

6.0 CONSULTATION AND COORDINATION

6.1 INTRODUCTION

The issue identification section of Chapter 1 identifies those issues analyzed in detail in Chapter 4. Appendix B provides the rationale for issues that were considered but not analyzed further. The issues were identified through the public and agency involvement process described in Sections 6.2 and 6.3 below.

6.2 PERSONS, GROUPS, AND AGENCIES CONSULTED

6.2.1 Consultation

U.S. Fish & Wildlife Service (USFWS):

Section 7 consultation with the USFWS was initiated on November 9, 2007. On November 30, 2007, the USFWS responded with a Biological Opinion. Consultation for this project is therefore considered to be closed. However, since this EA is a programmatic document, consultation may be reinitiated when it is determined to be necessary based on site-specific review of individual project applications.

Utah State Historic Preservation Office (SHPO):

Consultation with the SHPO was initiated with letters dated May 9, 2005 and May 2, 2007. A response was received dated May 29, 2007 requesting further information. Follow-up is pending.

Native American Tribes:

Consultation with the Native American Tribes was initiated on May 9, 2005. The Confederated Tribes of the Goshute Reservation responded with a letter dated May 18, 2005 that indicated they did not have any concerns with the project. The Santa Clara Pueblo responded with a letter dated June 21, 2005 indicated that the project would not impact their traditional cultural properties.

A consultation was re-initiated with the following tribes on May 3, 2007: