).⁴ Furthermore, the Richfield DNA’s reliance on the Utah Combined Hydrocarbon Leasing Regional EIS (1984) (CHL EIS) for any no leasing alternative analysis is misplaced. This document analyzed hydrocarbon leasing, not oil and gas leasing, and it included absolutely no discussion of a no leasing alternative for oil and

⁴ SUWA hereby incorporates the entirety of its protest of the Richfield PRMP.

gas. *See* CHL EIS at 24, 27. Furthermore, by the CHL EIS's own admission, the document was only intended to offer twenty-years-worth of analysis; thus, this analysis expired after 2004. *See id.* at 24.

Finally, the Vernal DNA likewise fails to cite to any adequate pre-leasing NEPA document that considered a no leasing alternative. SUWA has already informed BLM of this shortcoming in all of its pre-leasing-analysis-related documents:

The Vernal [Field Office, Proposed Resource Management Plan and Final Environmental Impact Statement (Vernal PRMP)] does not analyze the possibility of a no leasing alternative. *See* Vernal PRMP at 2-6 to -7. The prior resource management plans for the Vernal Field Office—the Book Cliffs RMP and the Diamond Mountain RMP—never considered no leasing alternatives; a no action alternative is not a no leasing alternative. Management framework plans are not NEPA documents and thus any management framework plan predating the Book Cliffs and Diamond Mountain RMPs cannot constitute adequate pre-leasing analyses that consider a no leasing alternative. *See Southern Utah Wilderness Alliance*, 164 IBLA 118, 123-24 (2004). The Environmental Assessment for Oil and Gas Leasing in the Book Cliffs Resource Area, EA No. UT-080-89-02 (Dec. 16, 1988); the Supplement to the Environmental Assessment for Oil and Gas Leasing in the Book Cliffs Resource Area, EA No. UT-080-89-02 (Jan. 25, 1989); the Environmental Assessment for Oil and Gas Leasing in the Diamond Mountain Resource Area, EA No. UT-080-89-03 (Dec. 16, 1988); and the Supplement to the Environmental Assessment for Oil and Gas Leasing in the Diamond Mountain Resource Area, EA No. UT-080-89-03 (Jan. 23, 1989) all fail to analyze the no leasing alternative. Likewise, the 1975 Vernal District Oil and Gas Program Environmental Analysis Record does not sufficiently analyze a no leasing alternative. Finally, even if there were brief mention and rejection of the no leasing alternative in any of these supplemental NEPA documents it would be facially insufficient for the no leasing alternative analysis and could not be relied upon now for that necessary analysis. *See Southern Utah Wilderness Alliance*, 457 F. Supp. 2d at 1262–64. Hence, the BLM has *never* had before it the possibility of totally abandoning oil and gas leasing in the Vernal planning area, something it is required to consider. *See Bob Marshall Alliance*, 852 F.2d at 1228. BLM must fully analyze the no leasing alternative. The present analysis is insufficient.

SUWA *et al.*, Protest of the Vernal Field Office Proposed Resource Management Plan and Final Environmental Impact Statement 39 (Sept. 8, 2008) (SUWA *et al.* Vernal PRMP Protest).⁵

None of the DNAs at issue here rely on NEPA analysis that has fully analyzed a no leasing alternative. This oversight is more glaring when contrasted with the Fillmore EA's attempts to undertake no leasing alternative analysis.

The Fillmore EA includes a no leasing alternative, thereby demonstrating that such analysis is both possible and useful. *See, e.g.*, Fillmore EA at 10, 51. As the Fillmore EA states, consideration of the no leasing alternative "provides for a full range of alternatives and comparison of impacts." *Id.* at 10. Although the no leasing alternative analysis in the Fillmore EA is inadequate and suffers from major flaws, it refutes BLM's refusal to undertake such analysis in the Moab, Price, Richfield, and Vernal RMPs. *See infra* at 12-12 (discussing the shortcomings of the Fillmore EA's no leasing alternative analysis). Before offering leases through DNAs BLM must address this shortcoming with supplemental NEPA analyses.

ii. The Fillmore EA Fails to Fully Consider the No Leasing Alternative

Although the Fillmore EA attempts to undertake something of a no leasing alternative, it is inadequate for the reasons described below. *See infra* at 121-154.

B. BLM Must Undertake Satisfactory Analysis Now Because Leasing Is Point of Irreversible Commitment

It is critical that BLM undertake satisfactory NEPA analysis before issuing these leases as subsequent approvals by BLM will not be able to completely eliminate potential environmental impacts. The sale of leases without no surface occupancy (NSO)

⁵ SUWA hereby incorporates the entirety of its protest of the Vernal PRMP.

stipulations represents a full and irretrievable commitment of resources. It cannot make such a commitment without adequate analysis. “BLM regulations, the courts and [Interior Board of Land Appeals (IBLA)] precedent proceed under the notion that the issuance of a lease without an NSO stipulation conveys to the lessee an interest and a right so secure that full NEPA review must be conducted prior to the decision to lease.” *Southern Utah Wilderness Alliance*, 159 IBLA 220, 240-43 (2003) (citing *Friends of the Southeast’s Future v. Morrison*, 153 F.3d 1059, 1063 (9th Cir. 1998) (additional citations omitted). See *Pennaco Energy, Inc. v. U.S. Dep’t of the Interior*, 377 F.3d 1147, 1159-61 (10th Cir. 2004); *Union Oil Co.*, 102 IBLA 187, 189 (1988) (citing *Sierra Club v. Peterson*, 717 F.2d 1409, 1412 (D.C. Cir. 1983)); *Conner v. Burford*, 848 F.2d 1441, 1448-51 (9th Cir. 1988) (holding that the selling of leases containing “no surface occupancy” stipulations did not require preparation of an EIS, but that an EIS was required before the selling of leases without “no surface occupancy” stipulations); *Peterson*, 717 F.2d at 1414 (same). Thus, in *Southern Utah Wilderness Alliance*, the IBLA explained that

[t]he courts have held that the Department must prepare an EIS before it may decide to issue such “non-NSO” oil and gas leases. The reason, according to the Ninth Circuit, is that a “non-NSO” lease “does not reserve to the government the absolute right to prevent all surface disturbing activities” and thus its issuance constitutes “an irreversible commitment of resources” under Section 102 of NEPA.

159 IBLA at 241-43 (citing *Conner*, 848 F.2d at 1448-51); *Union Oil*, 102 IBLA at 192-93 (same).

As the IBLA recognized in *Union Oil*, “[i]f BLM has not retained the authority to preclude *all* surface disturbance activity, then the decision to lease is itself the point of ‘irreversible, irretrievable commitment of resources’ mandating the preparation of an

EIS.” (Emphasis added). *Union Oil*, 102 IBLA at 189 (quoting *Peterson*, 717 F.2d at 1412). See also *Southern Utah Wilderness Alliance*, 159 IBLA at 241-43 (same); *Sierra Club, Oregon Chapter*, 87 IBLA 1, 5 (1985) (because issuance of non-NSO oil and gas leases constitutes an irreversible commitment of resources, BLM cannot defer preparation of an EIS unless it either retains authority to preclude development or issues the leases as NSO). BLM itself identifies lease issuance as the point of irretrievable commitment:

[t]he BLM has a statutory responsibility under NEPA to analyze and document the direct, indirect and cumulative impacts of past, present and reasonably foreseeable future actions resulting from Federally authorized fluid minerals activities. *By law, these impacts must be analyzed before the agency makes an irreversible commitment. In the fluid minerals program, this commitment occurs at the point of lease issuance.*

BLM Handbook on Planning for Fluid Minerals Resources, Chapter (H-1624-1), at I.B.2 (1988) (attached as Exhibit 1) (emphasis added).⁶ See *Southern Utah Wilderness Alliance v. Norton*, 457 F. Supp. 2d 1253, 1256 (D. Utah 2006).

Therefore, it is critical that BLM analyze all potential impacts of oil and gas development on these leases now rather than wait until a later date. As explained below, such delay could have irreversible negative impacts on air quality and cultural resources, among other things. See *infra* at 15 (discussing potential impacts to air quality from development made possible by this leasing), 98 (discussing likely impacts to cultural resources from development associated with oil and gas leasing).

⁶ A lessee is granted the “exclusive right to drill for, mine, extract, remove and dispose of all the oil and gas [in the lease parcel] together with the right to build and maintain necessary improvements thereupon for the term indicated below, subject to renewal or extension in accordance with the appropriate leasing authority.” BLM Form 3100 (attached as Exhibit 35). See also 43 C.F.R. § 3110.1-2 (surface use rights) (BLM may only require mitigation to the extent it does not require relocation of proposed operations by greater than 200 meters or prohibit new surface disturbance for longer than 60 days in any given lease year).

C. BLM Failed to Consider Whether These Lands Should Be Protected as Wilderness Study Areas Rather Than Leased

It is improper for BLM to offer oil and gas leases in areas in non-wilderness study area (non-WSA) lands which it has identified as having wilderness characteristics—which are not designated as wilderness study areas—since it has never considered the possibility of designating such areas as wilderness study areas (WSAs). Under Section 202 of FLPMA, BLM has the authority and the responsibility to adopt new WSAs. However, BLM has never considered this possibility or an alternative in any of its relevant RMPs that would designate areas with wilderness characteristics as WSAs.

SUWA informed BLM of this obligation previously:

We are aware of the April 2003 settlement agreement (Utah Settlement) between Secretary of the Interior Norton and the State of Utah (in which BLM abdicated its authority to designate any additional Wilderness Study Areas (WSAs)), and we maintain that this agreement is invalid and will ultimately be overturned in pending litigation. The federal court in Utah revoked its approval of the Utah Settlement, stating that its approval of the initial settlement was never intended to be interpreted as a binding consent decree. Recognizing that the court's decision undermined the legal ground for the Utah Settlement, the State of Utah and the Department of Interior have now formally withdrawn the settlement as it was originally submitted. This casts serious doubt upon BLM's current policy not to consider designating new WSAs. Because the State of Utah and the Department of Interior have withdrawn their settlement and do not intend to seek a new consent decree, there is currently no binding consent decree; yet the BLM has failed to issue any updated guidance regarding the application of this misguided and illegal policy.

Even if the Utah Settlement is reinstated, it is illegal. The Utah Settlement is based on an interpretation of FLPMA §§ 201, 202, and 603 that is contrary to FLPMA's plain language. Section 603 did not supersede or limit BLM's authority under § 201 to undertake wilderness inventories, but rather relies explicitly on BLM having exactly that authority under § 201. Nor did § 603 in any way limit BLM's discretion under § 202 to manage its lands as it sees fit, including managing areas as § 202 WSAs in accordance with the Interim Management Policy (IMP). Every prior administration has created WSAs under § 202 and they plainly had authority to do so. This administration has such authority as well, making

this a reasonable alternative deserving of consideration in this NEPA process. *See, e.g., City of Sausalito v. O’Neill*, 386 F.3d 1186, 1208-09 (9th Cir. 2004)[; *Natural Resources Defense Council v. Morton*, 458 F.2d 827, 837 (D.C. Cir. 1972)].

Further, if BLM continues to exclude designation of new WSAs from consideration in the [draft RMP/EIS], it risks violating both FLPMA and NEPA, and jeopardizing the validity of the entire planning process.

SUWA *et al.*, Comments on the BLM Richfield Draft Resource Management Plan/Environmental Impact Statement 24-25 (Jan. 23, 2008). Although these comments were offered specifically on the Richfield draft RMP, they also apply to the Moab, Price, and Vernal RMP, and thus their respective DNAs.

II. RMP DEFICIENCIES AND FAILURE TO CONSIDER CUMULATIVE IMPACTS

A. The Relevant RMPs Are Deficient

The Moab, Price, Richfield, and Vernal DNAs each rely on corresponding RMPs. *See supra* at 7. These RMPs were finalized and implemented slightly more than one month prior to the protest deadline. *Id.* Each of these RMPs suffers from significant and fatal flaws that now prevent BLM from relying on them for adequate analysis of the impacts from oil and gas leasing. SUWA hereby incorporates its protests for the Moab, Price, Richfield, and Vernal PRMPs. *See* Exhibits 2–5. The flaws identified in these protests prevent BLM from now relying on the respective RMPs for adequate NEPA analysis in the Moab, Price, Richfield, and Vernal DNAs.

B. BLM Must Present Environmental Analysis and Information in a Manner That Facilitates, Rather Than Impedes, Public Comment

NEPA requires BLM to “[e]ncourage and facilitate public involvement in decisions which affect the quality of the human environment.” 40 C.F.R. § 1500.2(d). A critical part of this obligation is presenting data and analysis in a manner that will enable

the public to thoroughly review and understand the analysis of environmental consequences. For this reason, NEPA requires the use of high quality data and the disclosure of the methodology underlying analysis of the proposed leasing decisions and also explicitly requires that an EIS “be written in plain language” and presented in a way that “the public can readily understand.” 40 C.F.R. § 1502.8.

These requirements are specifically reinforced for an EIS; the “primary purpose” of this document is “to allow for informed public participation and informed decision making” so its language must be “clear” and “supported by evidence that the agency has made the necessary environmental analyses.” *Earth Island Inst. v. U.S. Forest Service*, 442 F.3d 1147, 1160 (9th Cir. 2006); 40 C.F.R. § 1502.1.

Therefore, “an EIS must be organized and written so as to be readily understandable by governmental decisionmakers and by interested non-professional laypersons likely to be affected by actions taken under the EIS.” *Oregon Environmental Council v. Kunzman*, 817 F.2d 484, 493 (9th Cir. 1987). Accordingly, where a plan is so unclear as to not permit review and understanding, it may be deemed “incomprehensible” and in violation of NEPA. *See, e.g., California, ex rel. Lockyer v. U.S. Forest Service*, 465 F.Supp. 2d 942, 949-950 (N.D.Cal. 2006) (management plan for Giant Sequoia National Monument was “incomprehensible” because it referenced but did not explain its reliance on certain law and regulations, and because it contained conflicting statements regarding applicable standards for management, which were never clarified).

Where the Vernal, Richfield, Price, and Moab RMPs rely upon existing authority, they must include a sufficient explanation of how such authority actually supports the action taken – especially where such authority (such as the ORV regulations requiring the

agency to protect other resources and avoid conflicts with other recreationists) appears to require different actions and where these issues have already been highlighted to BLM in comments. Similarly, where the PRMP and FEIS include conflicting information for the same resources (such as acreage or management prescriptions) or conflicting conclusions about how decisions may harm and protect resources at the same time, the agency must not only correct errors, but also fully explain its conclusions and ultimate management decisions. Numerous inconsistencies in data, conclusions and compliance were raised in SUWA's comments on its protest on each of the relevant RMPs. These deficiencies must be corrected before BLM may rely on these documents for NEPA analysis.

C. BLM Failed to Consider Cumulative Impacts Generally

In general, the protested parcels being offered in the December oil and gas lease sale have failed to consider the cumulative impacts of leasing and all other activities likely to take place on the respective BLM. This failure to consider cumulative impacts comes because the NEPA documents upon which these protested parcels rely, which includes the Fillmore EA, have failed to consider a host of issues as identified in SUWA's RMP protests and its concerns identified regarding the Fillmore EA. *See supra* at 16, 121-154.

D. BLM Failed to Meet NEPA's Adequate Information Obligation

BLM has failed to meet its obligation to include adequate information in the NEPA documents upon which this lease sale relies so that it can evaluate reasonably foreseeable significant environmental effects. Council on Environmental Quality's regulations require that it include information relevant to reasonably foreseeable significant adverse environmental effects when the costs of doing so are "not exorbitant." 40 C.F.R. § 1502.22. However, in this case BLM has failed to include such information

or explain why it has decided not to include such information. *See id.; supra* at 16. This protest points out various facets of information that BLM failed to include such as dispersion modeling for oil and gas activities and cumulative activities, ozone cumulative analysis, climate change contributions, etc.

III. AIR QUALITY CONCERNS

BLM has failed to analyze the impacts of potential oil and gas development on these protested parcels to air quality. This analysis must be made before these leases are issued as lease issuance is the point of irreversible commitment and BLM will not be able to prohibit all development. The development of oil and gas wells contributes pollutants to the air. Thus, BLM will not be able to avoid all potential impacts to air quality. BLM cannot comply with its FLPMA obligation to observe federal and state air quality standards without analyzing air quality impacts before issuing these leases and ensuring that development will not exceed federal and state air quality standards.

FLPMA and its implementing regulations expressly require BLM to ensure that its approval of oil and gas development comply with all applicable air quality standards. *See* 43 U.S.C. § 1712(c)(8) (requiring BLM to “provide for compliance with applicable pollution control laws, including State and Federal air ... pollution standards or implementation plans”); 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”) (emphasis added); Richfield PRMP at 2–8; Environmental Assessment for the West Tavaputs Plateau Drilling Program, Carbon and Duchesne Counties, Utah, UT-070-2004-28, at 4-3 (July 2004) (attached as Exhibit 6) (“Under the *Federal Land Policy and*

Management Act and the *Clean Air Act*, the Bureau of Land Management (BLM) cannot conduct or authorize any activity that does not conform to all applicable local, state, Tribal, or federal air quality laws, statutes, regulations, standards, or implementation plans.”). These air quality standards include both the national ambient air quality standards (NAAQS) and the prevention of significant deterioration (PSD) increment limits created by the Clean Air Act. These standards are imposed at both the federal level and the state level. These standards are based on *ambient concentrations* of various air pollutants. Likewise, the Clean Air Act regulates hazardous air pollutants (HAPs). BLM is therefore obligated under the Clean Air Act to ensure that any activity it approves will not violate air quality standards such as NAAQS.

Oil and gas development, including the operations of existing wells, results in air pollution. Oil and gas development along with the operation and maintenance of existing, developed wells contributes criteria pollutants regulated under NAAQS. *See, e.g.,* BLM, West Tavaputs Plateau Natural Gas Full Field Development Plan, Draft Environmental Impact Statement, UT-070-05-055, at 4-15 to -18 (Feb. 2008) (West Tavaputs DEIS) (attached as Exhibit 37) (estimating the likely yearly contributions to air pollution from a proposed development on the West Tavaputs Plateau in the Price Field Office); EPA, National Ambient Air Quality Standards, <http://epa.gov/air/criteria.html> (listing the seven criteria pollutants regulated by NAAQS); Richfield PRMP at 4-12 (showing that oil and gas development envisioned in Richfield PRMP would result in emissions of criteria pollutants); Moab PRMP at 4-27 to -28 (same for Moab PRMP); Price PRMP at 4-7 (same for Price PRMP); Vernal PRMP at 4-15 to -17 (same for Vernal PRMP). The development and operations of oil and gas wells also results in the emission

of HAPs and pollutants regulated by the PSD program. *See, e.g.*, Moab PRMP at 4-28 (predicting HAPs emission levels from oil and gas development); West Tavaputs DEIS at 4-15 to -17 (showing predicted PSD-regulated emissions and HAPs from oil and gas development in the West Tavaputs Plateau).

Even small projects can result in significant levels of air pollution. For example, a recent project in the Uintah Basin predicted that the development of a small number of wells each year—approximately fifteen—could result in ambient concentrations of PM_{2.5} that would exceed the NAAQS 24-hour maximum average. *See* Rock House Emissions Inventory, prepared for the Enduring Resources’ Saddletree Draw Leasing and Rock House Development Environmental Assessment UT-080-07-671 (December 2007) (Rock House EA) (excerpts attached hereto as Exhibit 7) (showing predicted PM_{2.5} 24-hour maximum average concentrations from operations that would reach as high as 39.3 µg/m³, assuming an excessively low background of 25 µg/m³). Furthermore, the modeling prepared for this project predicted that PSD increment limits for PM₁₀ and NO₂ would be exceeded by this development alone. *See id.* Thus, even minor development or development taking place on one or two leases could result in emissions so high as to exceed national air quality standards.

BLM has not prepared any modeling for this lease sale so that it might understand the potential impacts of oil and gas development compared to national ambient air quality standards before it issues any leases. This is a critical error, fatal to BLM’s offering of these leases at the December lease sale. As BLM will not be able to prevent all development on those leases without NSO stipulations, it is authorizing some level of air pollution by offering these leases. *See supra* at 12. It is entirely possible that in some

scenarios this activity will exceed federal air quality standards, something that FLPMA forbids. For this reason BLM must prepare adequate analysis now that includes dispersion modeling.

A. Vernal

BLM's current air quality analysis in the Vernal Field Office is inadequate to predict the potential impacts to air quality from the development and operation of the oil and gas leases being offered in that field office in the December oil and gas lease sale. In particular, BLM has never analyzed the potential impacts from oil and gas development to ground-level ozone pollution in the Uintah Basin. Furthermore, BLM has never analyzed the impacts to air quality from the travel plan that it approved with the Vernal RMP. Thus, BLM does not understand how vehicular travel on designated routes in the field office coupled with oil and gas development will impacts air quality. The air quality analysis conducted for the Vernal RMP relied on outdated information and suffered from numerous flaws.

The EPA informed BLM that the Vernal PRMP suffered from numerous, significant flaws in its air quality impacts analysis. *See* Letter from Larry Svoboda, EPA, to Selma Sierra, Re: Final Resource Management Plan and Environmental Impact Statement for the Vernal Planning Area (Sept. 23, 2008) (EPA Vernal Letter) (attached as Exhibit 8). These comments have yet to be adopted by BLM and were not implemented by the Vernal Record of Decision (ROD). The EPA warned BLM that its analysis was inadequate because it lacked specifics for a proper analysis of oil and gas development, namely the model that it adopted and the fact that it completely ignored ozone. *Id.* at 1-3.

The EPA also stated that BLM's analysis of the impacts from oil and gas on climate change was insufficient. *See id.* at 4-5.

The National Park Service (NPS) also informed BLM that ground-level ozone was a problem at Dinosaur National Monument and that BLM had not performed any adequate "air quality analyses ... to determine whether air quality standards could be violated, or if visibility and other [air quality related values] could be adversely impacted." NPS, Memorandum to Director, Utah State Office, Bureau of Land Management 2 (Nov. 24, 2008) (NPS Memo) (attached as Exhibit 9).

SUWA submitted the following comments to BLM regarding the air quality analysis of the Vernal PRMP:

The Vernal PRMP fails to fully and accurately model the impacts of the activities that it permits on air quality in the planning area. Both NEPA and FLPMA require that BLM properly prepare such analysis. Without doing so BLM will not understand the effects of the pollutants that it has attempted to partially inventory and model in the Vernal PRMP, thereby violating NEPA and its requirement that BLM understand the environmental impacts of the activities it is permitting. Importantly, the Vernal PRMP will permit and plans for activities that would lead to exceedances of federal and state air quality standards, which BLM may not do. FLPMA requires that BLM manage the planning area according to federal and state air quality standards. *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") (emphasis added); *see also* 43 U.S.C. § 1712(c)(8) (requiring BLM in land use plans—which would therefore require implementation in daily management—to "provide for compliance with applicable pollution control laws, including State and Federal air . . . pollution standards or implementation plans"). To properly comply with FLPMA, the Vernal PRMP must affirmatively state that BLM is obligated "require compliance with air ... quality standards established pursuant to applicable Federal or State law." *See* 43 C.F.R. § 2920.7(b)(3).

BLM must perform comprehensive, complete modeling now. The fact that the implementation of the PRMP will result in air pollution (e.g., through approval of motorized use on designated routes) requires that such

modeling and quantification be undertaken. The routes identified in this plan that will be open to vehicular travel will never face further analysis whereby better estimates might be developed. BLM must conduct these analyses now. There is no better time to conduct comprehensive ozone pollution modeling. BLM cannot punt this obligation to some later date. As part of the “hard look” requirement, NEPA demands that BLM determine baseline conditions so that it, and the public, can fully understand the implications of proposed activities. BLM has failed to do this here.

It is particularly critical that BLM perform modeling now since it has already determined in some project specific analysis that gas development in the planning area is likely to exceed national ambient air quality standards (NAAQS) and prevention of significant deterioration (PSD) limits for various pollutants. *See infra*.

BLM has modified many of its assumptions regarding air quality impacts in the air quality modeling for the PRMP compared to the modeling that was used for the draft RMP. *See* Email from Craig Nicholls, BLM, to Megan Williams (Sep. 19, 2008) (attached as Exhibit P). These assumptions now mean that the PRMP understates the likely impacts of oil and gas development on air quality. BLM’s diminished figures must be changed as they represent unrealistic and unsupported figures. For example, the Vernal PRMP now assumes that the average roundtrip to visit a well site will only be 0.6 miles rather than four miles. *Id.* This assumption is excessively low and must be returned to at least the draft RMP assumption.

The Vernal PRMP fails to discuss the potential impacts of oil shale and tar sands development in the planning area on air quality. This is a significant oversight. It is entirely feasible that oil shale development will take place in the planning area during the life of the Vernal PRMP. Congress is currently considering a bill that would allow the State of Utah to determine whether federal lands in Utah should be made available for oil shale leasing. *See* H.R. 6899 § 171 (2008); Continuing Resolution likely to be passed during the week of September 22, 2008. BLM’s EIS evaluating proposed oil shale development does not acceptably analyze the potential impacts of that activity on air quality. *See* Letter from Larry Svoboda, Environmental Protection Agency, to Sherri Thompson, BLM (Apr. 17, 2008) (attached as Exhibit M). The U.S. Environmental Protection Agency has made it clear that BLM has not yet adequately considered the impacts of oil shale development on air quality and that waiting for a site specific proposal will result in analysis that fails to consider the full regional impacts of oil shale development. *Id.* For that reason the BLM must evaluate the impacts of oil shale development on air quality in the Vernal PRMP.

Furthermore, the Vernal PRMP does not quantify the impacts of the various activities envisioned in this plan on global warming. The Vernal PRMP fails to quantify the amount of greenhouse gases that will be emitted by these activities. The Vernal PRMP also fails to account for some of the impacts to the planning area itself from a rise in temperatures. BLM must analyze these changes and attempt to quantify impacts to climate from the development activities that could result from the approval of this PRMP.

In summary, the Vernal PRMP does not adequately analyze the impacts to air quality that will result from the area and route designations, and activities planned and permitted in this document. Because monitoring indicates that the planning area already has levels of PM_{2.5} that exceed NAAQS, and because it appears that ozone could also be exceeding—or close to exceeding—NAAQS, BLM is prevented by FLPMA from approving *any activities* that would further exacerbate or exceed these levels. These failures are contrary to both FLPMA, which requires that BLM observe air quality standards, and NEPA, which requires that BLM disclose the impacts of the activities it is analyzing.

Megan Williams, an air quality expert and former environmental engineer for the Environmental Protection Agency (EPA) (curriculum vitae attached as Exhibit Q) offers the following specific comments on the Vernal PRMP:

The BLM has issued a proposed resource management plan and final environmental impact statement (PRMP/FEIS) for the Vernal Field Office (August 2008). After thoroughly reviewing this document I conclude that the BLM's planning decisions are not justified. The BLM has not adequately demonstrated compliance with all Clean Air Act (CAA) requirements as required by NEPA. Specifically, the BLM has not completed an analysis of ozone impacts, has not adequately demonstrated compliance with the fine particle NAAQS and the PSD increments and has not demonstrated protection of air quality related values, including visibility. The BLM has not completed a comprehensive cumulative impacts analysis and has failed to establish any mitigation measure for ensuring compliance with all CAA requirements. Further, as discussed in numerous comments during the public review process, the BLM has failed to ensure scientific integrity in its air quality analyses.⁷ The BLM indicates in several

⁷ My review is based on the comment letters submitted to the BLM by Vicki Stamper on March 31, 2005 (Stamper) and the EPA Region VIII on May 6, 2005 (EPA) and the BLM's response to those comments in the Comments of the Draft RMP/EIS by Resource (Response to Comments by Resource).

instances that its analyses are sufficient, but the comments in the record indicate otherwise.

In several cases, the BLM made certain choices in its modeling methodology that result in an analysis that does not represent a reasonable assessment of impacts. For example, the BLM did not take into account the complex terrain of the area in assessing air quality impacts in the model. The BLM acknowledged that much of the project area consists of complex terrain (PRMP/FEIS at 20) and Vicki Stamper even established how the BLM could best account for this with the available data (Stamper at 2) yet the BLM chose to ignore this important factor in its analysis. The BLM also chose to model only a small subset of sources that likely do not fully represent the maximum near-field impacts (see, for example, Vicki Stamper's comments at 3 and the BLM's Response to Comments by Resource AQ12 at 32). The BLM, in its cumulative impacts analysis, left out key Class I areas in Colorado and Wyoming that could be impacted by development in the planning area and failed to model at least three years of mesoscale meteorological data in its far-field analysis (see BLM's Response to Comments AQ47 at 55 and AQ31 at 42-43). None of these decisions were a result of a lack of information or because the alternative was technically infeasible. On the contrary, data and technology are available to support the use of complex terrain in the model, the use of a larger subset of sources in the near-field analysis, the inclusion of a greater number of Class I areas and the use of more meteorological data. In choosing not to take advantage of these resources to formulate a more comprehensive and reasonable assessment of impacts, the BLM is failing to meet its obligation under NEPA to provide "full and fair discussion of the significant environmental impacts" (40 CFR § 1502.1) and to ensure the scientific integrity of analyses in environmental impact statements. 40 CFR §1502.24.

In addition to failing to complete the most comprehensive and technically feasible modeling exercise possible, the BLM has completely failed to consider the potentially huge impacts from oil shale and tar sands development in its air quality analysis. This one omission affects every potential impact to air quality assessed in the BLM's PRMP/FEIS. The EPA commented on the BLM's failure to include this development in its assessment and yet the BLM failed to include any such emissions in its modeling for the PRMP/FEIS. The development is foreseeable and it has the potential to cause huge impacts to air quality throughout the

planning area. The BLM recently released the final Programmatic EIS for oil shale and tar sands development, which does not include any modeling of impacts from the proposed leasing program. A future commitment is not an acceptable replacement for a comprehensive quantitative assessment of the environmental and public health impacts resulting from considerable increases in air pollution in an area already heavily impacted by the adverse effects of increasing development. The BLM failed to address specific impacts in the programmatic EIS and it has failed to address the foreseeable impacts in the Vernal PRMP/FEIS. The BLM can and must perform a detailed analysis of the potential impacts from this very significant development sector.

A detailed review of the BLM's failures in fully assessing air quality impacts for the Vernal PRMP/FEIS follows:

The BLM Failed to Assess Ozone Impacts for the PRMP/FEIS

The BLM maintains, in the PRMP/FEIS, that it does not need to complete an ozone modeling analysis for the planning area prior to moving forward with its planning decisions for the Vernal RMP. The BLM provides several arguments for this. Specifically, the BLM discusses the current Uinta Basin Air Quality Study (UBAQS) that is currently being conducted by the Independent Petroleum Association of Mountain States (IPAMS) and for the White River RMP Amendment, which will both assess ozone impacts in the region. There is no discussion, however, of the timeline of these efforts or how they are being coordinated.

In fact, the IPAMS study is being coordinated with very little, if any, stakeholder input. The EPA has expressed concerns with the BLM's reliance on this effort since the BLM is not acting to directly oversee the process:

“While we recognize that the BLM Vernal Field Office initiated an agreement late last year with the Independent Petroleum Association of the Mountain States (IPAMS) to begin an industry-managed study of basin-wide air quality impacts, EPA has concerns with this approach. We think the information to be generated by a basin-wide air quality study will be important for future NEPA analysis and decision making by your office. Therefore, it would be useful to follow the provisions of ‘third- party’ contract management according to 40 CFR 1506.5(c) and have the

BLM Vernal Field Office directly manage this basin-wide air quality study rather than industry. “⁸

The EPA again expressed similar concern in its comments on the draft modeling protocol for the UBAQS, as follows:

“If the study is to be used to inform management decisions by Federal, State, and local entities or in future NEPA actions, the independence of the analysis and assessment will be particularly important. . . . There are many Federal, State, and Tribal Agencies with an invested interest in the modeling study. With an active stakeholder process, BLM will increase the possibility that a reliable, useful, and credible modeling analysis will be completed.”⁹

And in addition to procedural concerns, the EPA has also expressed specific technical and policy concerns with the protocol itself. Of particular concern to EPA, in addition to the need for stakeholder input, appears to be the integrity and comprehensiveness of the emissions inventory, including the capability to perform source attribution analyses in order to develop effective mitigation strategies.¹⁰

In fact, the EPA appears to have changed its overall position on the need for an ozone impact assessment prior to any further planning decisions in the area. In EPA’s comments on the draft RMP it stated that the FEIS should “address ozone and specify that project-level NEPA compliance documents will estimate potential ozone impacts” (EPA at 6). This statement is what the BLM relied on to respond to comments regarding the lack of an ozone analysis in the RMP. However, since the time of EPA’s comments on the draft RMP (and prior to the BLM’s release of the PRMP/FEIS) it has stated that the BLM “has an obligation under NEPA to fully consider the reasonably foreseeable developments including proposed tar sands and oil shale activities that are likely in the next several decades, as well as the expansion of existing oil and gas

⁸ February 4, 2008 letter from Larry Svoboda, EPA region 8, to William Stringer, BLM Vernal Field Office, Re: Final Environmental Impact Statement (EIS) for EOG Resources Inc., Chapita Wells-Stagecoach Area Natural Gas Development, CEQ #20070549.

⁹ February 8, 2008 letter from Larry Svoboda, EPA region 8, to William Stringer, BLM Vernal Field Office, Re: Draft Modeling Protocol for the Uinta Basin Air Quality Study, pp. 1-2.

¹⁰ February 8, 2008 letter from Larry Svoboda, EPA region 8, to William Stringer, BLM Vernal Field Office, Re: Draft Modeling Protocol for the Uinta Basin Air Quality Study, pp. 3-6.

operations *regardless of whether or not an application for drilling has been submitted to your office.*"¹¹ (Emphasis added). This indicates that the EPA no longer supports the BLM waiting until they have project-specific requests before fully assessing air quality impacts, including those to ambient ozone concentrations. The EPA also explicitly recommended, for the proposed West Tavaputs Natural Gas Full Field Development Plan DEIS, that the BLM "prepare a Supplemental Draft EIS that includes modeled demonstrations of both this project and cumulative pollutant emissions sources from other activities in the Uinta Basin demonstrating whether the proposed action will contribute to violations of the ozone NAAQS."¹²

The State Division of Air Quality (DAQ) also commented that the BLM failed to demonstrate compliance with all of the NAAQS since, it noted, there is no ozone analysis presented. See BLM Response to Comments by Resource AQ75 at 24. Clearly the DAQ sees no reason why the BLM cannot perform such an analysis prior to making planning decision for the Vernal RMP.

In addition to concerns with the reliability of the ongoing efforts by industry and the BLM to assess ozone impacts in the region, the BLM has failed to include in the PRMP/FEIS a comprehensive inventory of emissions that contribute to ozone formation and has failed to explain how the inventoried sources in the DRMP/FEIS will be incorporated into the larger Uinta Basin Air Quality Study. Following are the issues that remain with the DRMP/FEIS inventory of NO_x and VOC sources.

The PRMP/FEIS Continues to Underestimate the Air Quality Impacts from NO_x Emissions from Compressor Engines

Both the EPA and Vicki Stamper commented that the BLM underestimated NO_x emissions from compressors (Stamper at 3-4 and EPA at 5). Specifically, these comments identified inconsistencies in the modeling parameters used in the near-field modeling analysis and in the number of compressors modeled in the far-field analysis and noted that the emission rates modeled for both near-field and far-field analyses were not reflective of actual

¹¹ February 8, 2008 letter from Larry Svoboda, EPA region 8, to William Stringer, BLM Vernal Field Office, Re: Draft Modeling Protocol for the Uinta Basin Air Quality Study, p. 1.

¹² February 4, 2008 letter from Larry Svoboda, EPA region 8, to William Stringer, BLM Vernal Field Office, Re: Final Environmental Impact Statement (EIS) for EOG Resources Inc., Chapita Wells-Stagecoach Area Natural Gas Development, CEQ #20070549, p. 3.

permitted emission rates expected on the Uintah and Ouray Indian Reservations (in “Indian Country”).

In response to Vicki Stamper’s comment on the inconsistencies between the stack parameters for compressor engines modeled for the near-field analysis and those modeled for the far-field analysis (2004 Air Quality Assessment Report Table 3-19 at p. 34 versus Table 3-10 at p. 23), the BLM revised the parameters for the near-field analysis to match those used in the far-field analysis and indicated that the initial modeling was in fact based on these [now corrected] source parameters and therefore did not need to be redone. However, the results Tables for the near-field analysis show otherwise. Table 5-68 in the 2006 Air Quality Assessment Report (p. 114) shows the near-field modeling results with a maximum modeled annual NO₂ concentration in the Vernal management area of 1.4 µg/m³ compared with 7.7 µg/m³ in the 2004 Air Quality Assessment Report (p. 116). This reduction in emissions by over 80% does not support the BLM’s claim that the modeling is the same. The BLM must explain the huge reduction in NO_x emissions presented in the PRMP/FEIS.

Furthermore, and more importantly, the fact that the BLM did not alter the modeled emission rate for compressor engines located in Indian Country for the PRMP/FEIS means that NO_x emissions continue to under-represent what will likely occur. Both EPA and Vicki Stamper’s comments expressed a need for the BLM to use emission rates in Indian Country (which makes up a large portion of the planning area) that are reflective of un-permitted minor source emission rates, not Utah state-permitted best available control technology (BACT) emission rates as low as 0.7 grams per horsepower hour (g/hp-h). The BLM completely ignored both EPA and Vicki Stamper’s suggestions to evaluate recently-installed engines in Indian Country in order to establish a more representative rate. The BLM has failed to do this and has based its planning decisions on low emission rates that are not ensured through permitting. According to EPA, NO_x emission rates from field compressor engines on the Uintah and Ouray Reservations range from 2 to 28 g/hp-h. EPA at 5.

Finally, the number of compressor engines modeled for the far-field analysis appears to be too low. The maximum predicted number of compressors at 1,000 hp for the PRMP/FEIS is 69 (2006 Air Quality Assessment Report at 22). The number of wells for the preferred alternative of 4,265 (2006 Air Quality Assessment Report Table D-8) would mean that there would be approximately one compressor for every 62 wells (or roughly 16 hp per well). As

previously noted in Vicki Stamper's comments, this does not seem adequate given the current level of development. Stamper at 7. The Record of Decision for the Questar Exploration & Production (QEP), Greater Deadman Bench Oil and Gas Producing Region (GDBR) 1-2 (Mar. 31, 2008) seeks to approve up to 15 2,000-hp compressors for 1,368 wells, or roughly 22 hp per well. The ratio of wells per 1,000 hp of compression under this proposal would be 1:46. Stamper goes on to point out that the ratio of 1:62 is much less conservative than the near-field analysis, which assumed six 1,000 hp compressor engines for every 25 well pads (or a ratio of wells per 1,000 hp of compression of 1:4). The BLM has not responded to this inconsistency, which potentially results in yet another underprediction of NO_x emissions in the Vernal Management Area.

The PRMP/DEIS Does Not Include the Impacts of Drill Rig Emissions in the Near-Field Analysis

The BLM failed to include emissions from drill rig engines in its analysis of air quality impacts for the DRMP/FEIS on the basis that these emissions are considered insignificant. DRMP/DEIS at 4-35. Vicki Stamper disagreed in her comment letter and pointed out that the emissions inventory for the Rawlins DRMP/EIS included significant emissions from drilling operations and from other well pad construction equipment. Stamper at 5. The BLM responded by saying that drill rig engines were excluded based on estimates from the NSTC Air Quality staff but did not make publicly available the magnitude of these emissions as estimated by NSTC (Response to Comments by Resource AQ24 at 37). At the very least, the BLM should provide this information in support of its claim that these emissions are insignificant. It seems unlikely that these emissions could be considered insignificant since the BLM has included this source category in other RMPs and those emissions have not been an insignificant fraction of overall NO_x emissions. For example, the BLM estimated NO_x emissions from drill rigs for the Price Field Office DRMP/EIS and the West Tavaputs Plateau DEIS. These emissions made up over 40% and over 30%, respectively, of all NO_x emissions (construction and operation) inventoried.¹³ In fact, it is not uncommon for NO_x

¹³ Based on data from the October 2006 "Price Field Office Air Quality Baseline and Analysis Report Emissions Calculations" CD for the September 2007 Supplement to the DRMP/EIS and the Air Quality Technical Support Document (Appendix J) for the February 2008 West Tavaputs Plateau Natural Gas Full Field Development Plan Draft Environmental Impact Statement (DEIS).

emissions from drill rigs to account for as much as 40% of all NO_x emissions in oil and gas development.¹⁴ The BLM must, therefore, justify why the NO_x emissions from drill rigs in the Vernal planning area are somehow different from other areas. In not including this source category, the BLM's assessment very likely underpredicts NO_x emissions by a significant amount.

The DRMP/FEIS Underestimates NO_x Emissions from Flaring

Vicki Stamper commented that the inventory of emissions from flaring appear to “greatly underestimate” NO_x emissions from that source. Stamper at 6. Stamper suggested an emission rate based on more recent emission factor data that is eight times higher than the rate assumed in the DRMP/FEIS. The BLM responded by saying that even if the modeled emission rate were eight times higher the modeling results still yield “extremely small concentrations”. Response to Comments by Resource AQ25 at 38. The BLM also ignored Stamper's comment that the BLM must consider VOC emissions from flaring in their analysis. Considering the importance of NO_x and VOC emissions in ozone formation and the fact that the BLM has not conducted an ozone analysis for the region and therefore is not demonstrating compliance with the ozone NAAQS it is important for the BLM to consider *all* relevant emissions sources that contribute to ozone formation, however small.

The importance of protecting the air quality for those people who live in the region, most importantly for sensitive populations, including children, the elderly and those with respiratory conditions is huge. Exposure to ozone is a serious concern as it can cause or exacerbate respiratory health problems, including shortness of breath, asthma, chest pain and coughing, decreased lung function and even long-term lung damage.¹⁵ According to a recent report by the National Research Council “short-term exposure to current levels of ozone in many areas is likely to contribute to premature deaths”.¹⁶ The EPA recently revised the 8-hour ozone standard from 80 ppb to 75 ppb.¹⁷ The Clean Air Scientific Advisory Committee (CASAC) recommended substantially lowering the 8-hour standard and the EPA did not

¹⁴ Based on a review of inventories from the Pinedale Anticline and Jonah Infill Oil and Gas Development EIS Projects.

¹⁵ See EPA's National Ambient Air Quality Standards for Particulates and Ozone, 62 FR 38,856 (July 18, 1997).

¹⁶ <http://www.nationalacademies.org/morenews/20080422.html>

¹⁷ 73 FR 16436, Effective May 27, 2008.

abide by the committees recommendations. Specifically, the CASAC put forth a unanimous recommendation to lower the 8-hour standard from 80 parts per billion (ppb) to somewhere between 60-70 ppb.¹⁸ The committee concluded that there is no scientific justification for retaining the current 8-hour standard and that the EPA needs to substantially reduce the primary 8-hour standard to protect human health, especially in sensitive populations. So, even ozone concentrations at levels as low as 60 ppb can be considered harmful to human health and the BLM must consider this when evaluating the air impacts in the planning area. A monitor located in Vernal, UT for most of 2007 collected ozone data for the area. These data confirm that ozone concentrations in the basin already threaten human health.¹⁹ The BLM must fully evaluate ozone concentrations in the region before continuing to approve more development that will increase emissions of ozone-forming pollutants in the planning area. As an example, the BLM recently proposed to allow NO_x emissions and VOC emissions from the West Tavaputs Plateau Full Field Natural Gas development to add over 1,200 and over 6,000 tons per year of NO_x and VOC emissions, respectively, to the area.²⁰ No modeling of the impacts of these emissions on ozone concentrations in the region was presented with the BLM's proposal.

The BLM has utterly failed to conduct any ozone analysis for the Uinta Basin up to this point (either at the planning stage or at the project-specific proposal stage). The recent West Tavaputs Plateau Natural Gas Full Field Development Project DEIS, which is located next to the planning area and is within the Uinta Basin, attempted to rely on ozone modeling done for southwest Wyoming to demonstrate compliance with the ozone NAAQS but the BLM did not even include project sources from the proposed development in it's "analysis" and the results of the analysis still showed exceedances of the 8-hour ozone NAAQS.²¹ Along with the data collected at Vernal showing high ozone concentrations, other areas in the region are also already experiencing elevated ozone concentrations - sometimes in excess of the ozone NAAQS - including Canyonlands National Park, Zion National Park, Mesa

¹⁸ EPA-CASAC-LTR-07-001, Clean Air Scientific Advisory Committee's (CASAC) Peer Review of the Agency's 2nd Draft Ozone Staff Paper, October 24, 2006

¹⁹ The 4th maximum 8-hour average concentration in 2007 was 68 ppb.

²⁰ See Table 2-1 on page 2 of the Air Quality Technical Report (Proposed Action)

²¹ See Table 4-3.4 on p. 4-18 of the West Tavaputs Plateau Natural Gas Full Field Development Plan DEIS

Verde National Park and the Green River Basin in Wyoming.²² The State of Wyoming recently issued three ozone advisories for the Pinedale region in the Upper Green River Basin. The Wyoming Department of Environmental Quality has said the cause of the elevated ozone levels is probably the area's intensive natural gas development.²³ These data show that ozone levels are already a concern and an even greater one than when the BLM released the draft RMP for the area. Yet the BLM continues to avoid completing an ozone analysis for the region. None of the following EAs from the Vernal BLM include an ozone analysis, instead claiming that a regional study should be developed: Enduring Resources Saddletree Draw Leasing and Rock House Development Proposal Environmental Assessment and Biological Assessment, UT-080-07-671, at 6-25 (June 2007) (approving approximately 60 wells); Record of Decision, Questar Exploration & Production (QEP), Greater Deadman Bench Oil and Gas Producing Region (GDBR) 8 (Mar. 31, 2008) (approving 1,368 gas and oil wells and stating that ozone analysis is often based on regional analysis); Record of Decision, EOG Resources, Inc. Chapita Wells – Stagecoach Area Natural Gas Development 6 (Mar. 31, 2008) (approving 627 gas wells and stating the same as the GDBR record of decision). At the project specific phase the BLM is saying ozone should be assessed on a regional level and yet the BLM fails to follow through with such an assessment for this regional planning document. The BLM is avoiding its obligation to complete such an assessment at both the planning stage and at the project proposal stage.

The BLM Failed to Adequately Demonstrate Compliance with the Particulate Matter NAAQS

The DRMP/FEIS does not adequately demonstrate compliance with the particulate matter NAAQS (i.e., PM₁₀ and PM_{2.5}). Of primary concern is the fact that the air quality analysis is based on outdated background concentrations that are not reflective of actual

²² See data compiled by the National Park Service at http://www.airquality.utah.gov/Public-Interest/Current-Issues/Oil_and_Gas/Uintah_Basin/comparison.pdf. Also see the draft RMP for the Richfield Field Office (October 2007), Figure 3-4 on p. 3-9,. Also see “4 Corners Air Quality Task Force Existing Monitoring Summary”, May 2006. Also see EPA air monitoring data for Sublette County, Wyoming at <http://www.epa.gov/air/data/reports.html>.

²³ See <http://www.billingsgazette.net/articles/2008/03/11/news/wyoming/40-ozonewarnings.txt> and <http://billingsgazette.net/articles/2008/03/14/news/wyoming/25-drillerair.txt>

background concentrations as noted by the Division of Air Quality (DAQ) in several recent letters to the BLM. Specifically, the 24-hour average background concentration for PM₁₀ of 28 µg/m³ and for PM_{2.5} of 19 µg/m³ are specified, along with NO₂, SO₂ and CO, in Table 5-2 of the 2006 Air Quality Assessment Report (p. 51) and, according to the footnote in that table, are based on data from UDAQ from 2003. In fact, the BLM “defers the selection of background air quality monitoring data to the Utah DEQ”. Response to Comments by Resource AQ2 at 2. However, even after the State of Utah questioned the BLM’s background concentration data used for the analysis (see Response to Comments by Resource AQ2 at 2) the BLM did not seek to obtain and use updated data from the State. As recently as July 2008 the BLM used a 24-hour average background concentration in the Uinta Basin of 25 µg/m³ and cited the source of this data as “UDEQ-DAQ(2008)”.²⁴

The State of Utah, in fact, claims it has not provided PM_{2.5} background concentration data to the BLM for this area because it has not developed such values for studies such as EISs.²⁵ The State has revised its PM₁₀ background concentration for this area to a 24-hour average concentration of 63.3 µg/m³.²⁶ This value is based on recent PM monitoring data in the Vernal area. EPA has also weighed in on the background concentration for PM_{2.5} for the Vernal area in its comments on the West Tavaputs Plateau Development DEIS. EPA expressed concern with “the use of basis for the estimated background level for PM_{2.5}” of 25 µg/m³ for a 24-hour average period.²⁷ The EPA goes on to recommend that the BLM update the PM analysis with more current monitoring data.

All of the recent finalized RMPs prepared by the BLM in Utah have used a background PM_{2.5} concentration of 25 µg/m³ (24-hour average), or higher, so it is unclear why the 19 µg/m³ concentration was not updated to reflect more currently available data per the request of both EPA and the State.

²⁴ Petro-Canada Resources (USA) Inc.’s Twin Hollow Exploratory Drilling EA, July 2008, Table 3-2, p. 29.

²⁵ April 28, 2008 letter from John Harja, State of Utah to Brad Higdon, BLM Re: West Tavaputs Plateau Natural Gas Field Development Plan Draft Environmental Impact Statement (DEIS) Project No. 08-8885, p. 3.

²⁶ April 28, 2008 letter from John Harja, State of Utah to Brad Higdon, BLM Re: West Tavaputs Plateau Natural Gas Field Development Plan Draft Environmental Impact Statement (DEIS) Project No. 08-8885, p. 3.

²⁷ May 23, 2008 letter from Larry Svoboda, EPA to Selma Sierra, BLM Re: West Tavaputs Plateau Natural Gas Full Field Development Plan, Draft Environmental Impact Statement, Carbon County, Utah, CEQ# 20080028, p. 6.

The PM_{2.5} monitor in Vernal, Utah, which operated from December 2006 until mid-December 2007 appears to be the basis for the State’s suggested 24-hour PM₁₀ background concentration of 63.3 µg/m³.²⁸ PM₁₀ concentrations could obviously be even higher than the PM_{2.5} portion monitored in Vernal but this must be the minimum value used as representative of background PM₁₀ concentrations according to the State. During the short time of operation this monitor recorded several very high values of PM_{2.5} in the area, including six exceedances of the 24-hour PM_{2.5} NAAQS as follows:²⁹

Vernal (VL)		NAAQS
PM _{2.5} Actual Concentrations (24-hour average) in µg/m ³		PM _{2.5} (24-hour average) in µg/m ³
01/10/07	45.1	35
01/15/07	35.5	
01/18/07	55.7	
01/27/07	63.3	
02/08/07	51.8	
12/05/07	43.3	

The maximum 24-hour average concentration at the Vernal monitor in 2007 was 63.3 µg/m³ based on a one-in-three day sampling frequency. The second highest 24-hour average concentration (the “high second high” value) was 55.7 µg/m³. Both of these observed 24-hour average concentrations are three times the background concentration of 19 µg/m³ used by the BLM for the PRMP/FEIS. Keeping in mind that the concentration to be used as reflective of background should be determined by also evaluating “the meteorological conditions accompanying the concentrations of concern” (see 40 CFR Part 51, Appendix W, § 9.2.2), use of the maximum or high second high 24-hour average concentration from the Vernal monitor as the representative PM_{2.5} background concentration – either 63.3 µg/m³ or 55.7 µg/m³ – is the best way to ensure public health protection. These observed concentrations, where even the high sixth high concentration exceeds the NAAQS, indicate that the BLM must find a way to *reduce* PM_{2.5} emissions in the area in order to avoid violating the

²⁸ The last filter sampled was on December 14, 2007, per correspondence with the state DAQ.

²⁹ Data from the State’s “Particulate PM2.5 Data Archive” at <http://www.airmonitoring.utah.gov/dataarchive/archpm25.htm>

short-term PM_{2.5} NAAQS. Continuing to approve more development that adds fine particle emissions to the basin will threaten the area's attainment of the NAAQS. Nowhere in the PRMP/FEIS does the BLM acknowledge these monitored exceedances of the short-term fine particle NAAQS in the Vernal planning area. At these concentrations, *any* increase in PM_{2.5} emissions from development in the area (e.g., from off road vehicle use and from oil and gas development) will threaten the area's compliance with the short-term fine particle NAAQS. In order to meet its obligations under FLPMA, the BLM must demonstrate that the proposed increases in primary and secondary PM_{2.5} emissions will not cause or contribute to violations of the PM_{2.5} NAAQS.

The NAAQS were set to protect the public and the environment from the adverse effects from air pollution. Thus, in determining whether these air quality standards might be exceeded as a result of the BLM's proposed action, the RMP must use background concentrations that are truly representative of the maximum concentrations that are currently occurring. Only by using a background concentration that is representative of the maximum concentration for the area will the public be assured that public health and welfare will be protected. Using a concentration that is significantly lower than monitored levels in the area leaves open the possibility (when concentrations as high as the NAAQS occur, as they already have) that human health will be adversely affected as a result of future oil and gas development on top of all other air emissions sources in the region. Using a lower background concentration than what has been observed in the area simply ignores the real fact that higher levels can (and likely will continue to) occur in the area.

The State describes the Vernal monitor in its PM_{2.5} area designation recommendations as follows:

“In this case it is not the mobile source emissions that dominate the inventory, nor is there a single large point source that could unduly influence the area. Population growth for the Uintah Basin is estimated at only about one percent per year (see Table 3.) Rather, it is the area source emissions from a source category that is not well understood. This area has long been a source of oil and gas deposits, and with the recent emphasis on exploration and development of domestic energy sources, there has been an

upsurge in the industry surrounding this resource.”³⁰

The State attributes the high PM_{2.5} values from the Vernal monitor to oil and gas activity in the area which lends even more support to the use of these data for background concentrations when determining future impacts from oil and gas development.

The EPA recently revised the short-term PM_{2.5} standard because scientific information showed that the pollutant is a health concern at levels lower than what the previous standard allowed. PM_{2.5} can become lodged deep in the lungs or can enter the blood stream, worsening the health of asthmatics and even causing premature death in people with heart and lung disease. Fine particles are also a major contributor to visibility impairment. See the EPA’s staff paper on particulate matter (EPA-452/R-05-005a, December 2005) as well as the EPA’s Air Quality Criteria Document for Particulate Matter (EPA/600/P-99/002aF and EPA/600/P-99/002bF, October 2004) for more detailed information on the health effects of fine particles. And even PM_{2.5} concentrations lower than the current NAAQS are a concern for human health. In fact, the CASAC, in their recommendations to the EPA on the revised PM_{2.5} standard, unanimously recommended that the 24-hr PM_{2.5} standard be lowered from 65 µg/m³ to 30-35 µg/m³ and that the annual standard be lowered from 15 µg/m³ to 13-14 µg/m³.³¹ EPA set the standard on the high end of the CASAC recommended range for the short-term standard and chose not to lower the annual standard at all. In response, CASAC made it clear in their September 29, 2006 recommendation letter to the EPA that their recommendations were based on “clear and convincing scientific evidence” and that the EPA’s decision not to lower the annual standard does not provide for “an adequate margin of safety ... requisite to protect the public health” as required by the CAA and, furthermore, that their recommendations were “consistent with the mainstream scientific advice that EPA received from virtually every major medical association and public health organization that provided their input to the Agency”. The BLM has an obligation, under NEPA, to evaluate all potential health effects from exposure to increased pollution under the various alternatives of an EIS. The fact that the EPA has set the PM_{2.5} standards at levels that some would claim are not adequate to protect human

³⁰ Utah Area Designation Recommendation for the 2006 PM_{2.5} NAAQS, State of Utah, Department of Environmental Quality, Division of Air Quality, December 18, 2007, p. 34.

³¹ EPA-CASAC-LTR-06-003, Clean Air Scientific Advisory Committee Recommendations Concerning the Final National Ambient Air Quality Standards for Particulate Matter, September 29, 2006, <http://www.epa.gov/sab/panels/casacpmpanel.html>

health should not limit the BLM to using only EPA's standards. The BLM must assure adequate protection of human health from exposure to fine particles in the area and could certainly use the CASAC recommendations as a guide for achieving this protection.

Even using a background concentration of $19 \mu\text{g}/\text{m}^3$, the modeling for the PRMP/FEIS shows that $\text{PM}_{2.5}$ concentrations for the planning area are over 50% the 24-hour average $\text{PM}_{2.5}$ NAAQS. 2006 Air Quality Assessment Report at 58 and 115. Considering the fact that the BLM already has and continues to approve oil and gas development projects in the Vernal planning area without any comprehensive analysis of $\text{PM}_{2.5}$ impacts makes it almost certain that $\text{PM}_{2.5}$ concentrations in the area are already threatening to violate the short-term NAAQS. In fact, the monitoring data from the Vernal monitor in 2007 appear to support this trend.

The Enduring Resources' Saddletree Draw Leasing and Rock House Development Proposal EA (Rock House EA) (December 2007) predicted modeled violations of the 24-hour average $\text{PM}_{2.5}$ and PM_{10} NAAQS as well as the 24-hour average Class II PM_{10} increment. *See* Rock House EA at 6-24 to -25 and Rock House Emissions Inventory, Criteria Summary Tab. The modeled $\text{PM}_{2.5}$ NAAQS violations were based on a 24-hour average background concentration of $25 \mu\text{g}/\text{m}^3$. The BLM recently approved over 620 natural gas wells, close to 100 miles of road and an additional 5,000 horsepower of compression for the Chapita-Wells Stagecoach Area Natural Gas Development project (*See* Exhibit Y) as well as over 1,000 natural gas wells, over 200 oil wells, almost 900 well pads, 15 compressor stations and 170 miles of new road for the Greater Deadman Bench Oil and Gas Producing Region and yet, neither of these EISs included a comprehensive analysis of $\text{PM}_{2.5}$ impacts (i.e., near-field, far-field and cumulative impacts).³² The BLM cannot allow continued growth in fine particle emissions without assuring the public - through a comprehensive analysis of impacts - that concentrations of $\text{PM}_{2.5}$ are not at levels that are harmful to human health.

The $\text{PM}_{2.5}$ modeling that was completed for the PRMP/FEIS that results in 24-hour average $\text{PM}_{2.5}$ concentrations at over 50% of the NAAQS likely underestimated emissions and, therefore, ambient impacts. The modeling analysis did not include any $\text{PM}_{2.5}$ tailpipe emissions from construction of the well pads. Response to Comments by Resource AQ21 at 36. It also did not include any

³² See EOG Resources Inc. Chapita Wells-Stagecoach Area Natural Gas Development Final EIS UTU-080-2005-0010 (May 2007, Modified January 2008) and Greater Deadman Bench Oil and Gas Producing Region Final EIS UT-080-2003-0369V (January 2008)

PM emissions from increased traffic on existing roads. Response to Comments by Resource AQ45 at 53. These additional PM sources are important for demonstrating compliance with the PM₁₀ and PM_{2.5} NAAQS, as well as the PM₁₀ Class II PSD increments within the Vernal Field Office region. The BLM has included these source emissions in previous planning analyses and therefore has the capability to do so here, as well.³³

It is unclear if the BLM modeled the fugitive PM emissions from roads and from all sources (i.e., from roads, well construction and operation) correctly. Both Vicki Stamper and EPA commented on this. In response to Stamper's comments, the BLM said it completed a separate analysis of the impacts from the road only, at the request of EPA Region 8. The BLM describes this "update" as follows:

"To address the comment regarding the placement of receptors, and to update the near-field analysis to reflect site-specificity, the near-field analysis was updated."
Response to Comments by Resource AQ23 at 36-37.

There is no detailed discussion of this updated analysis in the PRMP/FEIS or Air Quality Assessment Report other than the results reported in the 2006 Air Quality Assessment Report in Tables 5-69 and 5-70 which, for 24-hour PM_{2.5} concentrations in the Vernal MA, are significantly lower than the concentrations reported in the 2004 Air Quality Assessment Report (99% lower for fugitive dust from roads only and 83% lower for fugitive dust emissions from roads and other sources). It appears that the updated analysis adjusted the placement of receptors such that the predicted impacts are now only a fraction of what they were in the draft. The BLM must more clearly explain/justify what changes it made to the modeling runs that result in lower predicted maximum PM_{2.5} ambient impacts from fugitive dust. The receptor location that yielded the higher predicted concentrations would seemingly best represent "Maximum Modeled Concentration" as reported in Tables 5-69 and 5-70 of the Air Quality Assessment Report. The maximum modeled concentration must represent just that – the maximum concentration predicted at any given receptor location in the model.

In addition to the fugitive dust and tailpipe emissions from oil and gas development, the BLM must account for these same emissions from off-road vehicle (ORV) activities in the planning area.

³³ See, e.g., Rock House Emissions Inventory, "Const. Tailpipe" Tab.

Southern Utah Wilderness Alliance (SUWA) specifically addressed this deficiency in a letter to the BLM on June 18, 2008.³⁴ SUWA provided documentation to support the type of emissions assessment that is needed for evaluating the impacts from this source category (e.g., one based on vehicle miles traveled and emission factors that do not employ dust suppression). Specifically, SUWA specified the need for modeling “ORV use on unpaved routes that would be authorized by its travel plan as well as ORV cross country use and predictable unauthorized use”. The BLM has not addressed this omission of ORV emissions in the PRMP/FEIS.

Another way in which the BLM likely underestimated PM_{2.5} emissions is by failing to consider secondary PM_{2.5} emissions in its analysis. The PM_{2.5} modeling conducted by the BLM for the PRMP/FEIS only considered primary PM_{2.5} (directly emitted from combustion point sources and from fugitive sources). Emissions of NO_x, VOCs, SO₂ and ammonia can form, after emitted into the atmosphere, into PM_{2.5} and this could potentially be a significant component of ambient PM_{2.5} concentrations. Estimates of PM_{2.5} formation from these precursors should also be included in the BLM’s modeling analyses.

It is quite possible that the high concentrations of PM_{2.5} that were recorded at the Vernal monitor are due in large part to the secondary formation of PM_{2.5} (e.g., sulfates and nitrates), as opposed to directly emitted [primary] PM (e.g., road dust and wood smoke). The high values mostly occurred during the wintertime and could therefore be associated with inversions that limit dispersion and provide conditions (e.g., high relative humidity) that contribute to the formation of secondary PM_{2.5} in the atmosphere. Since it is possible that the monitored high values in Vernal are due to gaseous pollutants that form fine particles after reacting with other compounds in the air during wintertime inversions then it would be very important for the BLM to consider these PM_{2.5} sources (e.g., NO_x from diesel combustion) in its air quality impact assessment. All of the sources of the primary pollutants that contribute to secondary PM_{2.5} formation – e.g., NO_x, SO_x and VOC - from development in the Vernal management area must be accounted for in the BLM’s assessment of PM_{2.5} impacts.

While the discipline of secondary PM_{2.5} modeling is still evolving there *are* tools available to support such an analysis. The EPA

³⁴ Letter from David Garbett, SUWA, to Kelly Buckner, BLM (June 18, 2008).

provides access to certain photochemical modeling applications, including modeling of secondary PM, for regulatory applications. Specifically, the EPA recently developed a model based on the Community Multi-scale Air Quality (CMAQ) model to support the development of the PM_{2.5} NAAQS. According to the EPA, the model has been shown to “reproduce the results from an individual modeling simulation with little bias or error” and “provides a wide breadth of model outputs, which can be used to develop emissions control scenarios”.³⁵ The Comprehensive Air quality Model with extensions (CAMx) is another tool available to assess secondary PM_{2.5} formation. CAMx has source apportionment capabilities and can assess a wide variety of inert and chemically reactive pollutants, including inorganic and organic PM_{2.5} and PM₁₀. The Regional Modeling System for Aerosols and Deposition (REMSAD) can also model concentrations of both inert and chemically reactive pollutants on a regional scale, “including those processes relevant to regional haze and particulate matter”.³⁶ These are just some examples of current models with the capability to assess secondary PM_{2.5} impacts.

It is imperative that the BLM use the available tools to assess the impact of emissions in the planning area that contribute to secondary PM_{2.5} formation. Resulting PM_{2.5} concentrations will be higher when considering the additional impacts from secondary PM_{2.5}. Considering the already high PM_{2.5} background concentrations in the area and the fact that the BLM has not arguably demonstrated compliance with the 24-hour NAAQS, the secondary PM_{2.5} impacts are critical to understanding the best way to mitigate health impacts from fine particle pollution within the Vernal planning area.

All of these factors (i.e., the use of background concentrations lower than what has been observed in the area and potential underestimates of PM_{2.5} emissions) result in an incomplete assessment of near-field PM_{2.5} impacts and therefore fail to meet the requirements of FLPMA to demonstrate compliance with all CAA requirements. It seems quite likely, based on all of the presented information (e.g., the recent monitoring data in Vernal, previous BLM project-specific analyses in the Vernal management area, etc.) that compliance with the 24-hour PM_{2.5} NAAQS cannot be demonstrated for the Vernal planning area. Failing to fully evaluate all known PM_{2.5} emissions sources and failing to use a more representative background concentration will result in an

³⁵ See http://www.epa.gov/scram001/reports/pmnaqs_tsd_rsm_all_021606.pdf

³⁶ See <http://remsad.saintl.com/>

analysis that under-predicts PM_{2.5} impacts in the planning area. The extent of this under-prediction could be quite significant considering the recently monitored PM_{2.5} values recorded in Vernal. Again, the BLM must ensure the scientific validity of this analysis per the requirements of 40 CFR § 1502.24.

The BLM Failed to Complete a PSD Increment Analysis

The BLM has failed to complete an analysis to determine how much of the incremental amount of air pollution allowed in clean air areas (i.e., PSD increment) has already been consumed in the affected planning area and how much additional increment consumption will occur due to the proposed development under the RMP. Without this analysis, the BLM is not ensuring that air quality will not deteriorate more than allowed under the law (Clean Air Act).

The BLM did not include any revisions to its PSD increment consumption “analysis” for the PRMP/FEIS. However, it did receive comments from Vicki Stamper and the State of Utah, which call into question the integrity of the BLM’s so-called PSD increment analysis. In response to these comments, the BLM claims that “[t]he analysis of increment consumption is the sole responsibility of State air agencies that have been delegated authority by EPA under the Clean Air Act.” Response to Comments by Resource AQ 26 at 46.

In fact, the BLM is required, under NEPA, to analyze and disclose all significant air quality impacts, regardless of whether another agency might address an adverse environmental impact in the future. The BLM must consider the PSD increments as important and legally binding Clean Air Act requirements and it must provide for compliance with these requirements in the FEIS. The PSD increments are separate ambient air quality standards not to be exceeded, as set out in §163 of the Clean Air Act, that apply *in addition to* the national ambient air quality standards in clean air areas. The BLM is required under FLPMA, 43 U.S.C. § 1712(c)(8), to “provide for compliance with” all Clean Air Act requirements, and thus the BLM cannot authorize an action that would allow the PSD increments to be exceeded. See also 43 CFR § 2920.7(b)(3) (requiring the same for land use authorizations).

Reliance on the State to track PSD increment consumption and assess PSD increments during new source permit reviews cannot be a substitute for the BLM’s obligation under FLPMA to “provide for compliance” with the NAAQS and PSD increments. The types

of oil and gas sources proposed in the RMP development (e.g., area sources and numerous smaller point sources) will likely not trigger the need for the operator(s) to obtain any PSD permits from the State and therefore, none of the referenced state analyses of increment consumption will occur. Utah's minor source permitting regulations do not require increment consumption analyses (see Utah Administrative Code (UAC) R307-401). There are other provisions of the Clean Air Act and implementing regulations that require the protection of the PSD increments in addition to permitting requirements. The state must also track increment consumption in the area (and in any affected Class I areas) and the State Implementation Plan (SIP) should contain any necessary measures to assure that the increments are not exceeded. Specifically, the state is required to periodically review its plans for preventing significant deterioration (40 CFR 51.166(a)(4)) and if it determines that an applicable increment is being violated, then the state must revise the SIP to correct the violation (40 CFR 51.166(a)(3)). However, the fact that the State has a legal responsibility to protect increments does not mean that the BLM is relieved of its responsibility under FLPMA to "provide for compliance" with CAA requirements or its obligation under NEPA to fully describe the cumulative impacts of the proposed project and identify mitigation measures to prevent adverse impacts. In fact, the BLM has no assurance that the State will perform any analysis of increment consumption. If the State had performed such an increment tracking analysis for the Uinta Basin the BLM might properly rely on it to show that existing sources have not caused PSD increment violations. Without such an assessment to rely on, the PRMP/FEIS must include an increment consumption analysis so that BLM's obligation to develop and adopt sufficient mitigation measures may be included as part of the FEIS analyses and adopted as conditions in the Record of Decision.

In the past, the BLM has also indicated that the predicted PSD increment violations in EIS documents should not be considered as real increment violations because they are modeled. However, since only emissions from major stationary sources which commenced construction or modification after the applicable "major source baseline date" and emissions increases from minor, area and mobile sources that occurred after the relevant "minor source baseline date" affect the allowable increment, an air quality monitor cannot distinguish between pollutant concentrations from sources that are part of the baseline and those from sources that

consume increment.³⁷ Therefore, it is impossible to use monitoring data to establish compliance with the PSD increments; the only way to determine compliance is to complete a modeling analysis.

The BLM's PSD increment analysis is based on the use of a "monitoring base year" and only includes sources that began operation or commenced construction after that year. The "monitoring base year" is 2000 or 2001, depending on the pollutant being considered. See PRMP/FEIS Table 4.2.4 at 4-21. This type of analysis essentially leaves out all increment consuming emissions that occurred between the time of the applicable regulatory baseline dates and the "monitoring base year" (i.e., 2000 or 2001). As presented, the BLM's PSD increment analysis is merely a subset of what is required since it only assesses the emissions changes that have occurred or are expected to occur since 2000 or 2001.

The State of Utah, which the BLM purports to be the Agency with "the sole responsibility" of ensuring protection of the PSD increments, made the following comment, among others, regarding the BLM's PSD "comparison analysis":

"UDAQ is not familiar with "monitoring baseline date," or why it would support the conclusion that since a source was operating at the time of the monitoring date, it was assumed to be included in the background concentration of a pollutant. As mentioned in other discussions in the DRMP-EIS, there is very little actual air quality monitoring data that exists within the study area. A PSD modeling analysis must include emissions from sources that would impact the study area at the 1ug/m3 level. The analysis must be redone using standard modeling procedures, which would include modeling the emissions from nearby sources. Also, since the major and minor PSD baseline dates have been established for the DRMP-EIS area, minor sources consume increment and must be included in all increment calculations." Response to Comments by Resource AQ81

The major source baseline dates are January 6, 1975 for SO₂ and PM₁₀ and February 8, 1988 for NO₂ (40 CFR 52.21(b)(14)(i)). The minor source baseline dates in Utah differ by pollutant and by [baseline] area and were triggered on the date that a complete PSD permit application was received by the State DAQ (or by the EPA for sources proposing to locate in Indian Country). Baseline area designations in Utah include Indian Country (40 CFR 81.345). See definitions of "major source baseline date", "minor source baseline date" and "baseline area" in the Utah PSD rules and 40 CFR 52.21(b)(14)(i), 52.21(b)(14)(ii) and 52.21(b)(15).

at 25.

Clearly the State thinks the BLM must perform its own defensible PSD increment analysis as part of the planning process for the Vernal RMP. The BLM must prepare an inventory of all emissions changes that have occurred since the major and minor PSD baseline dates and model those changes in emissions to determine compliance with the PSD increments. The BLM is required to do this not only to comply with its obligations under the Clean Air Act and the Federal Land Policy and Management Act, but also to comply with its obligations under NEPA to consider the direct and indirect impacts of the action, and its cumulative impacts. See e.g., 40 CFR §§ 1502.2(d), 1508.7, 1508.8. Furthermore, the BLM must base its PSD increment analysis on a comprehensive inventory of sources in order to meet its obligation to ensure the scientific validity of this analysis. 40 CFR § 1502.24.

The BLM Failed to Prepare a Comprehensive Cumulative Source Inventory

The inventory of source emissions since the “monitoring base year” does not represent all sources that can and must be inventoried in order to make a full assessment of cumulative impacts in the areas impacted by sources throughout the planning area. Both Vicki Stamper and the EPA identified several shortcomings in the inventory which were not addressed by the BLM in the PRMP/FEIS.

The draft RMP/EIS identified a high to moderate potential for oil shale development in the next 15 years and EPA highlighted two current efforts in the Vernal planning area for pilot-scale oil shale development. It does not appear that the BLM specifically addressed the EPA’s comment on the need to identify the impacts from oil shale development. As mentioned earlier, the BLM’s final Programmatic EIS for oil shale and tar sands development does not include any modeling of impacts from the proposed leasing program.

The EPA also commented on the need to include reasonably foreseeable future sources of air emissions in the West Tavaputs Plateau development area. Specifically, the EPA identified several proposed projects with emissions estimates that could be included in the inventory for the RMP.

Vicki Stamper identified several sources that were not included in the inventory and should have been. Stamper at 12-13. These include sources that are located more than 50 km away from the

Class I areas of concern but that could still impact these areas (e.g., coal-fired power plants in central and northeast Utah and northwest New Mexico as well as oil and gas development in southwest Wyoming, southwest Colorado and northwest New Mexico). The BLM responded to this comment by saying that more detail is needed on these sources, some of which - according to the BLM - are “well outside” the modeling domain. The BLM made no effort to obtain more information on these sources and made no changes to the inventory as a result. Vicki Stamper points out in her comments, however, that some of these sources, in fact, do have projected impacts in the Class I areas modeled for the Vernal RMP. The BLM has an obligation to look at all sources that will impact the same areas impacted by the sources in the planning area. This could certainly include sources that are “well outside” of the modeling domain if their impacts are projected to be large enough to affect Class I areas impacted by sources covered under the RMP. The BLM says that “this NEPA air quality analysis is focused on the proposed action and alternatives, and is not performed to determine potential impacts at a given Class I area from every source regardless of proximity to the project area.” Response to Comments by Resource AQ38 at 48. However, the BLM is not able to determine if the proposed alternatives will cause or contribute to violations of Clean Air Act requirements if it does not assess the proposed alternative impacts along with all other sources impacting the same locations.

Finally, the BLM failed to justify why the modeling included a 10 km “buffer” around each modeled Class I area where no sources were assumed to reside (since not all source locations were known). The BLM responded to Vicki Stamper’s comment that this approach is inappropriate and could underestimate impacts to Class I areas by saying that “few, if any of these sources will actually be located within 10 km of a Federal Class I area.” Response to Comments by Resource AQ44 at 53. The fact that some of these sources could, in fact, locate within 10 km of a Class I area (e.g., smaller sources that don’t require a permit would not be restricted from locating within 10km of a Class I area), means the BLM has an obligation to include this possibility in its assessment. There is no scientifically defensible reason to arbitrarily establishing a “buffer” around Class I areas if it is quite possible, as the BLM acknowledges, that sources could locate there.

Failing to include the above-mentioned sources will result in an analysis that under-predicts cumulative impacts in the planning area. The extent of this under-prediction could be quite significant

considering the magnitude of the oil shale and tar sands leasing program identified in the programmatic EIS. Again, the BLM must base its air quality analyses on a comprehensive inventory of sources in order to meet its obligation to ensure the scientific validity of this analysis. 40 CFR § 1502.24.

The BLM Failed to Adequately Assess Impacts to Air Quality Related Values, Including Visibility

The PRMP/FEIS does not include a comprehensive cumulative assessment of impacts to air quality related values (AQRV), including visibility, at affected Class I areas. This type of analysis is needed in order to determine whether the Vernal RMP sources will cause or contribute to significant adverse impacts on AQRVs at affected Class I areas.

The visibility modeling analysis should include a more complete emissions inventory (for sources expected in the Vernal planning area, inventory sources, and other reasonably foreseeable development in the region as described in the source inventory section above) and should assess impacts at other Class I areas - besides just those in southern Utah - that could be impacted by the Vernal planning area sources, as described previously.

In addition to understating potential impacts due to an incomplete look at emissions, the BLM continues to use comparison thresholds for visibility and sulfur and nitrogen deposition that ignore potential impacts. Both the US Forest Service (USFS) and Vicki Stamper commented on these comparison thresholds. *See*, e.g., Stamper at 17 and USFS Ashley NF at 28. The PRMP/FEIS continues to use sulfur and nitrogen deposition thresholds that are 1,000 times higher than the deposition analysis thresholds (DATs) developed and used by the National Park Service (NPS) and Fish and Wildlife Service (FWS) for their Class I areas. The BLM justifies this by saying that the lower DATs used by the other Federal Land Managers are screening levels above which further analysis is required. The BLM must therefore complete such an analysis if either sulfur or nitrogen deposition rates exceed the 0.005 kg/ha/yr rate. The BLM cannot simply ignore those areas with potential adverse impacts.

For visibility impairment, the BLM should use a visibility metric of 0.5 deciview (dv) or more change in visibility as a measure of whether the Vernal RMP would result in significant visibility

impacts at Class I areas.³⁸ A threshold of 0.5 dv is much more protective of visibility in Class I areas and has the support of other Federal Land Managers (e.g., USFS, NPS). The Clean Air Act and subsequent EPA regulations also point to the importance of a 0.5 dv threshold. Under the regional haze regulations, states are required to consider a change of 0.5 dv in determining Best Available Retrofit Technology (BART) eligibility for stationary sources.³⁹ Furthermore, the BART rulemaking states that “changes in light extinction of 5% will evoke a just noticeable change in most landscapes.”⁴⁰

The Federal Land Managers’ 2002 FLAG report, concluded that “for the case of visibility impairment which changes the appearance of a viewed background feature [i.e., uniform haze as opposed to a plume], thresholds of perceptibility, where a just noticeable change occurs in the scene, have been found to correspond to a change in extinction (Δb_{ext}) as low as 2% under ideal conditions, up to 20% (NAPAP, 1990; Pitchford and Malm, 1994). A Δb_{ext} of 5% will evoke a just noticeable change in most landscapes (NAPAP, 1990). The FLMs are concerned about situations where a change in extinction from new source growth is greater than 5% as compared against natural conditions. Changes in extinction greater than 10% are generally considered unacceptable by the FLMs and will likely raise objections to further pollutant loading without mitigation.”⁴¹

The Forest Service and the National Park Service (NPS) both use a 0.5 dv change as their threshold for identifying visibility impairment. Because the Class I areas considered in the Vernal

³⁸ Deciview (dv) is an index based on the natural logarithm of light extinction. As the concentration of haze species increases, light extinction increases, visibility decreases (worsens) and the deciview metric increases.

³⁹ 70 FR 39104, 39120.

⁴⁰ 69 FR 25184, 25194. Dr. Jana Milford explained the basis for this statement in her September 26, 2005 comments on the Jonah Infill Draft EIS Air Quality Supplement, as follows:

“The reference for this statement is a 1990 National Acid Precipitation Assessment Program report⁴⁰ that estimated perception thresholds for landscapes using a psycho-physical model of just noticeable changes in scenic brightness. An even lower threshold might occur for some viewers, scenes and viewing conditions.⁴⁰ The model used in the NAPAP assessment to derive the 0.5 dv threshold is relevant for situations of uniform haze, which is the case at issue with oil and gas development, where construction and production phases involve dispersed sources of NO_x, SO₂, PM-2.5 and PM-10, all of which contribute to visibility degradation. Of note, the 2002 paper by Professor Ron Henry that is often cited for the suggestion that a threshold value higher than 0.5 dv should be used is not persuasive, because it considers thresholds for perceptible changes in colorfulness, ignoring brightness.⁴⁰ Both of these visibility attributes are important, and are better captured by using the 0.5 dv standard.”

⁴¹ Federal Land Managers’ Air Quality Related Values Workgroup (FLAG) Phase I Report, December 2002, p. 26.

RMP are either under Forest Service or NPS control, the BLM must fully acknowledge and discuss the significance of impacts using the impact threshold of 0.5 dv, even if the BLM does not adhere to this standard for its own lands. The BLM's continued refusal to fully acknowledge and address impacts at the 0.5 dv level fundamentally fails to meet the basic intent of NEPA, as described in sections 101 and 102(1) (42 U.S.C. § 4331) by stating it is the "continuing responsibility of the Federal Government to use all practicable means" to "assure for all Americans safe, healthful, productive, and esthetically . . . pleasing surroundings."

Regardless of the threshold of comparison used for visibility, however, the visibility screening analysis showed cumulative impacts to visibility at greater than 1.0 dv change in Arches National Park, Dinosaur National Monument and Ouray National Wildlife Refuge in the Vernal MA. 2006 Air Quality Assessment Report Table 5-65 at 111. The "refined" analysis then shows no cumulative impacts at greater than 1.0 dv change at Arches and Ouray (but still one day of maximum change > 10% at Dinosaur National Monument due to all sources and days greater than 5% change at all three areas). 2006 Air Quality Assessment Report Table 5-66 at 112. Vicki Stamper questioned the BLM's refined analysis and, specifically, the use of 1987-2001 Canyonlands IMPROVE monitoring data in the refined analysis. Stamper at 18. Stamper questioned the use of the Canyonlands data in place of what is considered the natural background conditions from the CALPUFF model, where "natural background" is not meant to reflect changes due to manmade sources. Clearly, Canyonlands monitoring data from 1987-2001 would include such influences and the BLM has not justified the substitution of these data. In fact, they specify the use of extinction values from the Canyonlands IMPROVE site in their explanation of the refined analysis. Response to Comments by Resource AQ52 at 62. Substituting data influenced by manmade sources for natural background would tend to reduce the change in light extinction measured against the 1.0 dv and 0.5 dv thresholds. Or said another way, if a larger background extinction (one influenced by manmade sources) is subtracted from the modeled extinction then the *change in extinction* (again, which is the value compared with the 1.0 dv and 0.5 dv thresholds) will be less than if a lower background is used.

SUWA *et al.* Vernal PRMP Protest at 13-39. BLM must address these concerns before it relies on the Vernal PRMP for satisfactory NEPA analysis of this proposed oil and gas lease sale.

B. Richfield

BLM may not offer non-NSO oil and gas leases at the December lease sale in the Richfield Field Office because it has already established that background air quality in the field office exceeds NAAQS for PM_{2.5} and ozone. Issuing non-NSO leases would permit some level of development, which would then further exacerbate air quality problems in the field office. *See supra* at 12. Even just a few wells can lead to significant levels of air pollution. *See, e.g., supra* at 18 (discussing the impacts from a small development in the Uintah Basin). Furthermore, BLM has never prepared modeling so that it can understand the impacts of oil and gas development on ambient concentrations of various pollutants and it therefore it also does not know the cumulative impact from vehicular travel on designated routes combined with oil and gas development.

SUWA submitted the following comments on the Richfield PRMP to BLM and it may not rely upon the air quality analysis for the Richfield RMP because these have yet to be addressed:

The Richfield PRMP fails to model the impacts of the activities that it permits on air quality in the planning area. Both NEPA and FLPMA require that BLM prepare such analysis. Without preparing near-field, far-field, and cumulative air quality analyses, BLM will not understand the effects of the pollutants that it has attempted to partially inventory in the Richfield PRMP, thereby violating NEPA and its requirement that BLM understand the environmental impacts of the activities it is permitting. In addition, BLM must model pollution concentrations in order to understand if this plan will comply with federal and state air quality standards, as required by FLPMA.

Importantly, the Richfield PRMP shows that background air quality in the planning area is so poor, in terms of ground-level ozone and particulate matter (specifically, 24-hour maximum concentrations of particulate matter 2.5 microns in diameter or smaller (PM_{2.5})), that BLM cannot approve any additional activities which will contribute to increased ozone

or PM_{2.5}. Thus, BLM may not permit off-road vehicle travel or further oil and gas development, as both of these activities emit ozone precursor pollutants and PM_{2.5}. FLPMA, and the Richfield PRMP, require that BLM manage the planning area according to federal and state air quality standards. See Richfield PRMP at 2–8; 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”) (emphasis added). See also 43 U.S.C. § 1712(c)(8) (requiring BLM in land use plans—which would therefore require implementation in daily management—to “provide for compliance with applicable pollution control laws, including State and Federal air . . . pollution standards or implementation plans”). These air quality standards include both the national ambient air quality standards (NAAQS) and the prevention of significant deterioration (PSD) increment limits. Both the State and Federal standards are based on *ambient concentrations* of various air pollutants. For this reason, the Richfield PRMP has failed to satisfy its FLPMA obligation: it permits activities (e.g. route designation and vehicle travel on designated routes) that the PRMP’s emissions inventory show will contribute PM_{2.5} and ozone precursors (both volatile organic compounds—VOCs—and nitrogen oxides—NO_x), thereby increasing ambient concentrations and further exceeding NAAQS. See Richfield PRMP at 4-7 to -20. In addition, BLM does not know whether it is satisfying its obligation to observe air quality standards without modeling the effect that the activities permitted in the PRMP will have on ambient *concentrations* of various pollutants, such as those related to NAAQS and PSD increment limits. The Richfield PRMP has also failed altogether to consider hazardous air pollutants (HAPs) that may be generated by activities approved in this plan; HAPs are also subject to regulation under the Clean Air Act.

Not only has BLM prepared an incomplete emissions inventory for the Richfield PRMP, but it has also failed to conduct modeling that analyzes the likely concentrations of pollutants that will result. See, e.g., PRMP at 4-7 to -20 (predicting likely quantities in tons per year—not ambient concentrations—of various pollutants that will result from plan implementation). As discussed below, the Richfield PRMP emissions inventory suffers from a number of flaws that have led to underestimates for various pollutants. With such flaws the emissions inventory cannot be used to accurately quantify and model pollutant concentrations in the planning area.

Furthermore, even if the emissions inventory were accurate, it does not inform BLM and the public as to what the resulting pollution concentrations will be for the pollutants relevant to NAAQS and the PSD increments. The PRMP does not include any modeling for NAAQS

criteria pollutants or for those pollutants related to PSD increment limits. In contrast, the recently released Vernal Field Office Proposed Resource Management Plan and Final Environmental Impact Statement (August 2008) (Vernal PRMP) includes modeling analyses for near-field, far-field, and cumulative impacts. *See* Vernal PRMP at 4-14, 4-19, 4-30. The Richfield PRMP must also undertake modeling analysis.

BLM's attempts to punt this obligation to perform dispersion modeling to a later date fail. *See* BLM Response to Comments, sorted by Resource, at 14 (stating that BLM guidance indicates that dispersion modeling is inappropriate without site-specific information and that BLM would consider performing such an analysis when it had a proposal before it). The fact that the implementation of the PRMP will result in air pollution (e.g., through approval of motorized use on designated routes and in the Factory Butte open areas) requires that such modeling and quantification be undertaken. *See* PRMP at 4-6 (admitting that various activities, including oil and gas development and ORV use, generate various pollutants, as well as fugitive dust). The routes identified in this plan that will be open to vehicular travel will never face further analysis whereby better estimates might be developed. BLM must conduct these analyses now. Besides, as SUWA pointed out, BLM has prepared models and more comprehensive emissions inventories in its Farmington, New Mexico; Vernal, Utah; and Roan Plateau, Colorado RMPs. This reality directly refutes the Richfield PRMP's insistence that such efforts would be too difficult at this time. Finally, as part of the "hard look" requirement, NEPA demands that BLM determine baseline conditions so that it, and the public, can fully understand the implications of proposed activities. BLM has failed to do this here.

It is particularly critical that BLM perform modeling now since it has already determined that the planning area likely exceeds NAAQS for ozone and PM_{2.5}. *See* PRMP at 3-8 to -10. The health impacts of PM_{2.5} are severe. *See* National Ambient Air Quality Standards for Particulate Matter, 71 Fed. Reg. 61,144 (Oct. 17, 2006) (discussing deleterious health effects of PM_{2.5} pollution). Likewise, the health impacts of ozone are also considerable. National Ambient Air Quality Standards for Ozone, 73 Fed. Reg. 16,436 (Mar. 27, 2008) (discussing adverse health impacts of ground-level ozone pollution).

The Moab Field Office Proposed Resource Management Plan and Final Environmental Impact Statement (August 2008) (Moab PRMP) includes inventories for HAPs likely to be generated by activities in the Moab planning area. *See, e.g.,* Moab PRMP at 4-22 to -23. The Richfield PRMP does not inventory or model HAPs.

The Richfield PRMP does not discuss or examine PSD increment limits (particulate matter, nitrogen oxides, carbon monoxide, sulfur dioxide). These federal air quality standards are also the State of Utah's air quality standards. Thus, there is no evidence, certainty, or indication that the Richfield PRMP will comply with federal and state air quality standards as NEPA and FLPMA require.

NEPA also requires that BLM model the impacts from the various activities—and fully inventory the pollutants generated by these activities—permitted by the Richfield PRMP. “NEPA ‘prescribes the necessary process’ by which federal agencies must ‘take a “hard look” at the environmental consequences’ of the proposed courses of action.” *Pennaco Energy, Inc. v. U.S. Dept. of the Interior*, 377 F.3d 1147, 1150 (10th Cir. 2004) (quoting *Utahns for Better Transp. v. U.S. Dept. of Transp.*, 305 F.3d 1152, 1162–63 (10th Cir. 2002)) (internal citation omitted). The fundamental objective of NEPA is to ensure that an “agency will not act on incomplete information only to regret its decision after it is too late to correct.” *Marsh v. Or. Natural Resources Council*, 490 U.S. 360, 371 (1990) (citation omitted). Without preparing modeling to determine what the ambient concentrations of relevant pollutants will be, BLM cannot understand or disclose the impacts of these pollutants on humans, wildlife, vegetation, water bodies, or the climate. Since it is actual ambient concentrations that will impact these various components of the ecosystem, BLM must model concentrations to understand these impacts. BLM's deficient air quality analysis does not satisfy NEPA's hard look requirement.

The emissions inventory prepared for the Richfield PRMP suffers from numerous deficiencies. SUWA detailed the important contributors to air pollution likely to result from the activities authorized in the PRMP, the proper methodology for quantifying those emissions, and the necessary modeling to fully understand the impacts of those emissions in its January 23, 2008 comments on the Draft RMP; in its May 22, 2008 supplemental comments; and its June 18, 2008 supplemental comments.

Among other things, BLM has failed to inventory the particulate matter pollution, differentiated for PM_{2.5} and for PM₁₀, which will be generated by fugitive dust. The existence of designated routes and travel of automobiles and ORVs on designated routes and in open cross-country travel areas will generate significant amounts of fugitive dust which will negatively affect air quality in the region. The Richfield PRMP and its air quality emissions inventory have completely failed to consider such emissions. The Richfield PRMP acknowledges that ORVs are significant contributors of fugitive dust. *See, e.g.*, Richfield PRMP at 4-6, 4-9, 4-11. SUWA alerted BLM to the importance of such quantification and modeling in its January 23, 2008 comments. To further guide BLM in

how such quantification and modeling could be conducted, SUWA sent a letter on June 18, 2008 with examples of air quality modeling for fugitive dust from vehicular travel on unpaved roads. This modeling was conducted for the West Tavaputs Plateau Natural Gas Full Field Development Plan, Draft Environmental Impact Statement, UT-070-05-055 (Feb. 2008) (West Tavaputs DEIS), and the Enduring Resources' Saddletree Draw Leasing and Rock House Development Proposal, Final Environmental Assessment UT-080-07-671 (Dec. 2007) (Rock House EA). In both cases, BLM itself attempted to estimate fugitive dust emissions from the passage of vehicles on unpaved roads. Furthermore, it then modeled these emissions to arrive at predicted ambient concentrations of various pollutants. The Richfield PRMP contains no such analysis; this quantification and modeling must be conducted in order to understand where BLM's plans will comply with federal and state air quality standards and to know what impact they may have on human health, wildlife, vegetation, water bodies, and the climate.

The models for these other projects demonstrate that fugitive dust from vehicular travel on unpaved roads can create significant levels of ambient pollution. As SUWA explained in its June 18, 2008 comments, the levels of PM_{2.5} predicted in the Rock House EA were so high that they exceeded NAAQS. It is likely that most of the predicted PM_{2.5} was the result of fugitive dust generated by vehicular traffic. Furthermore, dirt roads and ORV routes may generate fugitive dust even when not being traveled by vehicles (e.g., by wind blown dust). Thus, it is vital that the Richfield PRMP quantify all of the routes that it is designating, estimate the rate at which they will generate fugitive dust when not being traveled by vehicles, estimate the number of vehicles that will use each route, and the likely fugitive dust generation rate, and then model those figures to understand the true impacts of fugitive dust emissions.

These necessary preparations highlight the inadequacies of the Richfield PRMP's emissions inventory as presently constituted. The Richfield PRMP improperly attempts to quantify select ORV emissions by simply extrapolating what the percentage of ORVs traveling in the planning area might be based on national ORV-use figures multiplied by the fraction of the nation's population living in Utah further multiplied by the planning area's acreage compared to the acreage of the state as a whole. This methodology asks the wrong questions and thus gets the unreliable answers. It does not account for the actual estimated ORV-usage figures for the planning area and the mathematical function relationship between the number of routes designated and the number of miles traveled by ORVs and other vehicles. *See* BLM, Recreation Management Information System, Report #21, Visitor Days and Participants by Activity Group and State, Utah, Fiscal Year Range Oct 01, 2006 – Sep 30, 2007 (Aug. 6, 2008) (attached as Exhibit L); BLM, Recreation Management and

Information System, Report # 20, Visitor Days and Participants by Activity Group and Office, Richfield Field Office, Fiscal Year Range Oct 01, 2006 – Sep 30, 2007 (Aug. 6, 2008) (attached as Exhibit L).

Instead, BLM must actually estimate the number of vehicles that will travel these routes and the number and mileage of routes that will be open so that it can correctly inventory the fugitive dust that is likely to result from vehicle use *and* the mere existence of routes due to disturbed soils. Clearly, if every unpaved route identified in the Richfield PRMP was closed, and subsequently the soil stabilized, there would be much less fugitive dust than is now likely to result from the plan. Fugitive dust levels are related to mileage of routes open, for this reason the air quality modeling in the Rock House EA and the West Tavaputs DEIS calculate particulate matter pollution from fugitive dust as a function of miles traveled on unpaved roads. Simple, proportional calculations based on population comparisons does not account for such variances and are less likely to accurately inform BLM as to what the true levels of pollution will be from these activities. Glaringly, these calculations are for tailpipe emissions only and do not consider fugitive dust generated by off-highway travel. Thus, BLM must revise and improve the Richfield PRMP methodology for estimating pollution caused by ORVs and other vehicles.

Furthermore, this improved methodology for inventorying dust generation could be applied to any activity that will cause fugitive dust (e.g. mining, oil and gas development, grazing) in order to estimate total dust emissions. This information is necessary for understanding the likely contributions to regional climate change caused by this plan from eolian dust deposition and its tendency to cause premature snowpack melt.

The recent monitoring from Zion National Park underscores the fact that the planning area likely has poor air quality and may currently be in violation of NAAQS. In 2005, an air monitor in Zion National Park recorded ozone levels of 91 parts per billion as a fourth highest value. National Park Service, Annual Data Summary 2005: Gaseous Pollutant Monitoring Program Ozone, Sulfur Dioxide, Particulate Matter, Meteorological Observations, 3-3, <http://www.nature.nps.gov/air/pubs/pdf/ads/2005/gpmp-xx.pdf>. The current NAAQS standard for ozone is 75 parts per billion. *See* National Ambient Air Quality Standards for Ozone, 73 Fed. Reg. 16,436, 16,436 (Mar. 27, 2008). The Richfield PRMP lists values for ozone monitored at Zion National Park for 2006 and 2007 that also exceed the new NAAQS limit of 75 parts per billion. *See* PRMP at 3-9. Thus, the Zion National Park monitor shows that the area has already experienced ozone levels well above the current standards for that pollutant. Likewise, the PRMP admits that the planning area is not meeting the 24-hour maximum average NAAQS for PM_{2.5}. *Id.* at 3-9 to -10. For this reason it is essential

that BLM monitor air quality in the planning area and then prepare comprehensive inventories as well as accurate models to assess the impact of the activities envisioned and permitted in these plans.

In summary, the Richfield PRMP does not adequately analyze the impacts to air quality that will result from the area and route designations, and activities planned and permitted in this document. Because the planning area has levels of ozone and PM_{2.5} that already exceed NAAQS, BLM is prevented by FLPMA from approving *any activities* that would further exacerbate or exceed these levels. These failures are contrary to both FLPMA, which requires that BLM observe air quality standards, and NEPA, which requires that BLM disclose the impacts of the activities it is analyzing. BLM must prepare a comprehensive emissions inventory, which includes fugitive dust emissions, and then model these figures in near-field, far-field, and cumulative analyses. Without doing so, BLM cannot know what impact these activities will have and whether it is complying with federal and state air quality standards. BLM may not authorize any activities which will contribute ozone precursors (NO_x and VOCs) or PM_{2.5} to ambient concentrations in the planning area (e.g. it may not permit any vehicular travel on designated routes or permit any oil and gas development).

SUWA *et al.* Richfield PRMP Protest at 14-18.

C. Price (Including Four Parcels in Vernal Field Office)

BLM cannot offer lease parcels 335, 336, 337, 338, 339, 340, 341, 342, 343, 345, 348, 349, 350, 355, 83, 84, 86, and 87 in the December 2008 auction or any future auction until it completes comprehensive, quantitative dispersions modeling. These leases are in or near a large, site specific development proposal: the West Tavaputs Plateau Natural Gas Full Field Development Plan which has been submitted by the Bill Barrett Corporation. BLM here knows exactly where likely development will take place and thus it has no excuse for refusing to complete air quality modeling before the issuance of these leases. As described previously, the issuance of leases is a point of irreversible commitment and BLM may therefore be issuing leases which could lead to levels of pollution in excess of federal air quality standards. *See supra* at 12, 18. BLM

has never completed dispersion modeling for this area of the Price Field Office that could now be applied to the issuance of these leases.

The EPA informed BLM that the Price PRMP suffered from numerous, significant flaws in its air quality impacts analysis. *See* Letter from Larry Svoboda, EPA, to Selma Sierra, Re: Final Resource Management Plan and Environmental Impact Statement for the Price Planning Area (Oct. 2, 2008) (EPA Price Letter) (attached as Exhibit 10). These comments have yet to be adopted by BLM and were not implemented by the Price ROD. The EPA first reminded BLM that it had yet to undertake quantitative modeling, as requested by the EPA in its comments on the draft RMP. *Id.* at 2. The EPA emphasized the importance of such modeling because without it BLM could not know if it was likely to exceed NAAQS for ozone, because levels of emissions were likely to be at or in excess of that standard. *Id.* The EPA also points out that BLM does not have any assurances in place that will allow for mitigation of air quality impacts and that the Uintah Basin Air Quality Study would not be something that could apply to oil and gas development in the Price Field Office. *Id.* The EPA raised a slew of other concerns that have yet to be addressed by BLM. *See id.* at 2-5. EPA particularly warned that BLM was underestimating the likelihood of exceedances of NAAQS ozone standard in the Price Field Office. *See id.* The EPA also stated that BLM's analysis of the impacts from oil and gas on climate change was insufficient. *See id.* at 5-6.

SUWA provided the following specific comments regarding the inadequacies of the Price PRMP's air quality analysis:

The Price PRMP fails to fully and accurately model the impacts of the activities that it permits on air quality in the planning area. Both NEPA and FLPMA require that BLM properly prepare such analysis. Without doing so BLM will not understand the effects of the pollutants that it has

attempted to partially inventory and model in the Price PRMP, thereby violating NEPA and its requirement that BLM understand the environmental impacts of the activities it is permitting. Importantly, the Price PRMP will permit and plans for activities that will likely lead to exceedances of federal and state air quality standards, which BLM may not do. FLPMA requires that BLM manage the planning area according to federal and state air quality standards. *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”) (emphasis added); *see also* 43 U.S.C. § 1712(c)(8) (requiring BLM in land use plans—which would therefore require implementation in daily management—to “provide for compliance with applicable pollution control laws, including State and Federal air . . . pollution standards or implementation plans”). To properly comply with FLPMA, the Price PRMP must affirmatively state that BLM is obligated to “require compliance with air . . . quality standards established pursuant to applicable Federal or State law.” *See* 43 C.F.R. § 2920.7(b)(3).

BLM must perform comprehensive, complete quantitative modeling now. The fact that the implementation of the PRMP will immediately result in air pollution (e.g., through approval of motorized use on designated routes) requires that such modeling and quantification be undertaken. The routes identified in this plan that will be open to vehicular travel will never face further analysis whereby better estimates might be developed. BLM must conduct these analyses now. This is the time that BLM must conduct comprehensive ozone pollution modeling. BLM cannot ‘punt’ this obligation to some later date. As part of the “hard look” requirement, NEPA demands that BLM determine baseline conditions so that it, and the public, can fully understand the implications of proposed activities. BLM has failed to do this here.

It is particularly critical that BLM perform modeling now since it has already determined in some project specific analysis that gas development in and near the planning area are likely to exceed national ambient air quality standards (NAAQS) and prevention of significant deterioration (PSD) limits for various pollutants. *See infra*.

The Price PRMP fails to discuss the potential impacts of oil shale and tar sands development in the planning area and in the nearby Uintah Basin on air quality. This is a significant oversight. It is entirely feasible that oil shale development will take place in or near the planning area during the life of the Price PRMP. Congress is currently considering a bill that would not renew the oil shale leasing moratorium on public lands. *See* Continuing Resolution likely to be passed during the week of September 22, 2008; *see also* H.R. 6899 § 171 (2008) (proposing a section that would

allow individual states to lift the oil shale moratorium on federal lands within their state boundaries). BLM's EIS evaluating proposed oil shale development does not acceptably analyze the potential impacts of that activity on air quality. *See* Letter from Larry Svoboda, Environmental Protection Agency, to Sherri Thompson, BLM (Apr. 17, 2008) (attached as Exhibit M). The U.S. Environmental Protection Agency has made it clear that BLM has not yet adequately considered the impacts of oil shale development on air quality and that waiting for a site specific proposal will result in analysis that fails to consider the full regional impacts of oil shale development. *Id.* For that reason the BLM must evaluate the impacts of oil shale development on air quality in the Price PRMP.

Furthermore, the Price PRMP does not quantify the impacts of the various activities envisioned in this plan on global warming. The Price PRMP fails to quantify the amount of greenhouse gases that will be emitted by these activities. The Price PRMP also fails to account for some of the impacts to the planning area itself from a rise in temperatures. BLM must analyze these changes and attempt to quantify impacts to climate from the development activities that could result from the approval of this PRMP.

In summary, the Price PRMP does not adequately analyze the impacts to air quality that will result from the area and route designations, and activities planned and permitted in this document. Because monitoring indicates that the planning area likely already has levels of PM_{2.5} that exceed NAAQS, and because it appears that ozone could also be exceeding—or close to exceeding—NAAQS, BLM is prevented by FLPMA from approving *any activities* that would further exacerbate or exceed these levels. These failures are contrary to both FLPMA, which requires that BLM observe air quality standards, and NEPA, which requires that BLM disclose the impacts of the activities it is analyzing.

Megan Williams, an air quality expert and former environmental engineer for the Environmental Protection Agency (EPA) (curriculum vitae attached as Exhibit Q) submitted comments to BLM dealing with the revised air quality support documents developed for the Price Supplemental RMP.⁴² Inexplicably, BLM has completely ignored these comments. BLM must fully and adequately respond to all the points raised by Ms. Williams regarding the updated air quality support

⁴² Ms. Williams submitted these comments on January 14, 2008. Although this was one month after the Price Supplemental RMP comment deadline, BLM must still consider them. The reason for this is that BLM revised its air quality support documents without informing the public and without making that explicit in the Supplemental RMP. It was not until November 30, 2007 that BLM made this new air quality support document available to the public. *See* Email from Floyd Johnson, BLM, to Steve Bloch, SUWA (Nov. 30, 2007) (attached as Exhibit 36).

documents used for the Price RMP process. Without addressing these comments BLM is ignoring significant issues and concerns that pertain to the integrity of its air quality analysis and the ability of that analysis to understand and scrutinize the impacts of the activities envisioned in this RMP on air quality. Ms. Williams now offers the following specific comments on the Price PRMP:

The BLM has issued a proposed resource management plan and final environmental impact statement (PRMP/FEIS) for the Price Field Office (August 2008). I have thoroughly reviewed this document and the analyses relied upon for the decisions and conclusions made therein and based on my experience conclude that the BLM's planning decisions are not justified. The BLM has not demonstrated compliance with all Clean Air Act (CAA) requirements as required by NEPA. Specifically, the BLM has not completed an analysis of criteria pollutant impacts (including ozone and particulate matter), has not demonstrated compliance with the Prevention of Significant Deterioration requirements and has not demonstrated protection of air quality related values, including visibility. The BLM has not completed a comprehensive cumulative impacts analysis and has failed to establish any mitigation measures for ensuring compliance with CAA requirements. Further, as discussed in numerous comments during the public review process for the Price RMP, the BLM has failed to ensure scientific integrity in its air quality analysis.⁴³ The BLM indicates in several instances that its analysis is sufficient, but the comments that the BLM received on the DRMP and the October 26, 2006 air quality baseline report in the record demonstrate otherwise.

The BLM justifies its failure to perform a quantitative analysis of air quality impacts as follows:

“A qualitative emission comparison approach was selected for this RMP air quality analysis. This approach was used because: (1) sufficient specific data were not available on future projects; (2) there was limited time available to complete the analysis; (3) as projects are defined,

⁴³ My review included the comment letters submitted to the BLM from me on January 14, 2008 (Williams), Vicki Stamper on November 22, 2004 (Stamper) and the EPA on November 30, 2004 (EPA) and the BLM's response to those comments in the Public Comments and Responses - Price Draft RMP/EIS. Note: The BLM did not respond to any of the comments I submitted on the supplement to the draft Resource Management Plan and EIS on January 14, 2008.

quantitative analysis will be required; and (4) the State of Utah will require demonstration of compliance for any future specific projects. There are limitations associated with this approach. However, given the uncertainties with the number, nature, and specific location of future sources and activities, the emission comparison approach is defensible and provides a sound basis to compare alternatives.”

Air Quality Baseline Report at iii.

The BLM’s first reason for failing to perform a quantitative analysis - that sufficient specific data are not available on future development projects - is not supported by evidence that the BLM either cannot obtain the needed information without exorbitant cost or cannot present a credible scientific estimation of the needed data based on methods generally accepted in the scientific community. These methods of dealing with unavailable data are required when addressing incomplete or unavailable information under NEPA and must be thoroughly exercised before abandoning a more rigorous analysis. See 40 CFR 1502.22. The BLM’s second reason - arguing that there was limited time available - is without any basis. There is no support in the implementing regulations, and the BLM has not provided reference to any such allowance, for skipping details due to time constraints. Moreover, the Price field office initiated the planning process for this PRMP in the fall of 2001; there clearly was time to prepare such an analysis had the BLM made this a priority.⁴⁴ The BLM’s third reason – that project-specific analyses will occur as projects are proposed – is not supported in practice by the BLM’s past actions. The BLM has failed time and again to complete the appropriate analyses at the project proposal stage (e.g., for ozone impacts and cumulative impacts), instead saying that certain analyses are best completed at the regional planning stage.⁴⁵ The BLM cannot continue this pattern of dismissing required analyses at the project proposal

⁴⁴ See Price RMP/EIS Process and Public Participation Components timeline at http://www.blm.gov/ut/st/en/fo/price/planning/Proposed_RMP_Final_EIS/Schedule.html

⁴⁵ See, e.g., Enduring Resources Saddletree Draw Leasing and Rock House Development Proposal Environmental Assessment and Biological Assessment, UT-080-07-671, at 6-25 (June 2007) (approving approximately 60 wells); Record of Decision, Questar Exploration & Production (QEP), Greater Deadman Bench Oil and Gas Producing Region (GDBR) 8 (Mar. 31, 2008) (approving 1,368 gas and oil wells and stating that ozone analysis is often based on regional analysis); Record of Decision, EOG Resources, Inc. Chapita Wells – Stagecoach Area Natural Gas Development 6 (Mar. 31, 2008) (approving 627 gas wells and stating the same as the GDBR record of decision).

stage and then again when the opportunity arises at the planning stage. Finally, the BLM's fourth reason – that the State of Utah will require compliance demonstrations for any future project – does not relieve the BLM of its own obligation to provide for compliance with all Clean Air Act requirements.⁴⁶ Not only is putting the required analysis off on the State not allowed under NEPA but the State's requirements do not necessarily satisfy all of the NEPA requirements (e.g., to perform a cumulative impacts analysis considering all existing and reasonably foreseeable development sources). NEPA requires that the BLM complete a rigorous evaluation of all alternatives and thoroughly present the direct, indirect and cumulative environmental impacts of each alternative in its EIS. 40 CFR §§ 1502.14, 1502.16.

The BLM, therefore, can and must complete a quantitative assessment of air quality impacts. In fact, for other Utah resource management plans, the BLM has done just that. For example, for the Vernal RMP, the BLM completed a near-field, far-field and cumulative impact analysis using air dispersion models to evaluate the various development alternatives, although it must be noted that the BLM's analysis did not adequately assess air quality impacts. While notably flawed, the Vernal RMP is proof that a more rigorous evaluation of likely air pollution sources for the Price RMP can be done and, in fact, must be done in order to comply with NEPA. As pointed out by Vicki Stamper in her 2004 comments:

“The BLM likely has some idea of the areas of likely high gas development in the Price region (see, e.g., Maps 3-20 and 3-21 which show areas of “high” and “low” potential occurrence). Further, the BLM could determine the maximum well density that could be allowed under the RMP, estimate total increases in emissions, and perform a regional scale modeling of the emissions increases that could occur under the RMP as well as with all other sources in the region. Yet, the BLM failed to conduct such an analysis and thus failed to comply with NEPA.” Stamper at 3.

And, in fact, since the time that the Price and Vernal Field Offices first proposed draft resource management plans several new

⁴⁶ The Federal Land Policy and Management Act (FLPMA) mandates that, “In the development and revision of land use plans, the Secretary shall . . . (8) provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans...” at 43 U.S.C. § 1712(c)(8). See also 43 CFR § 2920.7(b)(3) (requiring the same for land use authorizations).

projects have been approved and more proposed in these areas giving the BLM much more specific information on development than is disclosed in the Price PRMP/FEIS.⁴⁷

In addition to failing to complete any form of quantitative modeling exercise, the BLM has completely failed to consider the potentially significant impacts from oil shale and tar sands development in its air quality analysis. The development is reasonably foreseeable and has the potential to cause huge impacts to air quality throughout the planning area. The EPA also noted this fact - that the BLM is not acknowledging this reasonably foreseeable development source in affected EISs - in its recent comments on the final EIS for the EOG Resources Inc., Chapita Wells-Stagecoach Area Natural Gas Development:

“BLM has an obligation under NEPA to take a close hard look at the reasonably foreseeable developments, including proposed tar sands and oil shale activities that are likely in the next several decades, as well as the expansion of existing oil and gas operations regardless of whether or not an application for drilling has been submitted to your office.”⁴⁸

The BLM recently released the final Programmatic EIS for oil shale and tar sands development, which does not include any modeling of impacts from the proposed leasing program. A future commitment is not an acceptable replacement for a comprehensive quantitative assessment of the environmental and public health impacts resulting from considerable increases in air pollution in an area already heavily impacted by the adverse effects of increasing development. The BLM failed to address specific impacts in the programmatic EIS and it has failed to address the foreseeable impacts in the Price PRMP/FEIS. The BLM can and must perform a detailed analysis of the potential impacts from this very significant development sector.

Even without performing a quantitative analysis of impacts and without compiling a comprehensive inventory of sources, the BLM’s air quality impacts “analysis”, which relies in part on other

⁴⁷ See, e.g., the Final Enduring Resources’ Saddletree Draw Leasing and Rock House Development Proposal EA (Rock House EA) released in December 2007, the West Tavaputs Plateau Natural Gas Full Field Development Plan EIS released in February 2008, etc.

⁴⁸ February 4, 2008 letter from Larry Svoboda, EPA region 8, to William Stringer, BLM Vernal Field Office, Re: Final Environmental Impact Statement (EIS) for EOG Resources Inc., Chapita Wells-Stagecoach Area Natural Gas Development, CEQ #20070549, p. 2.

EIS analyses of development authorized in the Price planning area, shows potential adverse air quality impacts. Specifically, Table 15 of the Air Quality Baseline Report shows modeled PSD Class II NO₂ increment violations from the Ferron Natural Gas proposed action within the Price planning area. Chapter 4 of the PRMP/FEIS describes visibility impairment in several Class I areas based on the Ferron Natural Gas EIS scenario “where all compressors were fueled by natural gas from the operating wells”. According to the modeling results, “[t]he cumulative effect could be to reduce the standard visual range more than 10 percent for 11 days at Capitol Reef National Park and 2 days at Canyonlands National Park. The standard visual range reduction might be from 5 percent to 10 percent for 47 days at Capitol Reef National Park and 16 days at Canyonlands National Park.” PRMP/FEIS at 4-442. Clearly, the air quality analyses that are the basis for the Price PRMP/FEIS show the potential for PSD increment violations and visibility impairment in Class I areas. Yet, the BLM fails to acknowledge the need to mitigate these impacts in the Price PRMP/FEIS. The fact that the Ferron Natural Gas EIS analysis shows air quality impacts back in 1999 and there has been increased gas production in the area since that time is evidence that the BLM must conduct a more comprehensive and updated air quality analysis for the Price planning area that will demonstrate compliance with all CAA requirements. In fact, in February 2008 - six months prior to the release of the PRMP/FEIS - the BLM issued a draft EIS for the West Tavaputs Plateau Natural Gas Full Field Development Plan in the Price planning area and yet there is no mention of the air quality impacts identified in that draft EIS (e.g., ozone concentrations that exceed the NAAQS and visibility impairment in Class I areas) in this PRMP/FEIS.

A detailed review of the BLM’s failures in fully assessing air quality impacts for the Price PRMP/FEIS follows:

The BLM Failed to Assess Ozone Impacts for the PRMP/FEIS

The BLM did not assess ozone impacts prior to moving forward with its planning decisions in the PRMP/FEIS. In fact, aside from describing the National Ambient Air Quality Standards (NAAQS) for ozone in Chapter 3 of the PRMP/FEIS and in the Air Quality Baseline Report, the only other mention of an ozone assessment is to disclose that the BLM did not complete one and therefore cannot demonstrate the area’s compliance with the ozone NAAQS:

“Because a quantitative relationship between the expected

air emissions calculated above and the subsequent potential impacts on ambient criteria pollutant concentrations, visibility, atmospheric deposition, or ozone is unknown, it is impossible to draw conclusions on potential impacts of alternatives on these air quality values.” Air Quality Baseline Report at 35.

Vicki Stamper and I both commented on the lack of an ozone analysis in comments during the public review period for the draft EIS and the draft SEIS. The BLM entirely failed to acknowledge or address my comments on the lack of an ozone analysis. See Williams 1/14/08 Comment Letter at 17. In response to Ms. Stammers’ comments on the draft EIS, the BLM indicated that “[t]he PFO is being included in the White River RMP Amendment/Oil and Gas EIS ozone modeling effort” (Public Comments and Responses – Price Draft RMP/EIS - Jul-2004 at 389). However, there is no further discussion of the White River RMP Amendment or the more recently developed Uinta Basin Air Quality Study (UBAQS) that is currently being conducted by the Independent Petroleum Association of Mountain States (IPAMS), both of which will assess ozone impacts in the region. The BLM must address the timeline of these efforts and how they are being coordinated if they plan to rely on the results of either of these assessments in demonstrating compliance with the ozone NAAQS in the Price planning area.

The IPAMS study is being coordinated with very little, if any, stakeholder input and the EPA has expressed concerns with the BLM’s reliance on this effort in its planning decisions since the BLM is not acting to directly oversee the process:

“While we recognize that the BLM Vernal Field Office initiated an agreement late last year with the Independent Petroleum Association of the Mountain States (IPAMS) to begin an industry-managed study of basin-wide air quality impacts, EPA has concerns with this approach. We think the information to be generated by a basin-wide air quality study will be important for future NEPA analysis and decision making by your office. Therefore, it would be useful to follow the provisions of ‘third- party’ contract management according to 40 CFR 1506.5(c) and have the

BLM Vernal Field Office directly manage this basin-wide air quality study rather than industry. ⁴⁹

The EPA again expressed similar concern in its comments on the draft modeling protocol for the UBAQS, as follows:

“If the study is to be used to inform management decisions by Federal, State, and local entities or in future NEPA actions, the independence of the analysis and assessment will be particularly important. . . . There are many Federal, State, and Tribal Agencies with an invested interest in the modeling study. With an active stakeholder process, BLM will increase the possibility that a reliable, useful, and credible modeling analysis will be completed.”⁵⁰

And in addition to procedural concerns, the EPA has also expressed specific technical and policy concerns with the UBAQS protocol itself. Of particular concern to EPA, in addition to the need for stakeholder input, appears to be the integrity and comprehensiveness of the emissions inventory, including the capability to perform source attribution analyses in order to develop effective mitigation strategies.⁵¹

In fact, the EPA has recently taken a strong position on the need for an ozone assessment in this region. Specifically, in its comments on the modeling protocol for the Uinta Basin Air Quality Study the Agency stated that the BLM “has an obligation under NEPA to fully consider the reasonably foreseeable developments including proposed tar sands and oil shale activities that are likely in the next several decades, as well as the expansion of existing oil and gas operations *regardless of whether or not an application for drilling has been submitted to your office.*”⁵² (Emphasis added). Thus, the EPA no longer supports the BLM

⁴⁹ February 4, 2008 letter from Larry Svoboda, EPA region 8, to William Stringer, BLM Vernal Field Office, Re: Final Environmental Impact Statement (EIS) for EOG Resources Inc., Chapita Wells-Stagecoach Area Natural Gas Development, CEQ #20070549, p. 3.

⁵⁰ February 8, 2008 letter from Larry Svoboda, EPA region 8, to William Stringer, BLM Vernal Field Office, Re: Draft Modeling Protocol for the Uinta Basin Air Quality Study, pp. 1-2.

⁵¹ February 8, 2008 letter from Larry Svoboda, EPA region 8, to William Stringer, BLM Vernal Field Office, Re: Draft Modeling Protocol for the Uinta Basin Air Quality Study, pp. 3-6.

⁵² February 8, 2008 letter from Larry Svoboda, EPA region 8, to William Stringer, BLM Vernal Field Office, Re: Draft Modeling Protocol for the Uinta Basin Air Quality Study, p. 1.

waiting until they have project-specific requests before fully assessing air quality impacts, including those to ambient ozone concentrations. The EPA also explicitly recommended, for the proposed West Tavaputs Natural Gas Full Field Development Plan DEIS, that the BLM “prepare a Supplemental Draft EIS that includes modeled demonstrations of both this project and cumulative pollutant emissions sources from other activities in the Uinta Basin demonstrating whether the proposed action will contribute to violations of the ozone NAAQS.”⁵³

In addition to concerns with the reliability of the ongoing efforts by industry and the BLM to assess ozone impacts in the region, the BLM has failed to include in the PRMP/FEIS a comprehensive inventory of emissions that contribute to ozone formation and has failed to explain how the inventoried sources in the DRMP/FEIS will be incorporated into the larger Uinta Basin Air Quality Study or White River RMP Amendment analyses. Following are the issues that remain with the DRMP/FEIS inventory of NO_x sources which, together with VOC emissions, will contribute to ozone formation in the region.

The PRMP/FEIS Continues to Assume NO_x Emissions Controls for Compressor Engines that are not Identified as Enforceable Mitigation Measures

As in the draft EIS, NO_x emissions from compression in the PRMP/FEIS are based on the assumption that all gas compressors are equipped with the Best Available Control Technology (BACT).⁵⁴ In my January 14, 2008 comments I said that there should be a discussion of Utah’s BACT requirements and whether state rules require that BACT apply to all compressor engines currently in use.⁵⁵ Because BACT determinations are made on a case-by-case basis, there is no guarantee that similar BACT emission limits will necessarily be required for every compressor engine. Therefore, the BLM still needs to provide justification that the emission limits assumed for compressor engines will be similar

⁵³ February 4, 2008 letter from Larry Svoboda, EPA region 8, to William Stringer, BLM Vernal Field Office, Re: Final Environmental Impact Statement (EIS) for EOG Resources Inc., Chapita Wells-Stagecoach Area Natural Gas Development, CEQ #20070549, p. 3.

⁵⁴ Air Quality Baseline Report at 25 and Price Field Office Air Quality Baseline and Analysis Report Emissions Calculations (“emissions CD”) at, e.g., Price NG Gas Well-Alt D.xls Assumptions Tab.

⁵⁵ January 14, 2008 letter from Megan Williams to the BLM Price FO, Re: Comments on the Air Quality Analysis for the Supplement to the Draft Price Resource Management Plan Draft Environmental Impact Statement, pp. 10-11.

to, and not less stringent, than those assumed for the BLM's Price RMP inventory. Again, these low emission rates must be clearly documented in the SEIS/RMP if they are the basis for the BLM's analysis.

In addition, compressor engines that transport gas from coalbed methane operations are still assumed to all use electric power. Air Quality Baseline Report at 26. This, too, must be an enforceable requirement in the PRMP/FEIS if the BLM is counting on no combustion emissions from these compressors or any other compressors outside of coalbed methane fields. In fact, the EPA also questioned this assumption and asked for further clarification:

“From our reading of the DEIS and the Air Quality Baseline and Analysis Report, Price Field Office, Resource Management Plan, we infer that: 1) electrification of compressor engines is not necessarily universal at least in the Ferron field, (2) the coal bed natural gas projects contain other emission sources that were not eliminated by electrification, (3) the remaining emissions have not been quantified for the current DEIS, and (4) due to lack of regulatory authority, BLM is not certain whether electrification will continue to apply to future development in the gas fields. Please include more detail and clarify the control of air contaminant emissions from coal bed natural gas development in the FEIS.” EPA at 5.

If in fact these assumptions for emissions controls and operation are not realistic, the resultant under-prediction of NO_x emissions places an even greater emphasis on the importance of ensuring compliance with the ozone NAAQS.

As I indicated in my comments on the SEIS, these assumptions considered as mitigation from uncontrolled air emissions should be clearly detailed in the PRMP/FEIS, so that government officials that will subsequently be authorizing actions under the resource management plan and issuing air quality permits for the air pollution sources will incorporate those mitigations into permits and other requirements to make sure the mitigations actually occur. Implementation of these measures is not assured otherwise.

The Price PRMP/FEIS Emissions Inventories Continue to Likely Underestimate NO_x Emissions from Drill Rigs During Oil and Gas Development

The BLM did not respond to my comment that it likely

underestimated NO_x emissions from drill rigs, based on the number of drill rigs assumed and the average size of the drill rigs. See Williams 1/14/08 Comment Letter at 12 for details. As I indicated, drill rig engines are a significant source of NO_x emissions from oil and gas development. For example, the emissions from drill rigs for the PRMP/FEIS make up over 40% of all NO_x emissions from natural gas development (construction and operation) inventoried.⁵⁶ Since the BLM has not demonstrated that the development proposed in the PRMP/FEIS provides for compliance with the ozone NAAQS, it is imperative that the BLM use reasonable estimates of emissions of NO_x from drill rig engines in a comprehensive assessment of ozone impacts.

Ozone Concentrations in the Region are Already a Concern

The importance of protecting the air quality for those people who live in the region, most importantly for sensitive populations, including children, the elderly and those with respiratory conditions is huge. Exposure to ozone is a serious concern as it can cause or exacerbate respiratory health problems, including shortness of breath, asthma, chest pain and coughing, decreased lung function and even long-term lung damage.⁵⁷ According to a recent report by the National Research Council “short-term exposure to current levels of ozone in many areas is likely to contribute to premature deaths”.⁵⁸ The EPA recently revised the 8-hour ozone standard from 80 ppb to 75 ppb.⁵⁹ The Clean Air Scientific Advisory Committee (CASAC) recommended substantially lowering the 8-hour standard, though the EPA did not abide by the committees recommendations. Specifically, the CASAC put forth a unanimous recommendation to lower the 8-hour standard from 80 parts per billion (ppb) to somewhere between 60-70 ppb.⁶⁰ The committee concluded that there is no scientific justification for retaining the current 8-hour standard and that the EPA needs to substantially reduce the primary 8-hour standard to protect human health, especially in sensitive populations. So, even ozone concentrations at levels as low as 60 ppb can be considered harmful to human health and the BLM must

⁵⁶ “Price Field Office Air Quality Baseline and Analysis Report Emissions Calculations” CD for the August 2008 PRMP/FEIS.

⁵⁷ See EPA’s National Ambient Air Quality Standards for Particulates and Ozone, 62 FR 38,856 (July 18, 1997).

⁵⁸ <http://www.nationalacademies.org/morenews/20080422.html>

⁵⁹ 73 FR 16436, Effective May 27, 2008.

⁶⁰ EPA-CASAC-LTR-07-001, Clean Air Scientific Advisory Committee’s (CASAC) Peer Review of the Agency’s 2nd Draft Ozone Staff Paper, October 24, 2006

consider this when evaluating the air impacts in the planning area. A monitor located in Vernal, UT for most of 2007 collected ozone data for the area. These data confirm that ozone concentrations in the basin already threaten human health.⁶¹ The BLM must fully evaluate ozone concentrations in the region before continuing to approve more development that will increase emissions of ozone-forming pollutants in the planning area. As an example, the BLM recently proposed to allow NO_x emissions and VOC emissions from the West Tavaputs Plateau Full Field Natural Gas development to add over 1,200 and over 6,000 tons per year of NO_x and VOC emissions, respectively, to the area.⁶² No modeling of the impacts of these emissions on ozone concentrations in the region was presented with that proposal.

The BLM has utterly failed to conduct any ozone analysis for the region up to this point (either at the planning stage or at the project-specific proposal stage). The recent West Tavaputs Plateau Natural Gas Full Field Development Project DEIS, which is located within the planning area, attempted to rely on ozone modeling done for southwest Wyoming to demonstrate compliance with the ozone NAAQS but the BLM did not even include project sources from the proposed development in its “analysis” and the results of the analysis still showed exceedances of the 8-hour ozone NAAQS.⁶³ The EPA, in fact, gave the BLM’s DEIS for the West Tavaputs Plateau a rating of “Inadequate Information” based on “the lack of adequate information from air quality modeling to disclose the predicted ozone concentration under varying emission scenarios” and stated that the BLM must complete additional air quality modeling to remedy this.⁶⁴

Along with data collected at Vernal, Utah showing high ozone concentrations, other areas in the region are also already experiencing elevated ozone concentrations - sometimes in excess of the ozone NAAQS - including Canyonlands National Park, Zion National Park, Mesa Verde National Park and the Green River

⁶¹ The 4th maximum 8-hour average concentration in 2007 was 68 ppb.

⁶² See Table 2-1 on page 2 of the Air Quality Technical Report (Proposed Action)

⁶³ See Table 4-3.4 on p. 4-18 of the West Tavaputs Plateau Natural Gas Full Field Development Plan DEIS

⁶⁴ May 23, 2008 letter from Robert E. Roberts, EPA Region 8 Administrator, to Selma Sierra, Utah BLM State Director, Re: West Tavaputs Plateau Natural Gas Full Field Development Plan, Draft Environmental Impact Statement, Carbon County, Utah, CEQ# 20080028, p. 4.

Basin in Wyoming.⁶⁵ In fact, the proposed RMP for the Richfield planning area, just adjacent to the Price planning area, included very high background concentrations for ozone.⁶⁶ The State of Wyoming recently issued three ozone advisories for the Pinedale region in the Upper Green River Basin. The Wyoming Department of Environmental Quality has said the cause of the elevated ozone levels is probably the area's intensive natural gas development.⁶⁷

These data show that ozone levels are already a concern and an even greater one than when the BLM released the draft RMP for the area. Yet the BLM continues to avoid completing an ozone analysis for the region and does not even discuss background concentrations of ozone in the planning area in the PRMP/FEIS. The PRMP/FEIS proposes to increase NO_x emissions and VOC emissions over base year emissions by 97% and 226%, respectively (Air Quality Baseline Report Table 13 at 34). In addition, the BLM continues to approve development projects in the area with no ozone assessment. None of the following EAs in the region include an ozone analysis, instead claiming that a regional study should be developed: Enduring Resources Saddletree Draw Leasing and Rock House Development Proposal Environmental Assessment and Biological Assessment, UT-080-07-671, at 6-25 (June 2007) (approving approximately 60 wells); Record of Decision, Questar Exploration & Production (QEP), Greater Deadman Bench Oil and Gas Producing Region (GDBR) 8 (Mar. 31, 2008) (approving 1,368 gas and oil wells and stating that ozone analysis is often based on regional analysis); Record of Decision, EOG Resources, Inc. Chapita Wells – Stagecoach Area Natural Gas Development 6 (Mar. 31, 2008) (approving 627 gas wells and stating the same as the GDBR record of decision). The Price Field Office has approved the following recent projects with no discussion of ozone impacts: Woodside Well #1 Exploratory Project, UT-070-06-55; Environmental Assessment for the West Tavaputs Plateau Drilling Program, Carbon and Duchesne

⁶⁵ See data compiled by the National Park Service at http://www.airquality.utah.gov/Public-Interest/Current-Issues/Oil_and_Gas/Uintah_Basin/comparison.pdf. Also see the draft RMP for the Richfield Field Office (October 2007), Figure 3-4 on p. 3-9,. Also see “4 Corners Air Quality Task Force Existing Monitoring Summary”, May 2006. Also see EPA air monitoring data for Sublette County, Wyoming at <http://www.epa.gov/air/data/reports.html>.

⁶⁶ Richfield RMP (October 2007) at 3-9.

⁶⁷ See <http://www.billingsgazette.net/articles/2008/03/11/news/wyoming/40-ozonewarnings.txt> and <http://billingsgazette.net/articles/2008/03/14/news/wyoming/25-drillerair.txt>

Counties, Utah, UT-070-04-28 (July 2004); Bill Barrett Corporation One Well Drilling Program, UT-070-08-023 (Apr. 15, 2008); Bill Barrett Corporation One Well Drilling Program, UT-070-08-024 (Apr. 15, 2008); Bill Barrett Corporation One Well Drilling Program, UT-070-08-025 (Apr. 15, 2008); Bill Barrett Corporation One Well Drilling Program, UT-070-08-026 (Apr. 2008).

At the project specific phase the BLM is saying ozone should be assessed on a regional level and yet the BLM fails to follow through with such an assessment for this regional planning document. The BLM is avoiding its obligation to complete such an assessment at both the planning stage and at the project proposal stage.

The BLM Failed to Assess Particulate Matter Impacts in the PRMP/FEIS

The DRMP/FEIS does not demonstrate compliance with the particulate matter NAAQS (i.e., PM₁₀ and PM_{2.5}). Of primary concern is the fact that the BLM has failed to complete an air quality analysis to assess predicted near-field impacts of PM_{2.5} or PM₁₀. Considering the fact that monitored PM_{2.5} concentrations in the nearby Vernal area are already high it is imperative that the BLM perform a near-field modeling analysis to predict PM_{2.5} and PM₁₀ concentrations and use the results of the modeling analysis, along with the most current background concentrations for the area, to assure compliance with the PM NAAQS as required by FLMPA.

The PRMP/FEIS contains outdated background concentrations of PM₁₀ that are not reflective of actual background concentrations as noted by the state Division of Air Quality (DAQ) in several recent letters to the BLM. Specifically, a 24-hour average background concentration range for PM₁₀ of 11-30 µg/m³ is specified (note, there is no annual background concentration for PM₁₀ provided), along with background concentrations for NO₂ and CO, in Table 3-2 of the 2008 PRMP/FEIS (p. 3-7) and, according to the footnote in that table, are based on data from the Final EIS and ROD for the Ferron Natural Gas Development Project in 1999. There is no background concentration for PM_{2.5} specified in the PRMP/FEIS. The BLM apparently changed the 24-hour background concentration for PM₁₀ from 13 µg/m³ to a range of 11-30 µg/m³ in response to a comment by the EPA during the public comment period for the draft EIS (Public Comments and Responses – Price Draft RMP/EIS – Jul 2004 at 61). There is absolutely no reason that the BLM could not use a more updated background

concentration for all pollutants, including PM_{2.5}. As recently as July 2008 the BLM used a 24-hour average PM_{2.5} background concentration in the Uinta Basin of 25 µg/m³ and cited the source of this data as “UDEQ-DAQ(2008)”.⁶⁸

The State of Utah claims it has never provided PM_{2.5} background concentration data to the BLM for this area because it has not developed such values for studies such as EISs.⁶⁹ The State has revised its PM₁₀ background concentration for this area to a 24-hour average concentration of 63.3 µg/m³.⁷⁰ This value is based on recent PM monitoring data in the Vernal area and the BLM should update the PRMP/FEIS to reflect the State’s recommendation. EPA has also weighed in on the background concentration for PM_{2.5} for the Vernal area in its comments on the West Tavaputs Plateau Development DEIS. EPA expressed concern with “the use of and basis for the estimated background level for PM_{2.5}” of 25 µg/m³ for a 24-hour average period.⁷¹ The EPA goes on to recommend that the BLM update the PM analysis with more current monitoring data.

Nearly all of the recent RMPs prepared by the BLM in Utah have used a background PM_{2.5} concentration of 25 µg/m³ (24-hour average) so it is unclear why the BLM failed to include any PM_{2.5} background concentration in the PRMP/FEIS when clearly the State and EPA are calling for the BLM to use available data to establish a more up-to-date concentration for the area. It is also unclear why the BLM is using PM₁₀ data from 1999 when more recent data are available.

The PM_{2.5} monitor in Vernal, Utah, which operated from December 2006 until mid-December 2007 appears to be the basis for the State’s suggested 24-hour PM₁₀ background concentration of 63.3 µg/m³.⁷² PM₁₀ concentrations could obviously be even

⁶⁸ Petro-Canada Resources (USA) Inc.’s Twin Hollow Exploratory Drilling EA, July 2008, Table 3-2, p. 29.

⁶⁹ April 28, 2008 letter from John Harja, State of Utah to Brad Higdon, BLM Re: West Tavaputs Plateau Natural Gas Field Development Plan Draft Environmental Impact Statement (DEIS) Project No. 08-8885, p. 3.

⁷⁰ April 28, 2008 letter from John Harja, State of Utah to Brad Higdon, BLM Re: West Tavaputs Plateau Natural Gas Field Development Plan Draft Environmental Impact Statement (DEIS) Project No. 08-8885, p. 3.

⁷¹ May 23, 2008 letter from Larry Svoboda, EPA to Selma Sierra, BLM Re: West Tavaputs Plateau Natural Gas Full Field Development Plan, Draft Environmental Impact Statement, Carbon County, Utah, CEQ# 20080028, p. 6.

⁷² The last filter sampled was on December 14, 2007, per correspondence with the state DAQ.

higher than the PM_{2.5} portion monitored in Vernal but this must be the minimum value used as representative of background PM₁₀ concentrations according to the State. During the short time of operation this monitor recorded several very high values of PM_{2.5} in the area, including six exceedances of the 24-hour PM_{2.5} NAAQS as follows:⁷³

Vernal (VL)		NAAQS
PM _{2.5} Actual Concentrations		PM _{2.5}
(24-hour average) in µg/m ³		(24-hour average) in µg/m ³
01/10/07	45.1	
01/15/07	35.5	
01/18/07	55.7	
01/27/07	63.3	35
02/08/07	51.8	
12/05/07	43.3	

The maximum 24-hour average concentration at the Vernal monitor in 2007 was 63.3 µg/m³ based on a one-in-three day sampling frequency. The second highest 24-hour average concentration (the “high second high” value) was 55.7 µg/m³. Both of these observed 24-hour average concentrations are more than two times the background concentration of 25 µg/m³ used by the BLM for other RMPs in Utah. Keeping in mind that the concentration to be used as reflective of background should be determined by also evaluating “the meteorological conditions accompanying the concentrations of concern” (see 40 CFR Part 51, Appendix W, § 9.2.2), use of the maximum or high second high 24-hour average concentration from the Vernal monitor as the representative PM_{2.5} background concentration – either 63.3 µg/m³ or 55.7 µg/m³ – is the best way to ensure public health protection. These observed concentrations, where even the high sixth high concentration exceeds the NAAQS, indicate that the BLM must find a way to *reduce* PM_{2.5} emissions in the area in order to avoid violating the short-term PM_{2.5} NAAQS. Continuing to approve more development that adds fine particle emissions to the area will threaten attainment of the NAAQS. Nowhere in the PRMP/FEIS

⁷³ Data from the State’s “Particulate PM2.5 Data Archive” at <http://www.airmonitoring.utah.gov/dataarchive/archp25.htm>

does the BLM acknowledge these nearby monitored exceedances of the short-term fine particle NAAQS. At these concentrations, *any* increase in PM_{2.5} emissions from development in the area (e.g., from off road vehicle use and from oil and gas development) will threaten the area's compliance with the short-term fine particle NAAQS. In order to meet its obligations under FLPMA, the BLM must demonstrate that the proposed increases in primary and secondary PM_{2.5} emissions will not cause or contribute to violations of the PM_{2.5} NAAQS. The BLM has failed to do this in the PRMP/FEIS.

The EPA, in its comments to the BLM on the EOG Resources Inc., Chapita Wells-Stagecoach Area Natural Gas Development FEIS stated that it "is particularly concerned with elevated daily PM_{2.5} concentrations measured in Vernal, Utah during 2007". In particular, the EPA made the following recommendation:

"EPA recommendation: We suggest that the Record of Decision consider this new air quality information from the Vernal monitoring station and implement additional mitigation that would reduce air emissions or phase the development over a longer time period to maintain air quality within these standards as needed to reduce the risk of adverse health impacts to Vernal area residents."⁷⁴

The NAAQS were set to protect the public and the environment from the adverse effects from air pollution. Thus, in determining whether these air quality standards might be exceeded as a result of the BLM's proposed action, the RMP must use background concentrations that are truly representative of the maximum concentrations that are currently occurring. Only by using a background concentration that is representative of the maximum concentration for the area will the public be assured that public health and welfare will be protected. Using a concentration that is significantly lower than monitored levels in the area leaves open the possibility (when concentrations as high as the NAAQS occur, as they already have in Vernal) that human health will be adversely affected as a result of future oil and gas development on top of all other air emissions sources in the area. Using a lower background concentration than what has been observed in the area simply ignores the real fact that higher levels can (and likely will continue

⁷⁴ February 4, 2008 letter from Larry Svoboda, EPA region 8, to William Stringer, BLM Vernal Field Office, Re: Final Environmental Impact Statement (EIS) for EOG Resources Inc., Chapita Wells-Stagecoach Area Natural Gas Development, CEQ #20070549, pp 2-3.

to) occur in the area.

The State describes the Vernal monitor in its PM_{2.5} area designation recommendations as follows:

“In this case it is not the mobile source emissions that dominate the inventory, nor is there a single large point source that could unduly influence the area. Population growth for the Uintah Basin is estimated at only about one percent per year (see Table 3.) Rather, it is the area source emissions from a source category that is not well understood. This area has long been a source of oil and gas deposits, and with the recent emphasis on exploration and development of domestic energy sources, there has been an upsurge in the industry surrounding this resource.”⁷⁵

The State attributes the high PM_{2.5} values from the Vernal monitor to activities related to oil and gas development in the area which lends even more support to the use of these data for background concentrations when determining future impacts from oil and gas development in the area.

The EPA recently revised the short-term PM_{2.5} standard because scientific information showed that the pollutant is a health concern at levels lower than what the previous standard allowed. PM_{2.5} can become lodged deep in the lungs or can enter the blood stream, worsening the health of asthmatics and even causing premature death in people with heart and lung disease. Fine particles are also a major contributor to visibility impairment. See the EPA’s staff paper on particulate matter (EPA-452/R-05-005a, December 2005) as well as the EPA’s Air Quality Criteria Document for Particulate Matter (EPA/600/P-99/002aF and EPA/600/P-99/002bF, October 2004) for more detailed information on the health effects of fine particles. And even PM_{2.5} concentrations lower than the current NAAQS are a concern for human health. In fact, the CASAC, in their recommendations to the EPA on the revised PM_{2.5} standard, unanimously recommended that the 24-hr PM_{2.5} standard be lowered from 65 µg/m³ to 30-35 µg/m³ and that the annual standard be lowered from 15 µg/m³ to 13-14 µg/m³.⁷⁶ EPA set the standard on the high end of the CASAC recommended range for

⁷⁵ Utah Area Designation Recommendation for the 2006 PM_{2.5} NAAQS, State of Utah, Department of Environmental Quality, Division of Air Quality, December 18, 2007, p. 34.

⁷⁶ EPA-CASAC-LTR-06-003, Clean Air Scientific Advisory Committee Recommendations Concerning the Final National Ambient Air Quality Standards for Particulate Matter, September 29, 2006, <http://www.epa.gov/sab/panels/casacpmpanel.html>

the short-term standard and chose not to lower the annual standard at all. In response, CASAC made it clear in their September 29, 2006 recommendation letter to the EPA that their recommendations were based on “clear and convincing scientific evidence” and that the EPA’s decision not to lower the annual standard does not provide for “an adequate margin of safety ... requisite to protect the public health” as required by the CAA and, furthermore, that their recommendations were “consistent with the mainstream scientific advice that EPA received from virtually every major medical association and public health organization that provided their input to the Agency”. The BLM has an obligation, under NEPA, to evaluate all potential health effects from exposure to increased pollution under the various alternatives of an EIS. The fact that the EPA has set the PM_{2.5} standards at levels that some would claim are not adequate to protect human health should not limit the BLM to using only EPA’s standards. The BLM must assure adequate protection of human health from exposure to fine particles in the area and could certainly use the CASAC recommendations as a guide for achieving this protection.

The PRMP/FEIS proposes increasing PM₁₀ emissions and PM_{2.5} emissions over base year emissions by 67% and 43%, respectively (Air Quality Baseline Report Table 14 at 34). This, along with the fact that the BLM already has and continues to approve oil and gas development projects in the vicinity of the planning area without any comprehensive analysis of PM_{2.5} impacts makes it almost certain that PM_{2.5} concentrations in the area will threaten violations of the short-term NAAQS. In fact, the monitoring data from the Vernal monitor in 2007 support this trend.

The Enduring Resources’ Saddletree Draw Leasing and Rock House Development Proposal EA (Rock House EA) (December 2007) predicted modeled violations of the 24-hour average PM_{2.5} and PM₁₀ NAAQS as well as the 24-hour average Class II PM₁₀ increment.⁷⁷ The modeled PM_{2.5} NAAQS violations were based on a 24-hour average background concentration of 25 µg/m³. The BLM recently approved over 620 natural gas wells, close to 100 miles of road and an additional 5,000 horsepower of compression for the Chapita-Wells Stagecoach Area Natural Gas Development project as well as over 1,000 natural gas wells, over 200 oil wells, almost 900 well pads, 15 compressor stations and 170 miles of new road for the Greater Deadman Bench Oil and Gas Producing Region and yet, neither of these EISs included a comprehensive

⁷⁷ See Rock House EA at 6-24 to -25 and Rock House Emissions Inventory, Criteria Summary Tab.

analysis of PM_{2.5} impacts (i.e., near-field, far-field and cumulative impacts).⁷⁸ The BLM cannot allow continued growth in fine particle emissions without assuring the public - through a comprehensive analysis of impacts - that concentrations of PM_{2.5} are not at levels that are harmful to human health.

The PM_{2.5} emissions inventory for the PRMP/FEIS that proposes increases in PM_{2.5} and PM₁₀ emissions by 67% and 43% likely underestimated emissions and, therefore, underestimates potential increases in emissions projected under the plan. The inventory assumed 50% control of fugitive dust emissions from well pad and resource road construction through water and/or chemical dust suppressants yet there is no enforceable mitigation measure in the FEIS to require this level of control. See Williams 1/14/08 Comment Letter at 10 for more details. New in the PRMP/FEIS is the additional statement that wetting is also assumed for maintenance traffic. Air Quality Baseline Report at 26. Also, the PRMP/FEIS does not address comments made during the SEIS comment period on the use of certain conversion factors for PM that result in potential underestimates of PM emissions from construction activities (Williams 1/14/08 Comment Letter at 11). Finally, and importantly, the BLM did not address concerns with the emissions estimates for off-road vehicles (ORV) - namely that the BLM must complete a more rigorous assessment of the emissions from this source using EPA's AP-42 emission factors to estimate the fugitive dust emissions from travel of off-highway vehicles on unpaved roads and EPA's MOBILE6.2 model to estimate ORV exhaust and brake and tire wear emissions.⁷⁹ The BLM has failed to include any estimates for fugitive dust emissions from this potentially large source category and continues to base tailpipe emissions on a fraction of national 2000 emissions estimates from EPA that likely underestimate emissions in the Price planning area. See Williams 1/14/08 Comment Letter at 13 for more details. Southern Utah Wilderness Alliance (SUWA) specifically addressed deficiencies in ORV impacts in a letter to the BLM on June 19, 2008.⁸⁰ SUWA provided documentation to support the type of emissions assessment that is needed for evaluating the impacts from this source category (e.g., one based on vehicle miles traveled and emission factors that do not employ dust suppression). Specifically, SUWA specified the need for

⁷⁸ See EOG Resources Inc. Chapita Wells-Stagecoach Area Natural Gas Development Final EIS UTU-080-2005-0010 (May 2007, Modified January 2008) and Greater Deadman Bench Oil and Gas Producing Region Final EIS UT-080-2003-0369V (January 2008)

⁷⁹ See EPA's AP-42, Section 13.3.2, Unpaved Roads, for more details on the associated emissions sources and how to estimate their magnitude. <http://www.epa.gov/ttn/chief/ap42/ch13/index.html>

⁸⁰ Letter from David Garbett, SUWA, to Floyd Johnson, BLM (June 19, 2008).

modeling “ORV use on unpaved routes that would be authorized by its travel plan as well as ORV cross country use and predictable unauthorized use”. The submission from SUWA identified specific projects where fugitive dust from travel on unpaved roads was a major factor in overall PM emissions, underscoring the importance of including solid estimates of fugitive dust emissions from ORV travel in its air quality analysis:

“In the [West Tavaputs] DEIS the BLM calculated the likely air quality impacts that would result from the travel of pickup trucks on unpaved roads and from the emissions of the truck engines. *See Buys & Associates, Inc., Near-Field Air Quality Technical Support Document for the West Tavaputs Plateau Oil and Gas Producing Region Environmental Impact Statement* in Appendix J – Air Quality Technical Support Document of the BLM, West Tavaputs Plateau Natural Gas Full Field Development Plan, Draft Environmental Impact Statement, UT-070-05-055 (Feb. 2008). Truck travel on unpaved roads creates significant amounts of fugitive dust, which results in high levels of both PM_{2.5} and PM₁₀. *See id.* at 3 of 12 and 12 of 12. In the [West Tavaputs] DEIS modeling fugitive dust from truck traffic on unpaved roads was projected to be the major pollutant during oil and gas development activities. *See id.* at 3 of 12. In an oil and gas project recently approved by the Vernal Field Office of the BLM, levels of PM_{2.5} – principally from fugitive dust emissions from truck traffic – were projected to be high enough to exceed NAAQS. *See Buys & Associates, Inc., Rock House Emissions Inventory for Enduring Resources’ Saddletree Draw Leasing and Rock House Development Proposal, Final Environmental Assessment UT-080-07-671* (Dec. 2007).” June 19, 2008 letter from SUWA to BLM.

The EPA also commented on deficiencies in the BLM’s PM analysis. Specifically, the EPA stated that it is “concerned that the DEIS does not address possible near-field impacts of fugitive dust that would have a greater potential to approach a NAAQS for particulate matter (such as the 24-hour standard for PM₁₀) than a regional haze threshold” (EPA at 6). The EPA went on to say that the BLM should “discuss potential near-field impacts of fugitive dust in the FEIS” (EPA at 6).

The BLM must perform a modeling analysis using the PM_{2.5} emissions inventory developed for the PRMP/FEIS (incorporating the inventory changes described above) in order to provide for

compliance with the PM_{2.5} NAAQS, as required by FLMPA. And in addition to modeling primary PM_{2.5} impacts (directly emitted from combustion point sources and from fugitive sources in the planning area) the BLM should also consider secondary sources of PM_{2.5}. Emissions of NO_x, VOCs, SO₂ and ammonia can form, after emitted into the atmosphere, into PM_{2.5} and this could potentially be a significant component of ambient PM_{2.5} concentrations. Estimates of PM_{2.5} formation from these precursors should also be included in the BLM's modeling analyses.

It is quite possible that the high concentrations of PM_{2.5} that were recorded at the Vernal monitor are due in large part to the secondary formation of PM_{2.5} (e.g., sulfates and nitrates), as opposed to directly emitted [primary] PM (e.g., road dust and wood smoke). The high values mostly occurred during the wintertime and could therefore be associated with inversions that limit dispersion and provide conditions (e.g., high relative humidity) that contribute to the formation of secondary PM_{2.5} in the atmosphere. Since it is possible that the monitored high values in Vernal are due to gaseous pollutants that form fine particles after reacting with other compounds in the air during wintertime inversions then it would be very important for the BLM to consider these PM_{2.5} sources (e.g., NO_x from diesel combustion) in its air quality impact assessment. All of the sources of the primary pollutants that contribute to secondary PM_{2.5} formation – e.g., NO_x, SO_x and VOC - from development in the Vernal management area must be accounted for in the BLM's assessment of PM_{2.5} impacts.

While the discipline of secondary PM_{2.5} modeling is still evolving there *are* tools available to support such an analysis. The EPA provides access to certain photochemical modeling applications, including modeling of secondary PM, for regulatory applications. Specifically, the EPA recently developed a model based on the Community Multi-scale Air Quality (CMAQ) model to support the development of the PM_{2.5} NAAQS. According to the EPA, the model has been shown to “reproduce the results from an individual modeling simulation with little bias or error” and “provides a wide breadth of model outputs, which can be used to develop emissions control scenarios”.⁸¹ The Comprehensive Air quality Model with extensions (CAMx) is another tool available to assess secondary PM_{2.5} formation. CAMx has source apportionment capabilities and can assess a wide variety of inert and chemically reactive pollutants, including inorganic and organic PM_{2.5} and PM₁₀. The

⁸¹ See http://www.epa.gov/scram001/reports/pmnaqs_tsd_rsm_all_021606.pdf

Regional Modeling System for Aerosols and Deposition (REMSAD) can also model concentrations of both inert and chemically reactive pollutants on a regional scale, “including those processes relevant to regional haze and particulate matter”.⁸² These are just some examples of current models with the capability to assess secondary PM_{2.5} impacts.

It is imperative that the BLM use the available tools to assess the impact of emissions in the planning area that contribute to secondary PM_{2.5} formation. Resulting PM_{2.5} concentrations will be higher when considering the additional impacts from secondary PM_{2.5}. Considering the already high PM_{2.5} background concentrations in the area and the fact that the BLM has not demonstrated compliance with the 24-hour NAAQS, the secondary PM_{2.5} impacts are critical to understanding the best way to mitigate health impacts from fine particle pollution within the Price planning area.

All of these factors (i.e., the complete failure to model ambient impacts from PM emissions, the use of background concentrations lower than what has been observed in the area and potential underestimates of PM_{2.5} emissions) result in an incomplete assessment of PM_{2.5} impacts and therefore fail to meet the requirements of FLPMA to demonstrate compliance with all CAA requirements. It seems quite likely, based on all of the presented information (e.g., the recent monitoring data in Vernal, previous BLM project-specific analyses in the region, etc.) that compliance with the 24-hour PM_{2.5} NAAQS cannot be demonstrated for the Price planning area. Failing to fully evaluate all known PM_{2.5} emissions sources in a modeling analysis and failing to use a more representative background concentration when comparing PM concentrations to the NAAQS will result in an inability on the part of the BLM to assess PM_{2.5} impacts in the planning area. The extent of this unknown could be quite significant considering the recently monitored PM_{2.5} values recorded in Vernal. The BLM must ensure the scientific validity of this analysis per the requirements of 40 CFR § 1502.24.

The BLM Failed to Complete a PSD Increment Analysis for the PRMP/FEIS

The BLM has failed to complete an analysis to determine how much of the incremental amount of air pollution allowed in clean air areas (i.e., PSD increment) has already been consumed in the

⁸² See <http://remsad.saintl.com/>

affected planning area and how much additional increment consumption will occur due to the proposed development under the RMP. Without this analysis, the BLM is not ensuring that air quality will not deteriorate more than allowed under the law (Clean Air Act).

The BLM received comments from Vicki Stamper and me regarding the need for a comprehensive PSD increment analysis. See Public Comments and Responses – Price Draft RMP/EIS – Jul 2004 at 389 and Williams 1/14/08 Comment Letter at 16. In response to Ms. Stamper’s comments, the BLM claims that “[t]he BLM never does a PSD Increment Consumption Analysis” and that “[t]he BLM does not have the authority or responsibility to do such.” Public Comments and Responses – Price Draft RMP/EIS – Jul 2004 at 389. Yet, the Air Quality Baseline Report includes results from the PSD increment analysis of the BLM’s own Ferron Natural Gas EIS showing Class II NO₂ increment violations (Table 15).

In fact, the BLM is required, under NEPA, to analyze and disclose all significant air quality impacts, regardless of whether another agency might address an adverse environmental impact in the future. The BLM must consider the PSD increments as important and legally binding Clean Air Act requirements and it must provide for compliance with these requirements in the FEIS. The PSD increments are separate ambient air quality standards not to be exceeded, as set out in §163 of the Clean Air Act, that apply *in addition to* the national ambient air quality standards in clean air areas. The BLM is required under FLPMA, 43 U.S.C. § 1712(c)(8), to “provide for compliance with” all Clean Air Act requirements, and thus the BLM cannot authorize an action that would allow the PSD increments to be exceeded. See also 43 CFR § 2920.7(b)(3) (requiring the same for land use authorizations).

The BLM appears to be relying on the state to track and ensure compliance with PSD increments. However, reliance on the State to track PSD increment consumption and assess PSD increments during new source permit reviews cannot be a substitute for the BLM’s obligation under FLPMA to “provide for compliance” with the NAAQS and PSD increments. The types of oil and gas sources proposed in the RMP development (e.g., area sources and numerous smaller point sources) will likely not trigger the need for the operator(s) to obtain any PSD permits from the State and therefore, none of the referenced state analyses of increment consumption will occur. Utah’s minor source permitting regulations do not require increment consumption analyses (see

Utah Administrative Code (UAC) R307-401). There are other provisions of the Clean Air Act and implementing regulations that require the protection of the PSD increments in addition to permitting requirements. The state must also track increment consumption in the area (and in any affected Class I areas) and the State Implementation Plan (SIP) should contain any necessary measures to assure that the increments are not exceeded. Specifically, the state is required to periodically review its plans for preventing significant deterioration (40 CFR 51.166(a)(4)) and if it determines that an applicable increment is being violated, then the state must revise the SIP to correct the violation (40 CFR 51.166(a)(3)). However, the fact that the State has a legal responsibility to protect increments does not mean that the BLM is relieved of its responsibility under FLPMA to “provide for compliance” by the State with CAA requirements or its obligation under NEPA to fully describe the cumulative impacts of the proposed project and identify mitigation measures to prevent adverse impacts. In fact, the BLM has no assurance that the State will perform any analysis of increment consumption. If the State had performed such an increment tracking analysis for the area the BLM might properly rely on it to show that existing sources have not caused PSD increment violations. Without such an assessment to rely on, the PRMP/FEIS must include an increment consumption analysis so that BLM’s obligation to develop and adopt sufficient mitigation measures may be included as part of the FEIS analyses and adopted as conditions in the Record of Decision.

In the past, the BLM has also indicated that the predicted PSD increment violations in EIS documents should not be considered as real increment violations because they are modeled. However, since only emissions from major stationary sources which commenced construction or modification after the applicable “major source baseline date” and emissions increases from minor, area and mobile sources that occurred after the relevant “minor source baseline date” affect the allowable increment, an air quality monitor cannot distinguish between pollutant concentrations from sources that are part of the baseline and those from sources that consume increment.⁸³ Therefore, it is impossible to use monitoring

The major source baseline dates are January 6, 1975 for SO₂ and PM₁₀ and February 8, 1988 for NO₂ (40 CFR 52.21(b)(14)(i)). The minor source baseline dates in Utah differ by pollutant and by [baseline] area and were triggered on the date that a complete PSD permit application was received by the State DAQ (or by the EPA for sources proposing to locate in Indian Country). Baseline area designations in Utah include Indian Country (40 CFR 81.345). See definitions of “major source baseline date”, “minor source baseline

data to establish compliance with the PSD increments; the only way to determine compliance is to complete a modeling analysis.

In comments on the Vernal RMP the State made it clear that the BLM must perform its own defensible PSD increment analysis as part of the planning process for the area.⁸⁴ The same certainly applies for the Price planning area. The BLM must prepare an inventory of all emissions changes that have occurred since the major and minor PSD baseline dates and model those changes in emissions to determine compliance with the PSD increments. The BLM is required to do this not only to comply with its obligations under the Clean Air Act and the Federal Land Policy and Management Act, but also to comply with its obligations under NEPA to consider the direct and indirect impacts of the action, and its cumulative impacts. See e.g., 40 CFR §§ 1502.2(d), 1508.7, 1508.8. Furthermore, the BLM must base its PSD increment analysis on a comprehensive inventory of sources in order to meet its obligation to ensure the scientific validity of this analysis. 40 CFR § 1502.24.

The BLM Failed to Complete a Cumulative Impacts Analysis

The inventory of source emissions discussed in the PRMP/FEIS does not represent all sources that can and must be inventoried in order to make a full assessment of cumulative impacts in the areas impacted by sources throughout the planning area. The PRMP/FEIS states that:

“The cumulative impact analysis of air quality within and near the PFO includes major sources such as coal-fired power plants and cogeneration facilities. No other RFDs would increase regulated pollutants in the area.”
PRMP/FEIS at 4-441.

In fact, there are many other sources, besides “major sources” that would increase pollutants in the area and must be included in a cumulative impacts assessment. Both Vicki Stamper and I identified several shortcomings in the BLM’s inventory, which were not addressed by the BLM in the PRMP/FEIS.⁸⁵

date” and “baseline area” in the Utah PSD rules and 40 CFR 52.21(b)(14)(i), 52.21(b)(14)(ii) and 52.21(b)(15).

⁸⁴ See August 2008 Vernal PRMP/FEIS Response to Comments by Resource AQ81 at 25.

⁸⁵ See Public Comments and Responses – Price Draft RMP/EIS – Jul 2004 at 386 and Williams 1/14/08 Comment Letter at 14.

The areas impacted by development in the Price planning area have the potential to be impacted by oil shale and tar sands development. This type of development will likely include no “major sources” but rather a large network of smaller sources that, when taken together, will have significant impacts to the region. The BLM must identify all of the potential impacts from oil shale development in the PRMP/FEIS. See Williams 1/14/08 Comment Letter at 13. As mentioned earlier, the BLM’s final Programmatic EIS for oil shale and tar sands development does not include any modeling of impacts from the proposed leasing program.

The BLM also must include reasonably foreseeable future sources of air emissions in the West Tavaputs Plateau development area (again, primarily minor sources) as well as other NEPA projects and recently permitted sources that are not yet operating that could impact the Price planning area (e.g., power plants such as those listed in my 1/14/08 comment letter at 14 and coal mines such as the Lila Canyon and Horizon mines).

The BLM failed to consider any of these sources in its so-called cumulative impacts analysis of air quality in the PRMP/FEIS. In fact, the BLM relies primarily on the woefully outdated Ferron Natural Gas and Price Coalbed Methane EISs to assess cumulative impacts. PRMP/FEIS at 4-441 to 4-442. There is no further quantitative (modeling) analysis of cumulative impacts presented in the PRMP/FEIS. The BLM must perform a full assessment of direct, indirect and cumulative impacts of each alternative and use the results as the basis for its planning decisions.⁸⁶ The BLM must base its cumulative air quality analysis on a comprehensive inventory of sources in order to meet its obligation to ensure the scientific validity of this analysis. 40 CFR § 1502.24.

The BLM Failed to Assess and Address Impacts to Air Quality Related Values, Including Visibility

The PRMP/FEIS does not include a cumulative assessment of impacts to air quality related values (AQRV), including visibility, at affected Class I areas. This type of analysis is needed in order to determine whether the Price RMP sources will cause or contribute to significant adverse impacts on AQRVs at affected Class I areas.

The visibility modeling analysis should include a complete emissions inventory (for existing sources and other reasonably

⁸⁶ BLM, “Land Use Planning Handbook,” H-1601-1, March 11, 2005, 22.

foreseeable development in the region as described in the section above) and should assess impacts at all Class I areas that could be impacted by the Price planning area sources, including Arches National Park, Bryce Canyon National Park, Canyonlands National Park, Capitol Reef National Park, Zion National Park, Grand Canyon National Park, Mesa Verde National Park and the Weminuche Wilderness Area.

The PRMP/FEIS relies on the 1999 Ferron Natural Gas EIS to describe potential visibility impacts in the Price RMP. Specifically, the BLM says that if the compressors associated with the oil and gas development in the Price planning area are fueled by natural gas, the standard visual range could be reduced by more than 10% for 11 days at Capitol Reef National Park and 2 days at Canyonlands National Park and the standard visual range reduction could range from 5% to 10% for 47 days at Capitol Reef National Park and 16 days at Canyonlands National Park. PRMP/FEIS at 4-442. Since there is no commitment in the PRMP/FEIS to require the use of electric compressor engines these adverse impacts to visibility must be addressed in the FEIS for the Price planning area.

Further, the BLM must consider impacts to visibility and other AQRVs (e.g., sulfur and nitrogen deposition) from the Ferron Natural Gas Project along with all other sources in the cumulative source inventory (including reasonably foreseeable development sources) in order to be able to assure the public there will be no adverse impacts to these values in affected Class I areas. The BLM states that “the potential for cumulative visibility impacts (increased regional haze) is a concern” (Air Quality Baseline Report at 23) yet the BLM has utterly failed to complete an analysis that can be used to address this concern.

SUWA *et al.* Price PRMP Protest at 15-40.

The Price Field Office recently released the West Tavaputs DEIS. This project encompasses many of the leases proposed for this sale in the eastern portion of the Price Field Office. *See* West Tavaputs DEIS at Figure 3.6 – Land Use, *available at* http://www.blm.gov/pgdata/etc/medialib/blm/ut/price_fo/Oil_Gas.Par.83309.File.dat/LandUse.pdf. This lease offering appears to be an integral part of that proposal as it includes parcels that are envisioned in the West Tavaputs DEIS as part of the project. *See, e.g.,*

West Tavaputs DEIS at Figure 2.2.1 – Alternative A, *available at* http://www.blm.gov/pgdata/etc/medialib/blm/ut/price_fo/Oil_Gas.Par.23114.File.dat/AlternativeA.pdf (showing unleased areas compared to the proposed development on the West Tavaputs Plateau). BLM prepared some air quality analysis for this project which suffered from extensive flaws. *See generally* Letter from David Garbett, SUWA, to Price Field Office, BLM, Re: West Tavaputs DEIS at 5-6, Ex. 13 (May 1, 2008) (attached as Exhibits 11–12). Despite these extensive flaws and BLM’s failure to prepare a full ozone analysis, what abbreviated ozone analysis it did prepare showed that even if Bill Barrett Corporation’s proposed West Tavaputs development were not approved the region would exceed NAAQS for ground-level ozone. *See* West Tavaputs DEIS at 4-17 to -18, *available at* http://www.blm.gov/pgdata/etc/medialib/blm/ut/price_fo/Oil_Gas.Par.41994.File.dat/Chapter4.pdf.

The EPA also commented on the West Tavaputs DEIS. *See* Letter from Robert Roberts, EPA, to Selma Sierra, BLM (May 23, 2008) (EPA West Tavaputs DEIS Letter) (attached as Exhibit 13). The EPA found that the air quality analysis in the West Tavaputs DEIS did not adequately assess the potential air quality impacts of the proposed project. *Id.* at 4. BLM and the EPA agreed that BLM would have to perform more modeling before this proposed development could be approved. *Id.* The EPA found BLM’s conclusions on ozone troubling and insufficient; it also disagreed with BLM’s modeling program. *See id.* at 2-6. It also expressed concerns over BLM’s analysis of particulate matter pollution. *See id.* at 6. It is difficult to understand how BLM would lease these tracts when it is currently considering a large scale proposal for this area that

has shown air quality violations and that suffers from numerous, fatal flaws in its analysis.

SUWA informed BLM that this letter from the EPA, coupled with other information, amounted to significant new information in the Price Field Office. *See* Letter from Stephen Bloch, SUWA, to Roger Bankert, BLM (June 20, 2008) (attached as Exhibit 14). This information must be addressed before BLM permits leasing in these areas. SUWA stated the following in that letter:

As you know, the Southern Utah Wilderness Alliance, The Wilderness Society, Natural Resources Defense Council, and the Nine Mile Canyon Coalition (collectively, “SUWA”) are intensely interested in ongoing and planned natural gas development in the greater Nine Mile Canyon/West Tavaputs Plateau region. This letter details significant new information generated after the Price field office approved multiple statutory categorical exclusions for Bill Barrett Corporations to drill at least 19 new natural gas wells (downhole locations) from existing well pads on the West Tavaputs Plateau. A list of the BLM’s recent statutory categorical exclusions that are the subject of this letter is attached hereto as Exhibit A.

On May 23, 2008 the Environmental Protection Agency (EPA), Region 8, sent detailed comments to the BLM’s Utah State Director regarding the West Tavaputs Plateau Natural Gas Full Field Development Plan, Draft Environmental Impact Statement. . . . EPA rated the West Tavaputs DEIS as a “3” – “Inadequate Information.”⁸⁷ EPA specified that “the rating of ‘3’ is based on the lack of adequate information from air quality monitoring to disclose the predicted ozone concentration under various emission scenarios.” EPA letter at 4.

In particular, EPA focused its concerns on air quality information and impacts related to ozone, a National Ambient Air Quality Standards

⁸⁷ EPA’s website explains that a rating of “3” means that “[t]he draft EIS does not adequately assess the potentially significant environmental impacts of the proposal. . . . The identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. This rating indicates EPA’s belief that the draft EIS does not meet the purposes of NEPA and/or the Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS.” *See* <http://www.epa.gov/oecaerth/nepa/comments/ratings.html>.

(NAAQS) criteria pollutant. EPA noted that it had recently “revised the 8-hour primary ozone standard, designed to protect public health, to a level of 0.075 parts per million (ppm). The previous standard set in 1997, was 0.08 ppm (effectively 0.840 ppm).” EPA letter at 2. The letter continued that predicted ozone levels in the area – without adding the emissions from the West Tavaputs project – would exceed NAAQS for ozone. *Id.* at 3. EPA recommended that BLM and Barrett conduct additional cumulative and project-specific air impact modeling and stated that “[i]f this additional modeling information indicates that this project would contribute to exceedances of the ozone standard, then EPA recommends additional air quality emissions controls be included in the EIS to mitigate these exceedances.” *Id.* See *id.* at 5 (specific ozone recommendations including that draft supplemental EIS “include modeled demonstrations that the proposed action will not incrementally contribute to violations of a NAAQS.”).

In other words, according to BLM and Bill Barrett Corporation’s own modeling, existing development and future state lands drilling will lead to exceedances of NAAQS without the additional emissions from construction, operation, and maintenance of Barrett’s recently approved 19 new wells. Neither the 2004 West Tavaputs Drilling Program EA nor the statutory categorical exclusions themselves consider the recent change in NAAQS for ozone or the fact that this new development will contribute to NAAQS are being further exceeded for ozone in this same area. See West Tavaputs Drilling Program EA at 3-5 (listing 8-hour ozone NAAQS at .08 ppm).

EPA also questioned the draft EIS’s use of a background level of 25 ug/m³ for PM_{2.5}, a NAAQS criteria pollutant and noted that even with this figure impacts from proposed development would come very close to exceeding NAAQS for PM_{2.5}. EPA letter at 6. See *id.* (explaining that NAAQS 24-hour PM_{2.5} limit is 35 ug/m³). EPA recommended that “BLM update the particulate matter section with more current monitoring data and also identify all background concentration data locations and periods of measurement.” *Id.* Importantly, the West Tavaputs Drilling Program EA contains no mention whatsoever of PM_{2.5}. See West Tavaputs Drilling Program EA at 3-5.

The National Environmental Policy Act (NEPA) requires that BLM prepare an environmental impact statement if an action (or series of actions) “threatens a violation of Federal . . . law or requirements imposed for the protection of the environment.” 40 C.F.R. § 1508.27(b)(9). See *Sierra Club v. U.S. Forest Service*, 843 F.2d 1190, 1195 (9th Cir. 1988) (concluding that it was unreasonable for the Forest Service not to prepare an EIS for a timber harvesting project that “may” have violated state water quality standards). The adverse air quality impacts from BLM’s decisions

to approve Barrett's 19 new natural gas wells triggers this requirement that BLM prepare an EIS to analyze, consider, and disclose this threat. At a minimum, BLM has not taken a hard look at PM_{2.5} and ozone emissions related to developing and operating these 19 wells.

In addition, the Federal Land Policy and Management Act (FLPMA) and its implementing regulations expressly require BLM to ensure that its approval of the West Tavaputs project complies with all applicable air quality standards. *See* 43 U.S.C. § 1712(c)(8) (requiring BLM to “provide for compliance with applicable pollution control laws, including State and Federal air ... pollution standards or implementation plans”); 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”) (emphasis added); West Tavaputs Drilling Program EA at 4-3 (Under the *Federal Land Policy and Management Act* and the *Clean Air Act*, the Bureau of Land Management (BLM) cannot conduct or authorize any activity that does not conform to all applicable local, state, Tribal, or federal air quality laws, statutes, regulations, standards, or implementation plans.”). By approving additional natural gas wells in area that will contribute to a violation of NAAQS for ozone, BLM is violating the Clean Air Act – in violation of FLPMA.

Id. at 1-3. BLM has yet to address these concerns and has yet to consider the potential impacts to air quality from its approval of large numbers of gas wells in the region using categorical exclusions. This letter underscores the current problems with air quality in the region and the fact that BLM's continued approval of wells without undertaking further analysis is exacerbating the situation. SUWA reminded of these concerns again when it submitted a letter to the Price Field Office on October 31, 2008. *See* Letter from David Garbett, SUWA, to Roger Bankert and Michael Stiewig, BLM (Oct. 31, 2008) (attached as Exhibit 15).⁸⁸ This letter further explained the problems with air quality in the region and underscores why BLM must examine the impacts of oil and gas development on air quality before it approves an additional development or leasing in the

⁸⁸ SUWA incorporates the contents of that letter into this protest.

Price Field Office. These impacts must be understood before BLM issues oil and gas leases in the Price Field Office.

BLM must remove parcels 335, 336, 337, 338, 339, 340, 341, 342, 343, 345, 348, 349, 350, 355, 83, 84, 86, and 87 until after the West Tavaputs DEIS becomes a finalized EIS and once it has completed sufficient air quality dispersion modeling for these tracts.

D. Moab

BLM's Moab PRMP air quality analysis suffers from numerous inadequacies that should prevent BLM from now relying on it to understand the impacts of this proposed lease sale on air quality. BLM has never prepared a detailed dispersion model to understand the impacts of oil and gas development on ambient concentrations of air pollution. SUWA provided extensive, detailed comments describing inadequacies in BLM's air quality analysis. However, these comments were completely ignored. BLM did not even acknowledge SUWA's comments in its Moab PRMP. Ultimately, BLM does not know how the development of these oil and gas leases would effect air quality in the region and it does not understand how those activities coupled with vehicles traveling on designated routes will impact air quality. This analysis must be undertaken before BLM includes these oil and gas leases in the December lease sale.

As with other field offices, the EPA informed BLM that the Vernal PRMP suffered from numerous, significant flaws in its air quality impacts analysis. *See* Letter from Larry Svoboda, EPA, to Selma Sierra, Re: Final Resource Management Plan and Environmental Impact Statement for the Moab Planning Area (Sept. 12, 2008) (EPA Moab Letter) (attached as Exhibit 16). These comments have yet to be adopted by BLM and were not implemented by the Moab ROD. The EPA warned BLM that its analysis

was inadequate because it had not prepared dispersion modeling and it had ignored the impacts to ozone concentrations from oil and gas development. *Id.* at 1-3. The EPA also stated that BLM's analysis of the impacts from oil and gas on climate change was insufficient. *See id.* at 3-4.

NPS also informed BLM that ground-level ozone was a problem at Canyonlands National Park and that BLM had not performed any adequate "air quality analyses ... to determine whether air quality standards could be violated, or if visibility and other [air quality related values] could be adversely impacted." NPS Memo at 2. In fact, in 2008 Canyonlands National Park recorded a fourth-highest value of ground-level ozone at the new limit established by NAAQS: 0.075 parts per million.⁸⁹ *Id.*; *see also* EPA, National Ambient Air Quality Standards, <http://epa.gov/air/criteria.html> (listing the new 8-hour ozone standard as 0.075 parts per million).

SUWA provided the following specific comments regarding the inadequacies of the Moab PRMP air quality analysis:

As an initial matter, the Moab PRMP has completely ignored and failed to respond to SUWA's air quality comments submitted on the Draft RMP. That being the case, SUWA now reiterates everything that it stated previously and specifically incorporates both its comments and those prepared by Ms. Megan Williams and submitted on SUWA's behalf regarding air quality issues in the Moab DRMP. BLM never acknowledged or responded to any of these comments. Ms. Williams advised BLM that in order to understand the impacts of the activities that it was permitting in the Moab RMP it would need to rectify certain inadequacies in its air quality analysis. These comments included a recommendation that BLM prepare a full-fledged, comprehensive quantitative analysis; acknowledge and quantify background concentrations of pollutants in the planning area; analyze whether the activities permitted in the Moab RMP would lead to a significant

⁸⁹ The NPS Memo lists the level recorded as ".75 [parts per million]." However, this appears to be an error; it is more likely that the NPS meant to list this figure as "0.075 parts per million."

deterioration of air quality; prepare a more comprehensive inventory and then perform dispersion modeling to understand impacts; and include plans for protecting and restoring air quality in the region. Ms. Williams also pointed out numerous additional details and flaws that would need repair in the RMP so that BLM could understand the impacts of the activities that it was permitting. BLM must take all of these steps.

The Moab PRMP also ignores information submitted by SUWA in a June 18, 2008 comment letter providing useful methods for preparing an inventory of emissions and fugitive dust generated by off-road vehicle travel on routes designated in the Moab PRMP. SUWA now reiterates those comments.

The Moab PRMP fails to model the impacts of the activities that it permits on air quality in the planning area. Both NEPA and FLPMA require that BLM prepare such analysis. Without preparing near-field, far-field, and cumulative air quality analyses BLM will not understand the effects of the pollutants that it has attempted to partially inventory in the Moab PRMP, thereby violating NEPA and its requirement that BLM understand the environmental impacts of the activities it is permitting. In addition, BLM must model pollution concentrations in order to understand if this plan will comply with federal and state air quality standards, as required by FLPMA.

FLPMA and the Moab PRMP require that BLM manage the planning area according to federal and state air quality standards. *See* Moab PRMP at 2-3; 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”) (emphasis added). *See also* 43 U.S.C. § 1712(c)(8) (requiring BLM in land use plans—which would therefore require implementation in daily management—to “provide for compliance with applicable pollution control laws, including State and Federal *air . . . pollution standards or implementation plans*”). These air quality standards include both the national ambient air quality standards (NAAQS) and the prevention of significant deterioration (PSD) increment limits. Both the State and Federal standards are based on ambient concentrations of various air pollutants. For this reason, the Moab PRMP has failed to satisfy its FLPMA obligation: it permits activities (e.g. oil and gas development, route designation, vehicle travel on designated routes, mining) without modeling the effect that these activities will have on ambient *concentrations* of NAAQS and PSD pollutants.

Not only has BLM has prepared an incomplete emissions inventory for the Moab PRMP, but it has also failed to conduct modeling that analyzes the likely concentrations of pollutants that will result. *See, e.g.*, Moab PRMP

at 4-17 to -33 (predicting likely quantities in tons per year or grams per second—not ambient concentrations—of various pollutants that will result from plan implementation). As discussed below, the Moab PRMP emissions inventory suffers from a number of flaws that have led to underestimates for various pollutants. With such flaws the emissions inventory cannot be used to accurately quantify and model pollutant concentrations in the planning area. Furthermore, even if the emissions inventory were accurate, it does not inform BLM and the public as to what the resulting pollution concentrations will be for the pollutants relevant to NAAQS and the PSD increments. The emissions inventory does not include any inventories or modeling for NAAQS criteria pollutants likely to be generated by the use of motorized vehicles on designated routes in the planning area. The use of these vehicles on designated routes and in areas open to cross country travel will generate emissions from the vehicle engines and from fugitive dust. BLM must quantify these emissions in order to fully understand their likely impact on air quality in the planning area.

Notably, BLM has prepared inventories for HAPs and NAAQS criteria pollutants, and precursors, likely to be generated by oil and gas development activities in the planning area. *See, e.g.*, Moab PRMP at 4-22 to -23. However, BLM has failed to prepare such inventories for the use of motorized vehicles on the extensive and sizeable network of routes identified for travel in the Moab PRMP. In addition, the Moab PRMP and its inventory do not discuss or examine PSD increment limits (particulate matter, nitrogen oxides, carbon monoxide, sulfur dioxide). These federal air quality standards are also the State of Utah’s air quality standards. Thus, there is no evidence, certainty, or indication that the Moab PRMP will comply with federal and state air quality standards as NEPA and FLPMA require.

NEPA also requires that BLM model the impacts from the various activities—and fully inventory the pollutants generated by these activities—permitted by the Moab PRMP. “NEPA ‘prescribes the necessary process’ by which federal agencies must ‘take a “hard look” at the environmental consequences’ of the proposed courses of action.” *Pennaco Energy, Inc. v. U.S. Dep’t of the Interior*, 377 F.3d 1147, 1150 (10th Cir. 2004) (quoting *Utahns for Better Transp. v. U.S. Dep’t of Transp.*, 305 F.3d 1152, 1162–63 (10th Cir. 2002)) (internal citation omitted). The fundamental objective of NEPA is to ensure that that an “agency will not act on incomplete information only to regret its decision after it is too late to correct.” *Marsh v. Or. Natural Resources Council*, 490 U.S. 360, 371 (1990) (citation omitted). Without preparing modeling to determine what the ambient concentrations of NAAQS- and PSD-regulated pollutants will be, BLM cannot understand or disclose the impacts of these pollutants on humans, wildlife, vegetation, water bodies,

or climate. Since it is actual ambient concentrations that will impact these various components of the ecosystem, BLM must model concentrations to understand these impacts. BLM's deficient emissions inventory does not satisfy NEPA's hard look requirement.

The emissions inventory prepared for the Moab PRMP suffers from numerous deficiencies. SUWA detailed the important contributors to air pollution likely to result from the activities authorized in the PRMP, the proper methodology for quantifying those emissions, and the necessary modeling to fully understand the impacts of those emissions in its expert's November 29, 2007 comment letter on the Draft RMP and in its June 18, 2008 supplemental comments—neither of which are dealt with or acknowledged in the Moab PRMP.

As mentioned above, BLM has failed to inventory the particulate matter pollution, differentiated for particulate matter 2.5 microns in diameter or smaller (PM_{2.5}) and for particulate matter ten microns in diameter or smaller (PM₁₀), which will be generated by fugitive dust. The existence of designated routes and travel of automobiles and ORVs on designated routes and in open cross-country travel areas will generate significant amounts of fugitive dust which will negatively affect air quality in the region. The Moab PRMP and its air quality emissions inventory have completely failed to consider such emissions. The Richfield Field Office Proposed Resource Management Plan and Final Environmental Impact Statement (August 2008) (Richfield PRMP) acknowledges that ORVs are significant contributors of fugitive dust. *See, e.g.*, Richfield PRMP at 4-6, 4-9, 4-11. The Kanab Field Office Proposed Resource Management Plan and Final Environmental Impact Statement (August 2008) (Kanab PRMP) also attempts to quantify at least some of the engine emissions expected from ORV use in the planning area. *See, e.g.*, Kanab PRMP at 4-7 to -11. SUWA alerted Moab BLM to the importance of such quantification and modeling in its November 29, 2007 comments. To further guide BLM in how such quantification and modeling could be conducted, SUWA sent a letter on June 18, 2008 with examples of air quality modeling for fugitive dust from vehicular travel on unpaved roads. This modeling was conducted for the West Tavaputs Plateau Natural Gas Full Field Development Plan, Draft Environmental Impact Statement, UT-070-05-055 (Feb. 2008) (West Tavaputs DEIS), and the Enduring Resources' Saddletree Draw Leasing and Rock House Development Proposal, Final Environmental Assessment UT-080-07-671 (Dec. 2007) (Rock House EA). In both cases, BLM itself attempted to estimate fugitive dust emissions from the passage of vehicles on unpaved roads. Furthermore, it then modeled these emissions to arrive at predicted ambient concentrations of various pollutants. The Moab PRMP contains no such analysis; this quantification and modeling must be conducted in order to understand where BLM's plans will comply with federal and state air

quality standards and to know what impact they may have on human health, wildlife, vegetation, water bodies, and climate.

The models for these other projects demonstrate that fugitive dust from vehicular travel on unpaved roads can create significant levels of ambient pollution. As SUWA explained in its June 18, 2008 comments, the levels of PM_{2.5} predicted in the Rock House EA *alone* were so high that they exceeded NAAQS. It is likely that most of the predicted PM_{2.5} was the result of fugitive dust generated by vehicular traffic. Furthermore, dirt roads and ORV routes may generate fugitive dust even when not being traveled by vehicles (e.g., wind blown dust). Thus, it is vital that the Moab PRMP quantify all of the routes that it is designating, estimate the rate at which they will generate fugitive dust when not being traveled by vehicles, estimate the number of vehicles that will use each route and the likely fugitive dust generation rate, and then model those figures to understand the true impacts of fugitive dust emissions.

These necessary preparations and background data highlight the inadequacies of the Moab PRMP's emissions inventory in its current form. Aside from failing to analyze the fugitive dust generated by routes and ORVs and other vehicles that will travel on the routes identified in this plan, the Moab PRMP has failed to inventory engine emissions (e.g., sulfur dioxide, nitrogen oxides, ozone precursors) that will be generated by these machines. Without this information these pollutants cannot be modeled.

BLM must actually estimate the number of vehicles that will travel these routes and the number and mileage of routes that will be open so that it can correctly inventory the fugitive dust that is likely to result. If every unpaved route identified in the Moab PRMP were closed, and subsequently the soil stabilized, there would be much less fugitive dust than is now likely to result from the plan. If only one or two unpaved routes were open to vehicular travel in the entire planning area the fugitive dust generated by these roads would likely be much less than the fugitive dust that will be generated by the thousands of miles of designated routes that are proposed for vehicular traffic in the Moab PRMP. It is therefore likely that fugitive dust levels are related to mileage of routes open, for this reason the air quality modeling in the Rock House EA and the West Tavaputs DEIS calculate particulate matter pollution from fugitive dust as a function of miles traveled on unpaved roads. BLM must improve the Moab PRMP by including a comprehensive inventory of fugitive dust generated by designated routes (both when being traveled by vehicles and as a result of wind erosion) and the engine emissions generated by the vehicles traipsing these routes.

The Moab PRMP has performed some fugitive dust calculations for vehicle travel related to the construction and servicing of oil and gas wells. See Calculations of Projected Air Emissions within the Moab Planning Area, “Fug Dust Assumptions” Tab, http://www.blm.gov/ut/st/en/fo/moab/planning/final_rmp_eis.html. It must do the same for ORVs and other vehicles that will be traveling on designated routes and in areas open to cross country travel. Recent surveying by BLM demonstrates that large numbers of people visiting the planning area use motorized trails and designated ORV areas. See BLM, National Visitor Use Monitoring Results for Moab Field Office 4, 14 (Dec. 2007) (listing visitation figures and percentage of people who used particular facilities). BLM should also apply this to any activity that will cause fugitive dust (e.g., mining, grazing) in order to estimate total dust emissions. This information is necessary for understanding the likely contributions to regional climate change caused by this plan from eolian dust deposition and its tendency to cause premature snowpack melt.

The fact that the implementation of the PRMP will result in air pollution (e.g., through approval of motorized use on designated routes and in the White Wash sand dunes) requires that such modeling and quantification be undertaken. Importantly, the routes identified in this plan as “open” to vehicular travel will never face further analysis whereby better estimate might be developed. *Now is the time that BLM must conduct such analyses.* As SUWA pointed out, BLM has prepared models and more comprehensive emissions inventories in its Farmington, New Mexico; Vernal, Utah; and Roan Plateau, Colorado RMPs. NEPA’s “hard look” requirement *demand*s that BLM determine baseline conditions so that it, and the public, can fully understand the implications of proposed activities. BLM has failed to do this here.

In summary, the Moab PRMP does not adequately analyze the impacts to air quality that will result from the activities planned and permitted in this document. These failures are contrary to both FLPMA, which requires that BLM observe air quality standards, and NEPA, which requires that BLM disclose the impacts of the activities it is analyzing. BLM must prepare a comprehensive emissions inventory, which includes fugitive dust emissions, and then model these figures in near-field, far-field, and cumulative analyses. Without doing so BLM cannot know what impact these activities will have and whether it is complying with federal and state air quality standards.

SUWA *et al.* Moab PRMP Protest at 12-16.

E. Failure to Consider Cumulative Impacts from Ground-Level Ozone

BLM has completely failed to consider the impacts of ground level ozone. As mentioned above, ozone is likely a significant problem in many areas being considered for leasing. *See supra* at 22-98 (discussing potential high levels of ozone in Richfield, Price, Moab, and Vernal field offices). BLM has never attempted to model or quantify likely ozone emissions from any proposed oil and gas development in any of these field offices. It has never modeled ozone for any activity in these field offices. Likewise, it has never prepared modeling or analysis of ozone in the Fillmore Field Office. Thus, BLM must now prepare cumulative impacts analysis for ground-level ozone from all reasonably foreseeable activities permitted and envisioned in the RMPs for each field office for the parcels being protested in this lease sale.

IV. CONFLICTS WITH ROADS OF DINOSAUR NATIONAL MONUMENT

Parcels 130, 131, 143, 144, and 146 conflict with auto tours and roads in Dinosaur National Monument and should be withdrawn from this lease sale or offered only as NSO parcels. Parcels 130 and 131 are located within the viewshed of the Tour of the Tilted Rocks. *See* NPS, Map, <http://www.nps.gov/dino/planyourvisit/upload/DINOMap1.pdf>. Monument visitors take this tour for the purpose of enjoying world-class scenery. Oil and gas development on these parcels would detract from this scenery and negatively impact the experience of monument visitors. These parcels should be removed because of this conflict.

Parcels 143, 144, and 146 should be removed from the lease sale because access to these parcels would require using Dinosaur National Monument's Harpers Corner Road. This road is part of the monument. Industrial traffic is not permitted on this road and thus BLM should remove these parcels from the lease sale.

V. FAILURE TO PRIORITIZE AREAS OF CRITICAL ENVIRONMENTAL CONCERN

A critical aspect of FLPMA is the requirement that BLM “give priority” to designation *and* protection of areas of critical environmental concern (ACECs). 43 U.S.C. § 1712(c)(3). In essence, FLPMA directs BLM to prioritize protection and designation of ACECs across all alternatives in land use planning, not simply the “conservation” alternative. In the Richfield, Moab, Price, and Vernal RMPs BLM has neither recognized nor carried out this statutory mandate. *See* Exhibits 2–5 (containing SUWA’s protests of each of these RMPs and identifying for each plan how BLM failed to prioritize the designation and protection of ACECs). In those plans once BLM determined that certain areas in the each field office contained the requisite relevant and important values (R&I values) and that the RMP did not protect all of the R&I values—which each plan determined—the agency was required to give priority to the designation of those areas as ACECs over other competing resource uses and likewise give priority to the protection of those areas over other competing resource uses, such as oil and gas development. BLM has violated FLPMA by failing to give protection to the designation and protection of ACECs. This means that BLM should not offer the following parcels in this lease sale because they are proposed for areas that were identified as potential ACECs in their respective RMPs: 83, 86, 87, 90, 91, 93, 94, 96, 97, 101, 106, 109, 110, 111, 115, 116, 117, 136, 137, 159, 164, 166, 167, 168, 175, 180, 181, 182, 183, 185, 186, 187, 196, 197, 201, 204, 205, 206, 207, 208, 210, 211, 212, and 295. The Moab, Price, Richfield, and Vernal RMPs each failed to follow FLPMA’s mandate that BLM prioritize the designation and protection of ACECs. *See* SUWA *et al.* Moab PRMP Protest at 106-19 (explaining the shortcomings of BLM’s consideration of ACECs in the Moab Field

Office and specific instances of BLM failing to prioritize the designation and protection of ACECs); *SUWA et al. Price PRMP Protest* at 132-48 (explaining the shortcomings of BLM's consideration of ACECs in the Price Field Office and specific instances of BLM failing to prioritize the designation and protection of ACECs); *SUWA et al. Richfield PRMP Protest* at 111-24 (explaining the shortcomings of BLM's consideration of ACECs in the Richfield Field Office and specific instances of BLM failing to prioritize the designation and protection of ACECs); *SUWA et al. Vernal PRMP Protest* at 135-45 (explaining the shortcomings of BLM's consideration of ACECs in the Vernal Field Office and specific instances of BLM failing to prioritize the designation and protection of ACECs).

VI. FAILURE TO CONSIDER SOCIOECONOMIC IMPACTS

As SUWA set forth in its protests of the Moab, Richfield, Price, and Vernal RMPs, the flawed socio-economic analyses in these plans all violate numerous provisions of NEPA and its implementing regulations. *See SUWA et al.*, Moab PRMP Protest at 73-101; *SUWA et al.*, Richfield PRMP Protest at 73-105; *SUWA et al.*, Price PRMP Protest at 94-125; *SUWA et al.*, Vernal PRMP Protest at 92-127. SUWA expressly incorporates these sections of its RMP protests in this lease sale protest.

BLM summarily rejected SUWA's protests on this important issue, restating its earlier argument that, among other things, it was not required to quantitatively assess non-market values associated with wild, undeveloped landscapes. *See, e.g.*, Director's Protest Resolution Report, Moab RMP at 64. This steadfast refusal to take a hard, quantitative look at the impacts that implementation of its unbalanced RMPs—including such things as oil and gas leasing and development in wilderness quality landscapes—

will have on non-motorized recreation and the benefits of those activities to local economies violates NEPA's hard look mandate.

In addition, BLM has arbitrarily refused to quantitatively assess the *costs* to local economies from oil and gas development. SUWA's protest and earlier comments explained that such costs can and must be quantified in order to fully understand the impacts from making land available for oil and gas leasing. *See, e.g., SUWA et al., Price PRMP Protest at 103-05.* The Director's Protest Resolution Report makes no mention of this issue whatsoever.

Further, SUWA explicitly provided methodology (including EPA reports) for evaluating and taking into account the economic costs of increased air pollution (as well as the economic benefits of improvements in air quality). These costs can be directly tied to compliance with the Clean Air Act. *See, e.g., SUWA et al., Moab PRMP Protest at 74-79.* The Director's Protest Resolution Report also makes no mention of this issue.

VII. FAILURE TO CONSIDER CLIMATE CHANGE

BLM has completely failed to consider the impacts of oil and gas development on climate change. SUWA informed BLM during the RMP protest period for each of the four RMPs relevant to this lease sale that it had not adequately considered the impacts of climate change on resources in the planning areas and that it had not adequately considered oil and gas development (and the cumulative impacts from these activities and others, such as off-road vehicle travel) on increasing global and regional temperatures. *See SUWA et al. Moab PRMP Protest at 17-27; SUWA et al. Price PRMP Protest at 41-52; SUWA et al. Richfield PRMP Protest at 19-32; SUWA et al. Vernal PRMP Protest at 40-51.*

VIII. FAILURE TO COMPLY WITH THE NHPA

A. Leasing the Contested Fillmore, Moab, Price, Richfield, and Vernal Parcels Will Violate the NHPA

The pre-leasing analysis conducted by the Fillmore, Moab, Price, Richfield, and Vernal Field Offices fails to satisfy the requirements of the National Historic Preservation Act, its implementing regulations, and the Utah Protocol. Because of these omissions and failures, leasing the contested parcels from each of these field offices will violate the NHPA.

B. The Moab, Price, and Richfield Field Offices Did Not Consult with the State Historic Preservation Officer

While the Fillmore and Vernal Field Offices consulted with the Utah State Historic Preservation Officer (SHPO) as part of their NHPA Section 106 process, the Moab, Price, and Richfield Field Offices failed to do so. These omissions violate the NHPA. To justify these decisions, the field offices proffer reasoning that has already been rejected by the IBLA or in one case fail to provide any basis whatsoever.

The Price Field Office does not offer any explanation for its omission, but rather only states in its DNA that the “undertaking will be documented in the Protocol log and sent to the SHPO in December 2008.” Price DNA at 4.

The Moab Field Office justifies its failure to consult with the SHPO by stating in its Documentation of Land Use Plan Conformance and Determination of NEPA Adequacy (DNA) that the “Field Office has concurrence State Historic Preservation Office that we do not consult them at the leasing stage [sic].” Moab DNA at 4. Regardless of any instructions from the SHPO, such reasoning was rejected by the IBLA in *Southern Utah Wilderness Alliance*, IBLA 2004-124 (2007). In that appeal, the IBLA explained that it “rejected the notion that BLM was allowed to defer NHPA review at the

lease sale stage.” *So. Utah Wilderness Alliance*, IBLA 2004-124 at 9; *see So. Utah Wilderness Alliance*, 164 IBLA 1, 27–28 (2004).

The Richfield Field Office does at least provide a rationale for its failure to consult with the SHPO: “BLM is not requesting SHPO review of leasing because this action does not meet the review thresholds outlined in Part VII.A. [of the Utah Protocol Agreement].” Richfield Staff Report: Cultural Resources, November 2008 Oil & Gas Lease Parcels. This reasoning has also been rejected by the IBLA and therefore can no longer be used to justify failing to consult with the SHPO. The Utah Protocol states: “At a minimum, the BLM will not request the review of the SHPO in the following situations . . . (4) No Historic Properties Affected; eligible sites present, but not affected.” Utah Protocol at VII.A.C.4. BLM argued in *Southern Utah Wilderness Alliance, Natural Resources Defense Council*, 164 IBLA 1 (2004) that under the Utah Protocol, “[i]f there is No Potential to Effect, the agency documents this finding and may proceed; the Section 106 process is complete and no further efforts are required of the agency,” including consulting the SHPO. *So. Utah Wilderness Alliance, Natural Resources Def. Council*, 164 IBLA 1, 8–9 (2004). However, the IBLA clearly rejected this argument and explained that “BLM’s application of Section VII.A.C. of the Protocol eviscerates the goal of consultation.” *Id.* at 23 (internal quotations omitted). The IBLA further explained: “BLM cannot avoid the consultation requirement by simply stating that it has determined that there is ‘No Potential to Effect,’ and therefore that nothing more is required.” *Id.* at 24. Instead, BLM must (1) provide a record supporting its “No Potential to Effect” determination and (2) “propose a finding of no adverse effect to all consulting parties, which would include the states’ SHPO.” *Id.* (internal quotations omitted). *See*

Pueblo of Sandia, 856, 859, 862 (10th Cir. 1995). (“[C]onsultation with the SHPO is an integral part of the section 106 process. Affording the SHPO an opportunity to offer input on potential historic properties would be meaningless unless the SHPO has access to available, relevant information. Thus, ‘consultation’ with the SHPO mandates an informed consultation.”) (citing *Attaki v. United States*, 746 F. Supp. 1395, 1407 (D. Ariz. 1990))

For the December 2008 lease sale, the Moab, Price, and Richfield Field Offices did not propose their findings of “No Potential to Effect” to the SHPO. This critical failure renders BLM’s lease of the contested parcels from these field offices a violation of the NHPA.

C. The Price, Richfield, and Vernal Field Offices’ Consultation with Native American Tribes was Insufficient

While each of the Field Offices did send letters to some Native American Tribes, these attempts at consultation suffer from several deficiencies in violation of the NHPA. For example, the letters from the Richfield Field Office do not request that the tribes submit any information, but instead merely notifies the tribes about the upcoming lease sale; the letters from the Price Field Office do not contain enough information about the lease sale; and the letters from the Vernal Field Office are not posted on the BLM website that provides information about the lease sale to the public.

BLM must make good faith efforts to consult with relevant Native American Tribes prior to a lease sale as part of BLM’s consideration of the effect of a lease sale on any properties eligible for inclusion on the National Register of Historic Places. *So. Utah Wilderness Alliance*, IBLA 2004-124, at 7 (2007); 16 U.S.C. §§ 470a(d)(6)(B); 470f. *See also So. Utah Wilderness Alliance*, 164 IBLA 1, 24 (2004) (“[The] NHPA is a procedural

statute. The process of identifying properties and consulting with affected tribes . . . is the goal sought by the statute.”) (quoting *Montana Wilderness Ass’n v. Fry*, 301 F. Supp. 2d 1127, 1152–53 (D. Mont. 2004)). This consultation serves to inform the tribes about the proposed project, provide the tribes an opportunity to inform BLM about any cultural resources that may be impacted by the project, and gives BLM an opportunity to access any information the tribes’ may have about the project area. This consultation must be “meaningful” and contribute to BLM’s “reasonable efforts to identify all historic properties and sacred sites on BLM-administered lands and private lands where a BLM undertaking will occur within Utah.” *So. Utah Wilderness Alliance*, IBLA 2004-124, at 12 (2007); Utah Protocol at Section VI.A. The letters that the Price and Richfield Field Offices sent to Native American Tribes, however, fail to meet these standards.

Unlike tribal consultation letters sent from some of the other field offices, the letters from the Richfield Field Office do not ask the tribes to submit any information. Instead, the letters merely notify the tribes of the lease sale and the results of BLM’s cultural resources records search. As the letters state, “Letters containing notification of this lease sale and the results of our cultural resource records were sent to the following Tribes on August 25, 2008 . . .” These letters do not provide the tribes with an opportunity to submit information, do not constitute “meaningful consultation,” and do not meet the requirements of the NHPA and the Utah Protocol. The Richfield Field Office should have looked to the Fillmore Field Office’s letters as an example of a more meaningful information request from the tribes, which state:

The FFO welcomes your comments relating to cultural, environmental or any other issues regarding this project in accordance with the National Environmental Policy Act, the National Historic Preservation Act, and the American Indian Religious Freedom Act to ensure that any concerns you

may have about the proposed project are fully considered and incorporated into the environmental analysis. The BLM is requesting your assistance in identifying properties of traditional, religious, or cultural importance which may be affected by the proposed project. The BLM would also like to consult, if possible, with traditional or religious leaders who may have information about places of cultural significance. Your assistance in recommending such leaders would help us in determining the effects to such areas.

The letters from the Price Field Office also do not meet the standards of the NHPA and the Utah Protocol. As discussed above, the tribal consultation process seeks to both inform the tribes of the upcoming proposed project and to request that the tribe submit information to BLM. To inform the tribes about the December 2008 lease sale, the Richfield and Fillmore Field Offices sent the tribes the field offices' cultural report and the Moab Field Office sent the tribes a list of parcels including information about known cultural properties and applicable stipulations and lease notices. Presumably, inclusion of such information with the consultation letters ensured that these field offices fully disclosed to the tribes all of the information that the field offices possessed about the proposed parcels and to ensure that the tribes had as much information as possible to aid their identification of cultural resources in the project area. In contrast, the Price Field Office sent the tribes a letter, maps, and a parcel list, without the two cultural reports that the Price Field Office produced for the December 2008 lease sale. These cultural reports provide a brief discussion of the prior inventories and known cultural resources for most of the proposed parcels, and the Field Office's reasoning supporting its determination of "No Historic Properties Affected." A good faith effort to meaningfully consult with relevant Native American Tribes and "identify all historic properties and sacred sites," as required by the NHPA and the Utah Protocol, require that

at the very least, the Price Field Office share its cultural reports with the tribes. The Price Field Office's failure to do so violates the letter and the spirit of the NHPA.

It is not clear whether the Vernal Field Office met the standards of the NHPA and the Utah Protocol, because the letters the Vernal Field Office sent to the Native American Tribes are not posted on the BLM website. As this website is the primary means by which BLM provides the public information about the December 2008 lease sale and BLM's efforts to comply with the NHPA, this omission deprives the public the ability to fully understand the proposed project and whether BLM did indeed satisfy the NHPA.

D. The Fillmore, Moab, Price, Richfield, and Vernal Field Offices Failed to Consult with the Interested Public

The Fillmore, Moab, Price, Richfield, and Vernal Field Offices did not make any effort to comply with the NHPA regulatory requirement to consult with, or at the very least, invite and seek input from the public during the consultation process. In particular, BLM did not consult with, invite, or seek input from SUWA, despite SUWA's demonstrated interest in historic properties and the land proposed to be leased in the December 2008 lease sale. This omission renders BLM's lease of the contested lease parcels a violation of the NHPA.

The regulations explain: "Certain individuals and organizations with a demonstrated interest in the undertaking may participate as consulting parties due to . . . their concern with the undertaking's efforts on historic properties." 36 C.F.R. § 800.2(c)(5). Further, the regulations state that BLM "shall seek and consider the views of the public in a manner that reflects . . . the likely interest of the public in the effects on historic properties" and "provide the public with information about an undertaking and its effects on historic properties and seek public comment and input." *Id.* §§ 800.2(d)(1) &

(2). BLM must also “[s]eek information . . . from individuals and organizations likely to have knowledge of, or concerns with, historic properties in the area.” *Id.* § 800.4(a)(3). The Utah Protocol “reiterates that BLM is obligated to ‘seek and consider the views of the public and Indian Tribes,’” and that “[i]nterested parties shall be invited to consult in the review process . . . if they have interests in a BLM undertaking or action on historic properties.” *So. Utah Wilderness Alliance, Natural Resources Def. Council*, 164 IBLA 1, 8 (2004). As the Board explained, the “NHPA is a procedural statute. The process of identifying properties and consulting with affected tribes *as well as members of the public* is the goal sought by the statute.” *Id.* at 23–24 (emphasis added); *see also Montana Wilderness Ass’n v. Fry*, 310 F. Supp. 2d 1127, 1152 (D. Mon. 2004).

SUWA has the kind of demonstrated interest in the December 2008 lease sale that is contemplated by the NHPA, its implementing regulations, and the Utah Protocol, as evidenced by SUWA’s consistent involvement with the management of Utah BLM lands for the past 25 years, and specifically with federal undertakings, including oil and gas leases, impacting historic resources for the past several years. As explained on SUWA’s website: “SUWA works to preserve Utah’s fragile archeological sites, areas of cultural importance, and fossil remains from destructive development, and to encourage the Bureau of Land Management to consider fully the voice of Native Americans.” SUWA: Ancient Treasures, http://www.suwa.org/site/PageServer?pagename=work_treasures (last visited Dec. 2, 2008). In addition, SUWA has a prominent, well known interest in cultural and historic properties in the greater Nine Mile Canyon region, the White River, the Moab field office, and the southern slope of the Book Cliffs. SUWA has actively participated in BLM decision making related to oil and gas development in the Nine Mile

Canyon region, and requested consulting party status regarding two massive natural gas projects that threaten the area's remarkable cultural resources—the Gasco and West Tavaputs projects. *See, e.g.*, Letter from Stephen Bloch, SUWA, to William Stringer and Stephanie Howard, Vernal Field Office (Mar. 20, 2006) (requesting consulting party status for the Gasco project) (attached as Exhibit 17); Letter from William Stringer, Vernal Field Office, to Stephen Bloch, SUWA (Sept. 12, 2006) (denying SUWA consulting party status for the Gasco project) (attached as Exhibit 18); Letter from Stephen Bloch, SUWA, to Patrick Gubbins and Fred O'Ferrall, Price Field Office (Nov. 11, 2005) (requesting consulting party status for the West Tavaputs project) (attached as Exhibit 19); Letter from Patrick Gubbins, Price Field Office, to Stephen Bloch, SUWA (Dec. 21, 2005) (denying SUWA consulting party status for the West Tavaputs project) (attached as Exhibit 20); Letter from Gary Reimer, Price Field Office, to Stephen Bloch, SUWA (Aug. 25, 2006) (denying SUWA consulting party status for the West Tavaputs project) (attached as Exhibit 21); Letter from Stephen Bloch, SUWA, to Fred O'Ferrall, Price Field Office (June 7, 2007) (requesting consulting party status for the West Tavaputs project) (attached as Exhibit 22). While BLM has rejected SUWA's requests to be a consulting party, the agency was certainly on notice about SUWA's intense interest in the area. SUWA also challenged BLM's decision to sell nine parcels along the southern slope of the Book Cliffs at the agency's November 2003 oil and gas lease sale alleging that it violated NEPA and the NHPA. *See SUWA*, 457 F. Supp. 2d at 1254, 1259. Of course, SUWA also brought the original appeal in *SUWA*, IBLA 2004-124, which focused in large part on BLM's failure to comply with the NHPA in the greater Nine Mile Canyon region. SUWA has also been intensely interested and actively worked

on BLM-proposed undertakings near the White River, the greater Dinosaur National Monument area, and the benches above Canyonlands National Park.

Despite this well demonstrated interest in the cultural and historic properties in the regions, BLM made no effort whatsoever to consult with SUWA or any other member of the public about its decisions to offer the parcels at issue in the protest for lease.

BLM's failure to consult with any interested member of the public, including SUWA, renders the lease of the contested parcels a violation of the NHPA.

E. The Price and Vernal Field Offices Failed to Consider Impacts to Nine Mile Canyon

The Price and Vernal Field Offices violated the NHPA and its implementing regulations by failing to identify all historic properties within the area of potential effects of the proposed lease sale, assess the effects, and resolve adverse effects prior to carrying out the lease sale, because these field offices did not perform this required analysis for cultural resources in Nine Mile Canyon. All ground transportation to and from lease parcels 83, 84, 87, 328-332, 335, 337-343, 345-50, and 355 must drive on the dirt roads in Nine Mile Canyon. As BLM has explained, "Nine Mile Canyon has often been described as the 'longest outdoor art gallery in the world' and is internationally recognized for its substantial concentration of prehistoric archaeological sites and renowned rock art panels." West Tavaputs DEIS at 3-129. Traffic through the Canyon to support existing energy development has already inflicted negative impacts on the region's famous cultural resources. BLM's failure to identify, assess, and resolve the direct, indirect, and cumulative impacts that development of the contested proposed lease parcels would cause in this area violates the NHPA.

Over 1,000 historical and archeological sites have been identified in Nine Mile Canyon during the past 100 years. BLM, Finding of No Significant Impact and Decision Record, West Tavaputs Plateau Drilling Program, Carbon and Duchesne Counties, Utah, Environmental Assessment UT-070-2004-28, at 6 (July 29, 2004) (West Tavaputs Drilling EA FONSI/DR) (excerpts attached hereto as Exhibit 23). Rock art composes seventy-five to eighty percent of these sites. *Id.* The remaining sites consist of “cliff dwellings, masonry granaries, slab storage cists, semi-subterranean pit houses, retaining walls, and modified natural features such as rock shelters and ledge overhangs.” *Id.* Nine Mile Canyon is both a Hopi Traditional Cultural Property and a National Scenic Backcountry Byway. The Hopi Tribe Cultural Preservation Office on the Draft Environmental Impact Statement West Tavaputs Plateau Natural Gas Full Field Development Plan UT-070-05-055, at 1 (Apr. 30, 2008).

Before 2004 there were no more than a handful of producing natural gas wells in the Nine Mile Canyon and the West Tavaputs Plateau region. However, this area has witnessed an exponential increase in natural gas drilling and development activities over the past five years. On July 29, 2004 the Price Field Office approved the West Tavaputs Plateau Drilling Program, Carbon and Duchesne Counties, Utah, Environmental Assessment UT-070-2004-28 (West Tavaputs Drilling EA) (attached as Exhibit 6). *See* West Tavaputs Drilling EA FONSI/DR at 32. Earlier that year, the Price Field Office approved a geophysical survey in Nine Mile Canyon and throughout the West Tavaputs Plateau. *See S. Utah Wilderness Alliance v. Norton*, 326 F. Supp. 2d 102, 105–07 (D.D.C. 2004). By 2006 BLM had approved at least thirty-eight wells in the Nine Mile Canyon region, as envisioned in the West Tavaputs Drilling EA, and BLM has since

approved approximately ninety additional natural gas wells in the West Tavaputs Plateau area. Currently, BLM is in the process of preparing an environmental impact statement to examine a proposal to develop over 800 wells on the West Tavaputs Plateau. *See* West Tavaputs DEIS at ES-3.

The passage of vehicles related to natural gas development through Nine Mile Canyon has created significant amounts of airborne dust; this dust is accumulating on and obscuring rock art throughout Nine Mile Canyon. West Tavaputs DEIS at 4-219. BLM has commissioned a study to examine the impacts of this fugitive dust on rock art in Nine Mile Canyon which is ongoing. West Tavaputs DEIS, App. G at 2. Although the final report has not been released, BLM did provide the public with an interim report that included some conclusive findings. *See id.* The report concluded that “*the collected data does support the visual observation that heavy vehicular traffic on untreated roads will produce fine particulates that will settle on and damage nearby rock art.*” *Id.* at 5 (emphasis added). Meanwhile, the Hopi Tribe informed BLM that industrial traffic was adversely affecting cultural resources in Nine Mile Canyon and its vicinity. BLM, Bill Barrett Corporation 2007–2008 Prickly Pear Unit Winter Drilling EA, Carbon County, Utah, Environmental Assessment UT-070-07-053, at 1-8 (Oct. 10, 2007) (excerpts attached hereto as Exhibit 24).

The effects of increased traffic on Nine Mile Canyon include diminished clarity on rock art panels from dust and even corrosion of the rock art as a result of magnesium chloride— which has been used as a dust suppressant on the road in Nine Mile Canyon— and/or other pollutants and chemicals contained in the dust generated by this traffic. Damage from existing truck traffic, alone, poses the risk of being irreparable. Further

damage from increased traffic will exacerbate the problem. BLM's own findings in the West Tavaputs DEIS concluded that "the problem of dust in Nine Mile Canyon is current and active and must be addressed immediately." West Tavaputs DEIS, App. G at 16. BLM's dust study also stated that there was a "need to act quickly to stop the generation of dust on the road in Nine Mile Canyon and to treat sites that have been affected." *Id.*, App. G at 31.

The NHPA Section 106 regulations require BLM to identify all historic properties within the area of potential effects of a proposed undertaking, assess the effects, and resolve adverse effects prior to approving the undertaking. 36 C.F.R. §§ 800.4, 800.5, 800.6; *Corridor H Alternatives, Inc. v. Slater*, 166 F.3d 368, 370 (D.C. Cir. 1999). The area of potential effects is defined in the Section 106 regulations as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties" and is "influenced by the scale and nature of an undertaking." 36 C.F.R. § 800.16(d). The NHPA regulations broadly define adverse effects to include direct, indirect, and cumulative effects. *Id.* § 800.5(a)(1); *see also Friends of the Atglen-Susquehanna Trail, Inc.*, 252 F.3d 246, 252, 253-54 (3rd Cir. 2001) (stating that an adverse effect includes direct and indirect effects).

BLM has not complied with its obligation under Section 106 of the NHPA to take into account the effects of an undertaking on historic properties. This Section prohibits federal agencies from approving any federal "undertaking" unless the agency takes into account the effects of the undertaking on historic properties. 16 U.S.C. §§ 470f, 470w; *see also Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800, 805 (9th Cir. 1999) (explaining that Section 106 is a "stop, look, and listen provision"). An undertaking

includes projects, activities, and programs requiring federal permit approval or licensure. 16 U.S.C. § 470w(7); *see also* 36 C.F.R. § 800.16(y). A federal oil and gas lease sale, such as the upcoming December 2008 lease sale, is an undertaking. *So. Utah Wilderness Alliance*, IBLA 2004-124, at 8 (2007). Because the December 2008 lease sale constitutes an undertaking, Section 106 regulations require BLM to identify all historic properties within the area of potential effects, assess the effects, and resolve adverse effects prior to carrying out the lease sale. *See* 36 C.F.R. §§ 800.4, 800.5, 800.6; *Corridor H Alternatives, Inc.*, 166 F.3d at 370; *Mont. Wilderness Ass'n*, 310 F. Supp. 2d at 1152 (describing range of adverse effects) (citing 36 C.F.R. § 800.5).

The Price and Vernal Field Offices made no effort to identify the historic properties in Nine Mile Canyon that would be directly, indirectly, or cumulatively affected by the lease of parcels 83, 84, 87, 328-332, 335, 337-343, 345-50, and 355. Instead, these Field Offices only made efforts to identify the historic properties and consider impacts on the lease parcels themselves. Indeed, the Field Offices defined the “Area of Potential Effect” as “the legal description provided for each parcel,” or in other words, the geographical boundaries of each parcel. *See, e.g.*, Vernal SHPO Consultation Letter (Oct. 6, 2008). This overlooks the impacts that are expected to occur to historic properties outside of the parcels, such as in Nine Mile Canyon.

The NHPA regulations define the area of potential effects as “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties” and is “influenced by the scale and nature of an undertaking.” 36 C.F.R. § 800.16(d). Determining the area of potential effects is one of the first steps in the Section 106 process. *See Colo. River Indian Tribes v. Marsh*, 605 F.

Supp. 1425, 1437 (C.D. Cal. 1985) (finding that the “area of potential effects” should be broadly defined and may be larger than the project area directly affected by an undertaking); *Crutchfield v. U.S. Army Corps of Eng’rs*, 154 F. Supp.2d 878, 905 (E.D. Va. 2001) (broadly defining “area of potential effects”). The Section 106 regulations also broadly define adverse effects to include direct, indirect, and cumulative effects. *Id.* § 800.5(a)(1); *see also Friends of the Atglen-Susquehanna Trail, Inc.*, 252 F.3d at 253-54 (stating that an adverse effect includes direct and indirect effects).

Thus, truck traffic to and from the lease parcels that creates significant amounts of dust, thereby harming rock art in Nine Mile Canyon, constitutes an adverse effect that BLM needed to consider. The effects from the development and operation of wells in the contested lease parcels will include diminished clarity on rock art panels in Nine Mile Canyon from dust and even corrosion of the rock art as a result of magnesium chloride and/or other pollutants and chemicals contained in the dust generated by this traffic.

BLM has failed to determine the proper area of potential effects from the undertakings at hand and thus also failed to identify the full scope of cultural sites at risk in Nine Mile Canyon and its tributaries. By narrowly focusing on only the direct effects on resources within the parcel boundaries, BLM has failed to identify the full range of potential adverse effects. BLM has not complied with the NHPA and the lease of contested parcels will violate the NHPA.

F. The Fillmore, Moab, Price, Richfield, and Vernal Field Offices Employed Reasoning to Support Their “No Historic Properties Affected” Determinations That Has Been Repeatedly Rejected by the IBLA

In several recent oil and gas lease sales, BLM has employed a one five-acre well pad theory, or “one well” rule, that has been repeatedly rejected by the IBLA. This analysis begins with an admission that a review of past inventories and recorded

historical resource sites revealed that most of the land proposed to be leased at an upcoming oil and gas lease sale have not been surveyed for archeological resources. Next, despite this lack of information, BLM states the possibility of high, moderate, or low site density, and concludes that due to site size, density, and placement, one well pad and associated roads and facilities can be developed on each parcel without adversely impacting historic resources. BLM assures that this is possible because BLM will work with the lease holder to place the development in a manner that will avoid impacting any newly-discovered historic resources. Finally, BLM makes the determination of ‘No Historic Properties Affected; eligible sites present but not affected’ under the Utah Protocol. Missing from this reasoning is how, despite the fact that most of the land to be leased has not been surveyed, BLM is cognizant of “site size, density, and placement” such that it believes development of one well and associated facilities will not have adverse impacts. Although field offices sometimes look to known site density in nearby areas or areas with similar physical characteristics to inform this process, such information, while helpful, does not equate to an inventory of the precise parcel at issue. With such little information about cultural resources in the parcels, it is not clear how BLM knows where undiscovered cultural resources are located. Also, aside from the fact that this theory is unsupported by sufficient information, this reasoning is the same reasoning the IBLA rejected in its January 31, 2007 order in Appeal 2004-124. In that order, the IBLA stated:

BLM asserts that it “assumed the presence of historic properties” on the parcels here, in order to conclude that there would be no “adverse effect on the subject parcels even assuming the presence of eligible properties.” BLM explains that “it is reasonable to infer that the archeologist’s experience would have allowed him to determine that a well and associated facilities could be located somewhere on a parcel even in an

area with high cultural site density. Further, in conducting the intensive cultural resource inventory that will occur prior to any ground disturbing activity, BLM has many reasonable options open to it in working with the lessee.” *Thus, BLM apparently believed that because it has options at the lease development phase to work with the lessee to avoid or mitigate impacts to historic sites, it was entitled to assume under the Protocol that leasing any parcel would have “no potential to affect” historic resources. Effectively BLM construes the Protocol to allow it to promise good faith NHPA compliance at the lease development phase. We have rejected such a construction.*

So. Utah Wilderness Alliance, IBLA 2004-124, at 14 (emphasis added); *see also So. Utah Wilderness Alliance*, 164 IBLA at 19 (rejecting BLM’s reasoning that “even in areas of high archeological site density, it is usually possible to place a well pad in a location devoid of sites”). BLM’s use of this reasoning, despite the IBLA’s repeated rejection of it, violates the NHPA.

BLM employed this rejected, unsupported reasoning in the Fillmore, Price, Richfield, and Vernal Field Offices’ analysis for the December 2008 lease sale. In its Environmental Assessment (EA) for oil and gas leasing, the Fillmore Field Office reasoned that “[b]ased on the ability to avoid or otherwise mitigate potential impacts to cultural properties, no historic properties would be expected to be impacted for most of the locations . . . based on the conclusion that at least one well could be located on some parcels without adversely affecting cultural resources.” Environmental Assessment UT-010-08-050, November 2008: Oil and Gas Leasing in the Fillmore Field Office, at 50. BLM is relying on future good faith compliance with the NHPA to justify its actions at the lease sale stage. This reasoning is precisely the reasoning that the IBLA has rejected, as discussed above. The Fillmore Field Office’s Cultural Report also relies on such rejected reasoning. The Cultural Report states that the records search revealed that for parcels 35 to 50, there have been several surveys “resulting in the recordation of five

archeological sites” and that “[t]hree archeological sites are recorded within the parcels with no associated inventory.” Fillmore Class I Cultural Resources Inventory: Specialist Report. It is not clear from this discussion how many surveys have been conducted in this grouping of parcels or whether there were any surveys or sites recorded for parcel 36 in particular. Based on this information and known cultural resource information for other areas “in the vicinity” and “with similar conditions,” the Fillmore Field Office concluded:

Known cultural resources are located in such a fashion (size, density, and placement) that avoidance is feasible during development of oil and gas resources. Based on the ability to avoid cultural properties, the FFO recommends a finding of No Historic Properties Affected; eligible sites present but not affected This is based on the determination that at least one well could be located within each parcel without affecting cultural resources.

The Fillmore Field Office’s reliance on this rejected reasoning in both its EA and Cultural Report violates the NHPA.

Although the Moab Field Office has not posted its Cultural Report on the BLM website, the Moab Field Office did attach a “Final Parcel List” to its tribal consultation letters that discusses the percentage of certain parcels that have been inventoried for cultural resources. For example, the Parcel List states that 1% of parcel 164, 1% of parcel 166, 5% of parcel 167, and 5% of parcel 168 has been surveyed. Moab Final Parcel List, Attachment to Cultural Letter. Despite the small percentage of each parcel that has actually been surveyed, the Moab Field Office concludes in its tribal consultation letter that “due to site size, density, and placement, development of at least one, five acre well pad and associated access road could be placed on each proposed lease parcel without adverse impacts to eligible cultural resources.”

The Price Cultural Report admits that “[m]any of the previous inventories are over twenty years old and were made at a different standard than today” and does not mention any previous inventories for the parcels contested in this protest, but still concludes that “there should be a place on each lease parcel that one five acre well pad could be developed without directly affecting a significant cultural resource.” Price Cultural Resource Assessment of December 2008 Oil & Gas Lease Sale. The Richfield Field Office Staff Report states that “Some of the areas proposed for lease have no inventory work in them at all” and for parcel 56, “No cultural resource inventories have been done.” Richfield Staff Report. Despite this lack of information, the Richfield Field Office concludes “there is room on each lease parcel to locate at least one well pad, ancillary facilities and afford reasonable access and still avoid any cultural resources that may be present.” Richfield Interdisciplinary Team Analysis Record Checklist. Similarly, the Vernal Field Office DNA states: “due to site size, density, and placement, development of at least one well pad and associated access road can occur without adverse impacts The documented cultural resources are located in such a fashion that avoidance is feasible for the placement of a well.” Vernal DNA at 4.

BLM’s use of this unsupported reasoning, despite the IBLA’s repeated rejection of it, violates the NHPA. This is particularly problematic, as BLM relies on this faulty reasoning in its ultimate determination that the lease parcels will not negatively impact historic resources and therefore can be included in the lease sale.

G. BLM Failed to Post the Moab Field Office Cultural Report on the BLM Website

As discussed above, the BLM website is the primary means by which BLM informs the public about the December 2008 lease sale. *See* <http://www.blm.gov/>

ut/st/en/prog/energy/oil_and_gas/oil_and_gas_lease/december_2008_oil0.html (last visited Dec. 2, 2008). Despite repeated requests by SUWA, BLM did not post the Moab Field Office Cultural Report on its website, effectively preventing the public from fully understanding the Moab Field Office's efforts to comply with the NHPA. This omission hinders the public's ability to submit a meaningful protest regarding the lease of the Moab parcels in the December 2008 lease sale.

IX. FILLMORE LEASING EA INADEQUATE

1. The Timing of the Fillmore Leasing EA Violates the National Environmental Policy Act

The timing of the Fillmore Leasing EA and related lease sale violates the National Environmental Policy Act ("NEPA") for two reasons. First, the EA provides the NEPA analysis that is required for several of the lease parcels included in the Bureau of Land Management's ("BLM's") December 19, 2008 lease sale; yet the EA has not been completed prior to the due date for protests on the lease sale. Second, the comment period for the EA is too brief and does not allow for adequate public participation.

In regards to the first issue, comments on the Fillmore Leasing EA are due on December 4, 2008. On the same day, protests for the December 19, 2008, oil and gas lease sale are also due. The December 2008 lease sale offers parcels in the Fillmore FO, and relies upon the Fillmore Leasing EA as the NEPA analysis for the sale of those parcels. BLM cannot offer parcels for sale without first having completed a NEPA analysis for those parcels. Council for Environmental Quality ("CEQ") regulations that implement NEPA require that, until BLM issues a Record of Decision ("ROD"), it shall not take any action which would "(1) Have an adverse environmental impact; or (2) Limit the choice of reasonable alternatives." 40 C.F.R. 1506.1(a)(1)-(2).

By offering parcels for sale without a completed NEPA analysis, BLM is putting the cart before the horse, and is making decisions based on a non-existent final NEPA document. That BLM might fast-track the review of a sister agency and public comments to “finalize” the NEPA analysis upon which the sale of the parcels relies by the time of the lease sale, violates NEPA because the end result, rather than thorough analysis, is driving the process. BLM must fully analyze the “adverse environmental impacts” rather than issue a Finding of No Significant Impact and Decision Record to conform to the lease parcels that are in the December 19, 2008 lease sale. *See* 40 C.F.R. § 1506.1(a)(1). Likewise, because the protests for the lease sale and the comments for the NEPA document upon which the lease sale relies are due on the same day, BLM limits the choice of reasonable alternatives, and predetermines the validity of the lease sale. *See* 40 C.F.R. § 1506.1(a)(2).

In regards to the second issue, NEPA requires BLM to “[e]ncourage and facilitate public involvement in decisions which affect the quality of the human environment.” 40 C.F.R. § 1500.2(d). A critical part of this obligation is presenting data and analysis in a manner that enables the public to thoroughly review and comment on the analysis of environmental consequences, and also allows BLM to thoroughly consider and respond to the public’s concerns. A 15-day comment period for an oil and gas leasing EA that covers the entire Fillmore FO (4.7 million acres) does not allow sufficient time for the public to thoroughly review and provide comments on the EA. Indeed, BLM’s rush to complete the Fillmore Leasing EA in time for the December 19, 2008 oil and gas lease sale does not leave the public, including interested organizations like SUWA, adequate time to conduct appropriate supplemental field evaluations, draft detailed wilderness

character submissions, or supply the Fillmore BLM with new information on each wilderness resource unit.

And, fifteen days between December 4 when the comments on the EA are due, and December 19, when the oil and gas lease sale takes place, is similarly an inadequate period of time for BLM to thoroughly review and consider the public's comments, and to thoroughly inventory and identify ALL the land in the Fillmore FO for wilderness character. Thus, the Fillmore Leasing EA violates NEPA by discouraging public involvement and similarly discouraging BLM's own thorough consideration of those comments.

Accordingly, SUWA requests that BLM extend the comment period beyond the fleeting fifteen days currently allowed to sixty days. If BLM complies with this request, SUWA will gladly and expeditiously provide Fillmore BLM with wilderness character submissions. If BLM does not grant this request, then Fillmore BLM itself must fully evaluate all areas in the FO that potentially have wilderness character, including all of the areas included in the Utah Wilderness Coalitions wilderness proposal (GIS data has been provided to BLM's state office) prior to issuing the Decision Record ("DR")/Finding of No Significant Impact ("FONSI") for the Fillmore Leasing EA.

In addition, NEPA requires that, while work on a program Environmental Impact Statement ("EIS") is in progress, BLM shall not engage in any action that will be covered by the EIS and may significantly affect the environment *unless* the action is independently justified, is covered by its own EIS, and will not prejudice the decision in the program EIS. 40 C.F.R. § 1506.1(c). Although the Fillmore Leasing EA is an EA, not an EIS, the same principles apply to an EA. BLM should not undertake an oil and

gas lease sale that is predicated upon the analysis and the completion of an EA for the same area and may significantly affect the environment prior to the completion of the EA. The EA must be completed *before* BLM proposes to sell oil and gas parcels that rely upon that EA. By all appearances, the publication of the EA was rushed to completion in order to allow for several lease parcels to be included in the upcoming December 19, 2008, lease sale. NEPA does not permit the hasty completion of projects that sacrifice the public's participation and the agency's thorough review of the environmental consequences of the project. *See* 40 C.F.R. §§ 1500.2(d), 1506.1.

2. The EA Violates NEPA Because it Fails to Adequately Consider the No Leasing Alternative

The Fillmore Leasing EA violates NEPA because it fails to adequately consider the No Leasing Alternative. NEPA requires that BLM prepare a pre-leasing NEPA document that fully analyzes the No Leasing Alternative *before* the agency engages in an irretrievable commitment of resources, i.e., the sale of non-no surface occupancy oil and gas leases. *See Southern Utah Wilderness Alliance v. Norton*, 457 F. Supp. 2d 1253, 1262-64 (D. Utah 2006); *Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228-30 (9th Cir. 1998) (requiring full analysis of No Leasing Alternative even if an EIS is not required); *Montana Wilderness Ass'n v. Fry*, 310 F. Supp. 2d 1127, 1145-46 (D. Mont. 2004); *Southern Utah Wilderness Alliance*, 164 IBLA 118, 124 (2004) quoting *Pennaco Energy, Inc. v. U.S. Dept. of Interior*, 377 F.3d 1147, 1162 (10th Cir. 2004).

The inclusion of a No Leasing Alternative in the Fillmore Leasing EA is a step in the right direction in comparison to some of BLM's previous actions. BLM has previously repeatedly relied upon Determinations of NEPA Adequacy ("DNAs") that tier to outdated EAs, Resource Management Plans ("RMPs"), and other documents that

contain virtually no analysis of the No Leasing Alternative. *See, e.g.*, Diamond Mountain RMP (1993); Vernal Environmental Analysis Record (1975); Price Environmental Analysis Record (1975). Although the Fillmore Leasing EA better addresses the No Leasing Alternative than some other plans have, the EA nonetheless fails to fully analyze the No Leasing Alternative, but instead employs short, unsupported, conclusory statements regarding the No Leasing Alternative. BLM's summary dismissal of this alternative does not meet the "rule of reason" test applied by both the Interior Board of Land Appeals ("IBLA") and the courts.

The EA must quantify the impacts to specific resources that are expected to result from the No Leasing Alternative so that BLM has a baseline from which it can analyze other alternatives. Indeed, NEPA requires that BLM describe the baseline conditions of the environment so that BLM can understand the impacts that each alternative will have on that baseline. *See* 40 C.F.R. § 1502.15. In addition, a truly adequate consideration of the No Leasing Alternative would quantify environmental and socio-economic costs and benefits of not leasing.

For the vast majority of resources, e.g. wildlife, sensitive species, cultural, wilderness characteristics, etc., no leasing "would provide additional protection" and result in fewer impacts to the resource. *See, e.g.*, EA at 59 addressing Vegetation including Special Status Plant Species other than FWS candidate or listed species; EA at 61-62 addressing Water Quality and Wetlands/Riparian Zones; EA at 65 addressing Visual Resources; EA at 67 addressing Wilderness Characteristics; EA at 52, addressing Native American Religious Concerns. In part because the No Leasing Alternative is

better for most resources than the Proposed Action and the No Action Alternatives, BLM should have given more consideration to this alternative.

3. NEPA Requires Consideration of a Reasonable Range of Alternatives; BLM Should Consider a Directional Drilling Alternative.

NEPA requires BLM to “rigorously explore and objectively evaluate” a range of alternatives to proposed federal actions. *See* 40 C.F.R. §§ 1502.14(a), 1508.25(c). “An agency must look at every reasonable alternative, with the range dictated by the nature and scope of the proposed action.” *See Nw. Envtl. Defense Center v. Bonneville Power Admin.*, 117 F.3d 1520, 1538 (9th Cir. 1997); *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1310 (9th Cir. 1990) (quoting 40 C.F.R. § 1502.14). This evaluation extends to the consideration of more environmentally protective alternatives and mitigation measures. *See, e.g., Kootenai Tribe of Idaho v. Veneman*, 313 F.3d 1094, 1122–23 (9th Cir. 2002) (and cases cited therein). A more environmentally protective alternative that is not No Leasing, discussed above, would be to minimize surface impacts by requiring directional drilling for any proposals with downhole density greater than one well per 320 acres. As SUWA suggested in its scoping comments, BLM should have considered this alternative in the EA, but failed to do so. SUWA Scoping Comments on the Fillmore Oil and Gas Leasing Proposal, to Terry Catlin, BLM, at 2 (September 17, 2008) (attached as Exhibit 25). Because NEPA requires the consideration of a reasonable range of alternatives, BLM must consider the directional drilling alternative in the EA.

4. The EA Must Require Legally-Binding Stipulations, Rather than Unenforceable Notices.

BLM regulations regarding oil and gas leasing explain that there is a major difference between a lease notice and a lease stipulation. Stipulations are part of the lease

and “supersede inconsistent provisions of the standard lease form.” Notices, on the other hand, “ha[ve] no legal consequences, except to give notice of existing requirement,” and “shall not be a basis for denial of lease operations.” 43 C.F.R. § 3101.1-3. Thus, a notice is an unenforceable provision, while a stipulation is an enforceable part of a lease contract. Simply put, a lessee may violate the admonitions of a notice with “no legal consequences,” and such action will not invalidate the lease.

The House Range Resource Area (“HRRA”) RMP and the Warm Springs Resource Area (“WSRA”) RMP both contemplated stipulations in order to best protect certain resources in the Fillmore FO. The Fillmore Leasing EA, however, envisions that notices, not stipulations, will generally attach to lease parcels. Indeed, in the upcoming December 19, 2008, lease sale, Fillmore BLM does not attach any new stipulations to any parcels. The only stipulations included for Fillmore parcels are those that apply nationwide, and carry-over stipulations from the HRRA and WSRA RMPs. *See* BLM Washington Office Instruction Memorandum No. 2005-03, Cultural Resources and Tribal Consultation for Fluid Minerals Leasing; the Endangered Species Stipulation, BLM Washington Office Instruction Memorandum No. 2002-174, Endangered Species Act Section 7 Consultation; Stipulation UT-S-01 for all lands included in the Sevier Bridge Reservoir; Stipulation UT-S-07 for Critical Mule Deer Winter Range from December 1 through April 30; UT-S-04 requiring No occupancy or other activity within 600 feet of Meadow and Walker Creeks, UT-S-01 for lands included in the Birch Creek Riparian Area.

Aside from these unavoidable exceptions, Fillmore BLM attaches only unenforceable notices to its parcels. These notices are wholly inadequate to protect the

resources at stake in the Fillmore FO. And, the notices are an aberration from customary BLM practice. Indeed, for the December 19, 2008 lease sale, each of the other BLM field offices involved, i.e. Price, Moab, Richfield, and Vernal all attach stipulations, sometimes exclusively, and sometimes in addition to notices, to their leases.

Because the Fillmore EA does not contemplate any new lease stipulations, there are no binding requirements on any future oil and gas lessees for any parcels analyzed in the Fillmore Leasing EA. Given the resources at stake on public lands managed by the Fillmore FO, it is unacceptable that no stipulations are implemented to protect important habitat, species, water, air, and other resources. There are myriad examples in the upcoming December 2008 lease sale where other field offices have attached stipulations to protect certain resources while the Fillmore FO has attached only an unenforceable notice for the same resource. *See, e.g.*, greater sage-grouse leks, steep slopes, raptor nesting, and riparian protection.

In particular, the greater sage-grouse is one of the resources that deserve the enforceable protection of a stipulation. The greater sage-grouse is a candidate species for listing under the Endangered Species Act whose numbers are dwindling quickly, in part as a response to habitat loss and human interference. *See, e.g.*, Greater Sage-Grouse Population Trends: An Analysis of Lek Count Databases 1965-2007, *available at* <http://www.fws.gov/mountain-prairie/species/birds/sagegrouse/PopulationTrendsWAFWA%20July2008.pdf>. Many of the lands in the Fillmore field office historically provided habitat for greater sage-grouse, but the birds' current range has been greatly reduced. *See id.* at Appendix A, Figure A. Crucial to the birds' survival are expansive areas called "leks" (Norwegian for "play") where the birds congregate to mate,

and where surrounding habitat is used for the nesting and rearing of chicks. Despite the undeniable importance of leks for the survival of the greater sage-grouse, Fillmore BLM has failed to protect this species and its leks through oil and gas leasing stipulations.

Requiring a stipulation for greater sage-grouse leks is neither difficult nor uncommon. Indeed, the Price FO attaches a No Surface Occupancy (“NSO”) stipulation to leases within a half-mile of greater sage-grouse leks. December 2008 Stipulations and Notices at Stipulation No. PFO-NSO-1, at 8. In addition to its NSO stipulation, the Price FO also attaches a timing stipulation, restricting surface-disturbing and other disruptive activities within two miles of greater sage-grouse leks from March 15 – July 15. December 2008 Stipulations and Notices at Stipulation No. PFO-TL-15, at 10. Likewise, the Moab FO employs a stipulation for Gunnison sage-grouse leks that prohibits surface-disturbing activities within 0.6 miles of leks. Errata Sheet (December 2, 2008), at 13 available at http://www.blm.gov/ut/st/en/prog/energy/oil_and_gas/oil_and_gas_lease/december_2008_oil0.html. Likewise, the Vernal FO attaches a stipulation that does not permit any surface-disturbing activity within 2 miles of a sage grouse lek from March 1 – June 15. December 2008 Stipulations and Notices at Stipulation No. VFO-08, at 31. Vernal allows no exceptions, modifications, or waivers to this stipulation. *Id.* Like these other field offices, Fillmore must attach a sage grouse lek stipulation, instead of a notice, to protect this appealing and dwindling species.

If, in the alternative, notices are legally-enforceable like stipulations, the notices envisioned in the Fillmore Leasing EA nonetheless fail to adequately protect the resources at stake. For example, the Fillmore FO notice in the upcoming December 2008 oil and gas lease sale, regarding greater sage-grouse nesting and early brood-rearing,

FFO-LN-06, states that exploration, drilling, and other development activities would be restricted from March 15 – July 15 within two miles of leks. December 2008 Stipulations and Notices at 24. However, the Fillmore Leasing EA states that exploration, drilling, and other development should be restricted during a longer period of time, from February 15 – August 1 within two miles of leks. EA at 58. Thus, the timing restriction in the December oil and gas lease sale list must be extended to comply with the timing restriction requirements in the EA.

The remainder of these comments describe similar ways in which the Fillmore Leasing EA and the December 2008 lease sale notices are inadequate to protect the resources at stake.

5. The EA Fails to Account for the Wilderness Resource; BLM Must Conduct a Wilderness Inventory Prior to Issuing a Finding of No Significant Impact and Conducting an Oil and Gas Lease Sale.

Section 201 of the Federal Land Policy and Management Act (“FLPMA”) requires BLM to conduct wilderness inventories. 43 U.S.C. § 1711. Under FLPMA, BLM “shall prepare and maintain on a continuing basis an inventory of all public lands and their resource and other values . . . This inventory shall be kept current so as to reflect changes in conditions and to identify new and emerging resource and other values.” 43 U.S.C. § 1711(a). Thus, FLPMA requires BLM to identify any wilderness resources that exist by conducting wilderness inventories and keeping them current. Indeed, the Ninth Circuit recently held that, “wilderness characteristics are among the ‘resource and other values’ of the public lands to be inventoried under § 1711.” *Oregon Natural Desert Ass’n v. Bureau of Land Management*, 531 F.3d at 1114, 1119 (9th Cir. 2008). Therefore, BLM is required to consider whether, and to what extent, wilderness

values are now present in the EA planning area outside of existing Wilderness Study Areas (“WSAs”) and, if the values are present, how the oil and gas leasing decisions should protect these values.

Prior to issuing a DR/FONSI on the Fillmore Leasing EA, and conducting an oil and gas lease sale in December, Fillmore FO must conduct a new wilderness inventory. Conducting the lease sale prior to the completion of the EA would violate FLPMA and jeopardize the unidentified wilderness values of the lands in the Fillmore FO.

The last BLM wilderness inventory to cover the entire Fillmore field office occurred in 1999. Were BLM to comply with FLPMA and keep its wilderness inventory current, it would likely find that additional areas possessed wilderness characteristics. Indeed, in June – July 2008, Fillmore BLM inventoried areas for wilderness characteristics that were involved in the Geothermal Lease Sale, scheduled to take place on December 19, 2008. *See* EA at 43. As a result of that inventory, BLM found that most of the areas involved in the geothermal inventory that are included in the Utah Wilderness Coalition’s wilderness proposal (America’s Red Rock Wilderness Act), including Crater Bench East, the Drum Mountains, Keg Mountain East and West, Lion Peak, Little Drum Mountains, Little Drum Mountains North, and Swasey Mountain Addition possessed wilderness characteristics. As a result of this finding, BLM withdrew these areas from the December lease sale. *Compare* Geothermal Leasing in the Fishlake National Forest, Cedar City, and Fillmore Field Offices, Environmental Assessment UT-010-08-051, at 2, Appendix A (November 2008) *with* December 2008 Geothermal Final Sale List, available at http://www.blm.gov/ut/st/en/prog/energy/geothermal0/december_2008_geothermal0.html

For the geothermal lease sale, BLM properly took account of the wilderness resource by conducting the wilderness inventory as required under FLPMA Section 201 *before* offering the parcels for sale and potentially impacting the wilderness resource. BLM must comply with FLPMA Section 201 and conduct a similar wilderness inventory for the December 19, 2008, oil and gas lease sale. BLM admits that there are several citizen-proposed wilderness character areas that have not been reviewed at this time. *See* EA at 67. In order to comply with FLPMA Section 201, BLM must correct this deficiency and inventory areas *before* issuing the DR/FONSI and conducting the lease sale.

SUWA urges BLM to study the units proposed for wilderness by the Utah Wilderness Coalition (“UWC”) in America’s Red Rock Wilderness Act (“ARRWA”). *See* Maps and Photos attached as Exhibits 26 & 27. SUWA reserves the right to submit wilderness character submissions, and additional new information on wilderness character areas in the future. Other BLM field offices have repeatedly agreed with SUWA that the wilderness character units proposed under ARRWA generally possess wilderness characteristics. Therefore, Fillmore BLM is likely to agree with the UWC proposal that these areas possess wilderness character.

The UWC has previously provided BLM with detailed new wilderness resource information that Fillmore BLM has yet to analyze. This new wilderness character information was submitted in response to BLM’s 1999 Utah Wilderness Inventory, and included information on the Deep Creek Mountain, Howell Peak, Kingtop, North Wah Wah, Notch Peak, Rockwell, and Swasey Peak wilderness inventory areas (“WIAs”). To date, no revisions to the 1999 Utah Wilderness Inventory for the Fillmore FO have been

conducted. Furthermore, within the Fillmore FO, BLM has yet to identify many wilderness-quality landscapes. These include, but are not limited to, Essex Canyon, Kern Mountains, Wild Horse Pass, Snake Valley, Disappointment Hills, Granite Mountain, Middle Mountains, Thomas Range, Tule Valley, Coyote Knolls, Tule Valley South, Ledge Canyon, Chalk Knolls, Notch View, Bullgrass Knoll, Orr Ridge, Barn Hills, Red Tops, Black Hills, Sand Ridge, Headlight Mountain, Cricket Mountains, Little Sage Valley, Cat Canyon, Red Canyon, San Francisco Mountain, Painted Rock Mountain, Burbank Pass, Middle Burbank Hills, Burbank Hills, Juniper, Tunnel Springs, Tweedy Wash, Mountain Home Range North, Mountain Home Range South, and Jackson Wash.

The map and photos attached as Exhibits 26 and 27 depict the locations and boundaries of the above-mentioned lands with wilderness characteristics that the Fillmore BLM must evaluate as part of the Fillmore Leasing EA before offering lands for sale in the December 2008 oil and gas lease sale. In the meantime, BLM must defer parcel UTU86824 (#036), which overlays lands identified by the UWC in ARROWA as possessing wilderness character until BLM conducts a new wilderness inventory. If BLM's inventory determines that this parcel contains wilderness characteristics, BLM must permanently withdraw it, and must consider withdrawing it until such time as Congress acts on ARROWA, so as to not preclude Congress's ability to include this area in wilderness designation.

The Fillmore FO contains some of the most remote, and seldom-visited wilderness-quality landscapes in western Utah. The lack of significant man-made developments in these wilderness character units and the overall sense of isolation in these areas enhance the wilderness character within these areas. In the past, countless

acres within the Fillmore FO were inadequately inventoried and/or incorrectly identified, and never received WSA designation. While areas such as the House Range, the Confusion Range and the Deep Creek Range were identified for their wilderness resources, numerous other locations, all retaining natural qualities with opportunities for either outstanding solitude or a primitive recreational experience have yet to receive proper identification and WSA status.

Fillmore BLM is beginning to correct some of these errors and omissions. The 1999 Utah Wilderness Inventory and the more recent Fillmore BLM 2008 Wilderness Characteristics Reviews (“WCR”) have been positive steps by the agency to update and identify wilderness quality lands pursuant to Section 201 of FLPMA. These latest evaluations and inventories are especially important because of the shortcomings of BLM’s original FLMPA wilderness inventory that resulted in the minimal creation of the FLPMA Section 603 WSAs. Throughout Utah, including in the Fillmore FO, additional BLM areas were arbitrarily omitted from WSA designation for various reasons, in violation of FLPMA’s mandate. In particular, wild areas such as the Barn Hills, the Mountain Home Range, Tunnel Springs, Picture Rock Mountain, the Cricket Mountains, etc. were worthy of WSA designation. Despite their qualifications, none of these areas was ever identified for their wilderness resource. These errors and improprieties made it impossible for BLM to fully account for the extent of the wilderness resource during its obligatory FLPMA wilderness inventory.

These deficiencies have yet to be fully alleviated by the agency, either within the WSRA or HRRR RMPs, or now within the Fillmore Leasing EA. It is apparent that many wilderness-quality lands exist and must be identified as possessing wilderness

characteristics. In order to comply with FLPMA, BLM must conduct an inventory and identify and protect the wilderness resources in ongoing planning documents and decisions, including the Fillmore Leasing EA.

6. Parcels 035 and 036 Must be Deferred Because BLM has not Analyzed Significant New Information or Conducted Required Additional NEPA Analysis.

Last year, SUWA, the Theodore Roosevelt Conservation Partnership (“TRCP”), and other groups protested the August 2007 oil and gas lease sale, which included some of the identical parcels adjacent to the Deep Creek Mountains WSA that are being offered for sale in the upcoming December 2008 lease sale. Parcels UTU86823 (#035) and UTU86824 (#036) contain the same lands that were deferred as parcels UT0807-078, UT0807-079, and UT0807-080 in the August 2007 lease sale. Deferred Lands List, August 21, 2007, available at http://www.blm.gov/ut/st/en/prog/energy/oil_and_gas/oil_and_gas_lease/august_2007_oil_.html. In addition, parcels UTU86811 (#023), UTU86826 (#038), UTU86827 (#039), UTU86828 (#040), UTU86829 (#041), UTU86830 (#042), and UTU86831 (#047) included in the upcoming December 2008 lease sale are adjacent to parcels UT0807-095, UT0807-096, UT0807-084, UT0807-082, and UT0807-039 that were deferred in the August 2007 lease sale.

As one example, BLM’s December 2008 lease sale proposes to offer parcel 036, (T 12 S, R 18 W, Section 15 SE) which contains wilderness characteristics. BLM’s current wilderness character boundary fails to follow an impact, and is located instead along an arbitrary section and ½ section line in this area. Indeed, the existing Deep Creek Mountains WSA and the 1999 Utah Wilderness Inventory boundaries run directly across the rugged and natural slopes. The existing boundaries do not account for the lands to the

east, which possess a natural appearance and are free of any significant impacts. While there are a few old mineral exploration routes in this general area, the edges of these routes, not the current straight and arbitrary boundaries, should be used as the borders of the wilderness character areas.

BLM's description of Unit 8 describes the area as having "...extensive mineral exploration impacts that affect the naturalness of the unit." *See* Deep Creek Mountain's 1999 Utah Wilderness Inventory files. This assessment and description are exaggerated. Photographs #s 1-3 (attached as Exhibit 27) depict the natural appearance of the lands, and demonstrate the arbitrary nature of BLM's existing unit boundary. BLM must identify these lands as possessing wilderness characteristics, and accordingly adjust the current wilderness character boundary.

Parcels 035 and 036, as well as all of the other above-listed August 2007 parcels, were deferred because, "[n]ew information indicates lands in this parcel may contain wilderness characteristics. Additional NEPA required." Despite this admission in 2007, BLM has not conducted the additional necessary NEPA that would validate the sale of these parcels. As explained in the preceding section, BLM must conduct a wilderness character inventory in order to comply with FLPMA Section 201. BLM admitted that a wilderness inventory must be conducted before offering these parcels for sale. Despite this recognition, BLM has not yet conducted additional NEPA analysis. Thus, parcels 035 and 036, and any other lands deferred in the August 2007 lease sale because of the potential for wilderness character, must be deferred until a wilderness character inventory has been conducted.

7. The EA Violates NEPA by Failing to Adequately Analyze Climate Change or the Impacts on Air Quality from Oil and Gas Leasing

The Fillmore Leasing EA violates NEPA because it fails to take a hard look at the impacts on air quality from the Proposed Action as well as the other alternatives, and fails to account for the effects of climate change on the resources in the planning area, and the interaction of potential effects on various resources (i.e. soils, vegetation, watersheds, wildlife) of oil and gas leasing and subsequent development with the uncontroverted effects of climate change.

The EA does not conduct any air quality analysis, but simply states that air quality will not be significantly affected. EA at 11, Appendix A at 77. Likewise, the EA does not conduct any analysis on the effects of climate change and how its oil and gas leasing decisions will contribute to effects caused by climate change on natural resources, but simply states that the Proposed Action will not contribute to climate change enough to warrant analysis. EA at 5.

7.a. Air Quality

In Scoping Comments submitted on September 17, 2008, SUWA requested that BLM conduct a full quantitative air quality analysis, and BLM ignored this request. *See* Exhibit 25. Because the concerns SUWA raised in its Scoping Comments were not addressed, I will repeat those concerns here. BLM must analyze the potential effects of oil and gas leasing on air quality because they could result in significant impacts on human health, visibility, ecological systems, and on regional as well as global climate.

Although the Fillmore FO is fortunate to have generally good air quality, without any Clean Air Act (“CAA”) non-attainment zones, this does not mean that BLM cannot forego an air quality analysis. *See* Appendix A at 77. Rather, under the CAA, BLM must ensure that areas that are in attainment with National Ambient Air Quality

Standards (“NAAQS”) remain in attainment. *See* 42 U.S.C. § 7401, *et seq.* BLM has never prepared any quantitative analysis regarding the impacts of oil and gas leasing on air quality in the Fillmore FO. Since a non-NSO lease guarantees some level of development to an operator, and most of BLM’s Fillmore leases are non-NSO leases, BLM must fully analyze impacts to air quality now or it may not be able to prevent exceedances of federal and state air quality standards—something it is not permitted to do under FLPMA. 43 C.F.R. §§ 2920.7(b)(3), 1712(c)(8).

BLM’s Richfield Proposed RMP and EIS, at 3-8 to -10 (August 2008), recently disclosed background concentrations of ozone and particulate matter 2.5 microns in diameter or smaller (PM_{2.5}) that exceeded or appeared to exceed the Clean Air Act’s NAAQS. Fillmore BLM’s Leasing EA should disclose background concentrations of these pollutants as well. Furthermore, modeling prepared for even minor projects, such as the Vernal BLM’s Enduring Resources’ Saddletree Draw Leasing and Rock House Development Environmental Assessment UT-080-07-671 (December 2007), have predicted levels of pollution generated from a natural gas project that would exceed NAAQS for PM_{2.5} and for the Clean Air Act’s prevention of significant deterioration (“PSD”) increment limits for NO₂ and PM₁₀. Thus, even though the Fillmore FO leases may be offered in largely rural settings, they may nonetheless contribute to unhealthy levels of air pollution.

BLM summarily dismisses air quality impacts from oil and gas leasing in a few sentences in the ID Team Checklist. BLM must conduct a full quantitative air quality analysis which includes background concentrations, full emissions inventories, and modeling because BLM cannot know whether the proposed action will contribute to

climate change and how the effects of climate change will be exacerbated by the agency's decisions for oil and gas leasing and development without analyzing projected impacts.

The Fillmore Leasing EA must undertake the following steps in order to present a complete, accurate analysis of the potential air quality impacts of oil and gas leasing and subsequent development.

First, the EA must conduct a comprehensive, quantitative analysis of current air quality in the region and the modeled, likely impacts to air quality from the Proposed Action as well as the other alternatives presented in the EA. *See* Megan Williams, Comments on the Air Quality Analysis for the Richfield Resource Management Plan Draft Environmental Impact Statement, at 1-3 (Jan. 24, 2008) [hereinafter Williams Comments] (attached as Exhibit 28). Second, the EA must acknowledge and address existing air quality concerns in the planning area, if there are any. *See id.* Third, the EA must analyze whether oil and gas development will lead to a significant deterioration of air quality. *See id.* Fourth, BLM must prepare an emissions inventory and use that inventory in full-scale dispersion modeling. *See id.* Fifth, BLM must include adequate plans to protect air quality and NAAQS in the planning area. *See id.*; EPA, National Ambient Air Quality Standards (NAAQS) (Mar. 28, 2008), *available at* <http://www.epa.gov/air/criteria.html>. Sixth, the BLM must require the capture of methane gas from all well heads and eliminate leakage from all pipelines and well facilities. *See* Eryn Gable; *Climate Change Concerns Voiced in Protests to BLM Leases*, Land Letter (Apr. 20, 2008) (attached as Exhibit 29) (discussing ways in which gas operators have been reducing emissions in the San Juan Basin). Finally, the EA must

quantify these greenhouse gas emissions and analyze their potential contribution to climate change.

7.b. Climate Change

There is no doubt that climate change is occurring, bringing intense changes around the globe, including in the Fillmore FO. The EA's failure to analyze predicted changes in the planning area is a significant oversight given that federal departments and agencies including the Department of Interior, the Environmental Protection Agency ("EPA"), and the U.S. Geological Survey have all published reports and/or provided public statements and congressional testimony acknowledging the impacts of climate change on public lands resources. Thus, BLM has failed to take NEPA's required "hard look" at the likely impacts from climate change on the planning area and the likely contributions from the Proposed Action on climate change.

The most current climate models show that the southwestern United States is warming and drying, that precipitation in the upper Colorado River Basin will decrease by 15-20%, fire will become more prevalent, and temperatures will increase by 4-6 degrees Celsius. *See, e.g.,* http://www.met.utah.edu/news/global_warming_2007 (report by University of Utah meteorologists and others showing climate warming in Utah, with more drought conditions expected); U.S. Geological Survey, *Impacts of Climate Change on Water and Ecosystems in the Upper Colorado River Basin* (August 2007). In the face of a hotter and drier southwest, runoff from precipitation is expected to decrease by as much as 30%, with dry soil conditions that will impact vegetation and wildlife, and spur dust storms, thereby creating greater risks for drivers on roads and highways. *See id.*

The U.S. Geological Survey report further notes that activities like energy exploration “reduce or remove the natural components that stabilize desert soils [which] increases soil loss through wind and water erosion.” *Id.* In addition, energy exploration and development also increase the spread of invasive plant species, which in turn spur more intense and more frequent wildfires. *See id.* And, soil disturbance increases erosion and decreases the ecosystems’ ability to recover from associated land use impacts such as roads built for oil and gas development and related off-road vehicle (“ORV”) use. *See id.*

Furthermore, desert ecosystems like Utah’s west desert in the Fillmore field office, and its riparian areas in particular, are more vulnerable to climate change since animals and plants already live near their limits for temperature and water stress. *See id.*; U.S. Department of Agriculture, *The Effects of Climate Change on Agriculture, Land Resources, Water Resources and Biodiversity*, Public Review Draft of Synthesis and Assessment Product 4.3 (Sept. 11, 2007) at 9, *available at* <http://www.climatescience.gov/Library/sap/sap4-3/public-review-draft/default.htm>.

The U.S. Geological Survey explains that “understanding interactions of landscape with changing environmental conditions, and their relative influence on the severity of drought, are important for natural resources planning and land use sustainability.” USGS, *Drought Conditions, 1996 to 2006: USGS Navajo Nation Studies*, *available at* <http://geomaps.wr.usgs.gov/navajo/drought.html> (last visited Dec. 1, 2008). However, BLM has failed to analyze and, thereby, to understand the interaction of climate change and oil and gas leasing and development.

The BLM must analyze the impacts and interactions of oil and gas leasing and development with the known effects of climate change. The six Utah BLM field offices that have recently finalized RMPs have all had sections acknowledging the contributions of anthropological sources to global climate change. *See, e.g.*, Vernal Proposed Resource Management Plan and Environmental Impact Statement 3-8 to -10 (August 2008). However, all of these plans have failed to quantify the greenhouse gases contributed from oil and gas development and have also failed to analyze how global climate change might impact the planning area. The Fillmore Leasing EA must acknowledge man-made contributions to climate change and include an analysis of how climate change may impact the planning area, and how the project may impact climate change.

BLM must address all of the above-mentioned predicted effects of climate change in Chapter 3's assessment of existing conditions and then provide actual analysis in Chapter 4's discussion of the impacts from climate change on the various alternatives of this project. A discussion of existing conditions in Chapter 3 would provide baseline information necessary for BLM to evaluate the impacts predicted by each alternative. Then, in Chapter 4, BLM should evaluate the ways the different alternatives will impact climate change and interact with the known effects of climate change, and, given the information listed above, BLM should minimize soil disturbance as much as possible (e.g., by adopting a 160-acre surface spacing). BLM's own science coordinator noted that the effects of climate change would likely result in an anticipated reduction in the allowed use of certain activities on BLM lands - yet anticipatory planning for this reduction is not present in the EA.

Furthermore, the Fillmore Leasing EA should analyze potential cumulative environmental impacts, in light of current information about climate change. For example, the depletion of Snake Valley water resources, which may be used to supply water to Las Vegas could cause significant problems in terms of losses to vegetation and wildlife. The Fillmore Leasing EA should consider the cumulative impacts of such a scenario coupled with oil and gas development. That cumulative impacts analysis should also consider the generation of eolian dust and its deposition on nearby mountains. Such depositions can lead to premature snowpack melt and increased regional temperatures. Even the ID Team Checklist indicates that fugitive dust has the potential to impact air quality. Despite this fact, the EA entirely fails to address fugitive dust. Indeed, the EA contains no analysis (direct, indirect, or cumulative) of how surface-disturbing activities from the project will increase eolian dust depositions. *See* J.C. Neff et al., *Increasing Eolian Dust Deposition in the Western United States Linked to Human Activity*, *Nature Geoscience* 1, Advanced Online Publication, 189 (2008) (discussing the impacts of eolian dust deposition) (attached as Exhibit 30). The EA must quantify the current amount of eolian dust being generated by the burned sections of the Milford Flat Fire. *See id.* Together, the depletion of Snake Valley water resources, the swaths of land burned in the Milford Flat fire, and the ground disturbance from oil and gas development could result in substantial amounts of dust deposition. Fillmore BLM must analyze these cumulative impacts in the EA before conducting the December 2008 oil and gas lease sale. *See* Exhibit 30.

8. The EA violates Utah’s Riparian Management Policy.

The Fillmore Leasing EA violates Utah's Riparian Management Policy, IM No. UT 2005-091. Utah's Riparian Policy extols the value of riparian areas in Utah by explaining that, "these small but unique areas are among the most important, productive, and diverse ecosystems in the State." Riparian Policy, IM UT 2005-091 at 1. Given the importance of riparian areas in desert ecosystems, and the valuable riparian areas in the Fillmore FO, including the Gandy Salt Marsh area, Fish Springs, Scipio Lake, Fool Creek Reservoir, Clear Lake Area, the Sevier River complex, and the riparian areas south of Delta and Oasis, the EA must adequately analyze the potential impacts and the level of protection necessary for riparian areas. *See* EA at 61-2 (a short 2-page "analysis").

The HRRRA RMP does not permit any new surface disturbance within 500 feet of perennial streams or springs. EA at 34. Neither the WSRA RMP nor the Utah Riparian Management Policy, IM UT 2005-091 permits any new surface disturbance within 100 meters of a riparian area unless:

- (A) there are not practical alternatives or,
- (B) all long term impacts can be fully mitigated or
- (C) the activity will benefit and enhance the riparian area.

Riparian Policy, IM UT 2005-091 at 4; EA at 34. The Fillmore Leasing EA must comply with the HRRRA and WSRA RMPs, and Utah's Riparian Policy. Although the Proposed Action in the Fillmore Leasing EA indicates that no new surface disturbance would be permitted within 500 feet of riparian areas in the Fillmore field office, the EA does not attach a stipulation to any parcels, but uses only unenforceable notices. EA at 62.

Furthermore, the EA states that a NSO stipulation could attach to certain parcels in riparian areas, in order to preclude the development of wells, roads, pipelines, and protect water quality. EA at 61. In the upcoming December 2008 oil and gas lease sale,

BLM does not include an NSO stipulation for any of the parcels (except for carry-over stipulations from the HRRRA and WSRA RMPs). However, even an NSO stipulation has the potential to damage underground aquifers, seeps, springs, subsurface flows, etc. even though the drill rig is not on top of the spring. December 2008 Stipulations and Notices. In order to adequately protect riparian areas, BLM must close areas to leasing, or, at the very least, attach protective stipulations, not notices, to parcels near riparian areas.

Furthermore, the EPA has previously indicated that neither a 100-meter or a 500-foot riparian buffer zone is sufficient to protect riparian areas, and that a ¼ mile buffer zone should be used for all riparian areas that are:

- (A) not in Properly Functioning Condition,
- (B) *vulnerable to impacts from oil and gas production*, recreation and grazing,
and
- (C) along stream segments with steeper slopes.

Moab Proposed RMP Response to Comments, Sorted by Commentor, at unpaginated 175. In addition to the EPA, other individuals and organizations have also proposed a larger buffer for riparian protection. For example, Charlie Shelz of ECOS Consulting explains that, “[w]hen there is nearby surface disturbance, the proposed BLM buffer of ‘100 meters’ is inadequate in this dry desert environment, because of the ease of the spread of soil disturbance and erosion, vegetation loss, and soil and water contamination that can spread into the floodplain and riparian habitat.” Charles Schelz, ECOS Consulting, Comments on the BLM Draft Moab RMP/EIS 5 (Nov. 2007). Thus, Fillmore BLM should consider establishing a ¼ mile buffer zone, or greater, expressed in a stipulation, to all parcels potentially impacting riparian areas.

BLM fails to provide scientific data that suggests that a 500-foot buffer is adequate to protect riparian areas, and fails to assess the impacts to riparian areas from

various types of oil and gas development, such as road construction, increased erosion and dust from roads, sludge pits, and waste water pits. BLM must modify the EA to comply with the Utah Riparian Policy and to address cumulative impacts from a wider array of factors.

In addition, the EA only limits surface-disturbance within 500 feet of *perennial* streams. This limitation, too, is inadequate. Desert ecosystems support numerous critical water sources that are not perennial. Indeed, the Riparian Policy is not limited to perennial streams, but instead includes areas with permanent *subsurface*, in addition to *surface*, water, and includes wetland areas that support riparian vegetation, whether or not surface water is present year-round. Riparian Policy, IM UT 2005-091 at 1. In order to adequately protect riparian areas and to comply with the Riparian Policy, BLM must amend the EA so that the hundreds of non-perennial rivers, streams, seeps, springs and other water sources in the planning area are protected by designating these areas “closed” to oil and gas leasing or receive other similar protective measure. *See* EA at 34. For large riparian areas, such as the Gandy Salt Marsh area and the Sevier River complex, for which the 500-foot buffer is insufficient to adequately protect their water quality and wetlands values, BLM must designated the areas as “closed” to oil and gas leasing.. *See* EA at 61-2.

9. BLM Must Withdraw Parcel 023, and Consult with the SHPO and the Tribes.

Congress enacted the National Historic Preservation Act (“NHPA”) in 1966 to implement a broad national policy encouraging the preservation and protection of the country’s historic and cultural resources. *See* 16 U.S.C. §§ 470(b), 470-1. To promote this policy, the NHPA requires that a federal agency “takes into account any adverse

effects on historical places from actions concerning that property.” *Friends of the Atglen-Susquehanna Trail, Inc. v. Surface Transp. Board*, 252 F.3d 246, 252 (3rd Cir. 2001); see 16 U.S.C. §§ 470(f), 470h-2(d). The heart of the NHPA is Section 106, which prohibits federal agencies from approving any federal “undertaking” unless the agency considers the effects of the undertaking on historic properties that are included in or eligible for inclusion in the National Register of Historic Places. 16 U.S.C. §§ 470(f), 470w(7).

BLM’s failure to withdraw parcel UTU86811 (#023) in spite of the Tribes’ objections violates the National Historic Preservation Act (“NHPA”). See EA at 51-52. The Kanosh Band of the Paiute Tribe expressed concern with the proposed leasing of parcel 023, which is directly adjacent to the Kanosh Indian Village and is west of the tribal cemetery, from which the lease parcel is visible. EA at 52. The Tribe has requested that the village and cemetery be evaluated as Traditional Cultural Properties for the purpose of the Fillmore Leasing EA. EA at 52. Due to the Tribes’ concerns regarding parcel 023, BLM must withdraw this parcel to comply with the NHPA. See EA at Appendix E at 115. There is no indication that the Kanosh Band’s objections have changed. See EA at Appendix E at 116. Furthermore, Fillmore BLM’s archaeologist states in her Class I Cultural Resources Inventory that parcel 023 should not be offered in the upcoming lease sale. EA at Appendix E at 116.

A Class I Cultural Resources Inventory must be completed for *all* portions of the parcels discussed in the Fillmore Leasing EA, not just a small portion of the parcels. See EA at 50-51, Appendix E at 116. In addition, consultation with the State Historic Preservation Officer (“SHPO”) must be completed before any leases are offered for sale, and a copy of the consultation letter with the tribes should be included with the EA and

FONSI. See EA at 50-51, Appendix E at 117. Notification of the Paiute Tribe of Utah, the Confederated Tribes of the Goshute Reservation, Kanosh Band of the Paiute Tribe, Skull Valley Goshute Tribe, and the Ute Tribe must be completed before the lease sale occurs, and copies of these communications must be included in the DR/FONSI before the lease sale occurs. EA at Appendix E at 117.

10. The Cumulative Impacts Analysis in the Fillmore Leasing EA is Insufficient.

The Fillmore Leasing EA addresses all potential cumulative impacts in a single paragraph and summarily dismisses such impacts as negligible. EA at 67-8. A one-paragraph “analysis” of cumulative impacts is wholly inadequate to address the potential impacts from oil and gas leasing and development nearly 78,000 acres to a variety of resources, including wilderness characteristics, the deposition of eolian dust and its contributions to melting snowpack, impacts on air quality, impacts on water quality and riparian areas, visual resources, and sensitive species. Likewise, the EA should address cumulative impacts in the context of climate change. For example, BLM should discuss how roads built for leasing and development and subsequent ORV use on these roads impact, among other things, soil stability, erosion, and riparian areas. The cumulative impacts analysis must be broadened to address these and other topics.

11. The EA Violates NEPA, FLPMA, and the Clean Water Act by Failing to Take a Hard Look at Impacts to Water Quality

NEPA requires that BLM analyze, assess, and disclose the impacts from anticipated oil and gas leasing and subsequent development and fully inventory the pollutants generated by these activities. In addition, FLPMA requires that BLM manage the planning area according to federal and state water quality standards. 43 C.F.R. § 2920.7(b)(3)

(requiring that every BLM “land use authorization shall contain terms and conditions which shall . . . [r]equire compliance with . . . *water quality standards* established pursuant to applicable Federal or State law”) (emphasis added). *See also* 43 U.S.C. § 1712(c)(8) (requiring BLM in land use plans—which would therefore require implementation in daily management—to “provide for compliance with applicable pollution control laws, including State and Federal . . . *water . . . pollution standards* or implementation plans”) (emphasis added).

The above-mentioned water quality standards and water pollution standards include the Clean Water Act’s (“CWA’s”) water quality standards (“WQS”) and accompanying Total Maximum Daily Loads (“TMDL”) limits for waters that do not meet WQS, as well as anti-degradation requirements for waters that do meet WQS. WQS are based on ambient water concentrations of various pollutants. Although the EA lists three water bodies that are impaired in the planning area, i.e. Chicken Creek, Currant Creek, and Sevier River segments 24 and 25, the EA does not present the most current information. Other water bodies in the planning area are also impaired, and some even have EPA-approved TMDLs that help the water bodies meet WQS. For example, as of August 17, 2004, the Sevier River from DMAD Reservoir upstream to U-132 crossing has had an approved TMDL for Total Dissolve Solids (“TDS”), sediment, and total phosphorus. Utah Approved TMDL List, current as of September 10, 2008, at 5 (attached as Exhibit 31). Likewise, as of August 17, 2004, a TMDL for sediment and total phosphorus, in addition to TDS, was approved for the Sevier River from Gunnison Bend Reservoir to DMAD Reservoir. For a complete list of water bodies with approved TMDLs in the planning area, see Exhibit 31.

BLM must ensure that all impaired water bodies in the Fillmore FO are protected. In order to know that it is protecting these and other water bodies, BLM must analyze the baseline water quality of all potentially-impacted rivers, streams, reservoirs, springs, and other water sources in the planning area, and then must model and analyze anticipated impacts from each of the alternatives. Without conducting modeling and analysis, BLM cannot know whether the oil and gas leasing and subsequent development contemplated in the EA will significantly impact water quality. Likewise, without analyzing baseline and anticipated water quality, BLM violates FLPMA, NEPA, and the CWA because it does not know whether or not it is complying with water quality standards, and fails to take a hard look at how its actions will affect water quality.

12. BLM Must Update its Visual Resources Inventory.

BLM is directed by federal statutes and BLM policies to protect visual resources. FLPMA compels BLM to prepare and maintain inventories of the visual values of all public lands, 43 U.S.C. § 1711(a), and manage public lands “in a manner that will protect the quality of . . . scenic . . . values,” §1701(a)(8). NEPA requires BLM to “assure for all Americans . . . aesthetically . . . pleasing surroundings.” 42 U.S.C. § 4331(b)(2). BLM has interpreted these mandates as a “stewardship responsibility” to “protect visual values on public lands” by managing all BLM-administered lands “in a manner which will protect the quality of the scenic (visual) values.” BLM, BLM Manual 8400 – Visual Resource Management .02, .06(A).

Fillmore BLM must update its Visual Resource Management (“VRM”) inventory. It appears that BLM has not conducted a VRM inventory since the 1986 HRRA RMP and the 1987 Warm Springs RMP. BLM must conduct a new VRM inventory to comply with

FLPMA Section 201 which requires BLM to prepare and maintain on a current VRM inventory. *See* 43 U.S.C. § 1711(a). With a current inventory, BLM would likely find that certain areas in the Fillmore FO warrant a higher VRM Classification.

In particular, the benches of the Deep Creeks, which contain several of the lease parcels addressed in the Fillmore Leasing EA, possess outstanding visual resources. All lands with wilderness characteristics, including lands in parcel 036, should be managed as VRM Class II “to retain the existing character of the landscape, with a low level of landscape change.” *See* EA at 39. Under the existing inventory, the benches of the Deep Creek Mountains are identified as Class III visual resource areas, while the Deep Creek WSA is a Class II area. The benches are a part of the viewshed of the Deep Creeks and the beauty and naturalness of the lands surrounding the Deep Creeks WSA indicate that Class II VRM classification is appropriate. *See also* nominated Deep Creek Mountains Scenic ACEC, attached as Exhibits 32–34.

13. BLM Must Address the Nominated Deep Creek Mountains Scenic Area of Critical Environmental Concern (“ACEC”) and Solicit Internal Input on Additional ACECs

Fillmore BLM must maintain a current inventory of Areas of Critical Environmental Concern (“ACECs”) and protect the relevant and important values of the resources at stake in these ACECs. *See* 43 U.S.C. § 1711. FLPMA § 201 requires that BLM prepare and maintain “an inventory of all public lands and their resource and other values (including, but not limited to, outdoor recreation and scenic values), *giving priority to areas of critical environmental concern.*” 43 U.S.C. § 1711(a) (emphasis added). As FLPMA states, BLM must *give priority* to the designation and protection of ACECs. Accordingly, BLM must solicit internal input on additional potential ACECs

from BLM specialists. This must be done *before* the DR/FONSI for the EA is completed and *before* the December 2008 oil and gas lease sale occurs.

SUWA is pleased to submit a nomination for a new ACEC, the Deep Creek Mountains Scenic ACEC, attached as Exhibits 32–34. BLM must address SUWA’s nomination, and identify the resources at stake in order to comply with FLPMA Section 201. BLM must address this submission *before* it offers any of the parcels within the nominated area for sale in the upcoming December 19, 2008 oil and gas lease sale. If BLM agrees with SUWA and designates the Deep Creek Mountains Scenic ACEC, it must protect the resources by withdrawing the parcels, attaching a non-waivable NSO stipulation, or deferring the parcels until it can work out another solution that adequately protects the relevant and important resources at stake.

14. There are Many Inaccuracies in the December 2008 Stipulation and Notice List as well as the Final Sale List; These Must be Corrected to Comply with the Fillmore Leasing EA and to be Intelligible.

There are many inaccuracies in the December 2008 Stipulation and Notice List as well as the Final Sale list. These inaccuracies must be corrected in order to comply with the Fillmore Leasing EA and to be intelligible. First, Fillmore field office notice FFO-LN-16 for the December 19, 2008 lease sale is entitled “burrowing owl habitat.” However, the description states that “[t]he lessee/operator is given notice that this lease has been identified as containing *bald eagle* habitat.” December 2008 Stipulations and Notices, at 26 (emphasis added). This notice must be corrected to reflect that the lease contains *burrowing owl*, not bald eagle, habitat.

Second, several parcels in Final Sale List for the December 2008 oil and gas lease sale contain Notice Number FFO-LN-25, which states that it is for “raptors,” Notice

Number FFO-LN-26 for “pygmy rabbit,” and FFO-LN-27 for “Utah Sensitive Species.” In the December 2008 Stipulation and Notice list, however, Notice Number FFO-LN-25 is listed as “ferruginous hawk nest sites,” and FFO-LN-26 is listed as “raptors,” and FFO-LN-27 is listed as “pygmy rabbit.” The Final Sale List for ALL of the Fillmore Field Office parcels contain these three notices, but it is not clear whether these notices refer to ferruginous hawk nest sites, raptors, and pygmy rabbits, respectively, or instead to raptors, pygmy rabbits, and Utah Sensitive Species, respectively. The Notices for all of the Fillmore Field Office parcels must be changed to accurately reflect and protect the resources at stake.

Third, in accordance with the Fillmore EA stipulations for the December 19, 2008 lease sale must be added to ensure protection for northern goshawk, short-eared owl, and their habitat. *See* EA at 58. These should be added to the list of notices and stipulations and attached to lease parcels where appropriate. Many of the parcels surrounding the Deep Creeks, namely parcels 050, 040, 042, 039, 038, 037, 036, 035, contain high-value habitat for short-eared owls. Utah GAP Analysis Data (2001). In addition, other parcels, namely 001, 002, 003, 004, 005, 006, 007, 008, 012, 013, 014, 015, 020, 019, 018, 017, 033, 032, 031, 033, 029, 028, 027, 026, 025, and 024, possess either high-value or critical habitat for short-eared owl. In accordance with the EA, stipulations must attach to all of these parcels indicating the presence of short-eared owl habitat, and restricting surface disturbance during breeding and nesting season within a half mile of an occupied nest.

15. Certain Notices Must be Changed to Stipulations and Then Modified in Order to Comply with the HRRA and WSRA RMPs.

Several notices should be changed to stipulations and then modified to comply with the HRRA and WSRA RMPs. First, according to the HRRA RMP, parcel 036

overlaps critical elk summer range. EA at Appendix F at 118. Therefore, BLM must add a stipulation for critical elk summer range, and/or crucial elk calving and deer fawning habitat, to parcel 036.

Second, under the WSRA RMP, an unwaivable stipulation attached to parcels that contained mule deer winter range and prohibited development activity from December 1 to April 30. BLM appropriately attached this stipulation to parcels 012, 013, and 016, but must add the stipulation to parcels 014, 015, 022, and 023 in order to be as protective as the No Action Alternative.

Third, under the WSRA RMP, a stipulation prohibiting exploration and development from March 1 – June 30 attached to parcels that contained crucial raptor nesting habitat. EA at 8. In order to be as protective as the No Action Alternative, the Fillmore Leasing EA must be changed to attach a stipulation that prevents any development from March 1 – June 30, with exceptions only allowed in writing when it can be shown that the activity will not impact raptor nests. *See* EA at 8.

X. REQUEST FOR RELIEF

SUWA requests the following appropriate relief: (1) the withdrawal of the ninety-two protested parcels from the December 19, 2008, Competitive Oil and Gas Lease Sale until such time as the agency has complied with NEPA, FLPMA, and the NHPA or, in the alternative (2) withdrawal of the ninety-two protested parcels until such time as the BLM attaches unconditional no surface occupancy stipulations to all protested parcels.

This protest is brought by and through the undersigned on behalf of the Southern Utah Wilderness Alliance, Grand Canyon Trust, National Parks Conservation Association, Natural Resources Defense Council, Sierra Club, and The Wilderness

Society. Members and staff of these organizations reside, work, recreate, or regularly visit the areas to be impacted by the proposed lease sale and therefore have an interest in, and will be affected and impacted by, the proposed action.

December 4, 2008

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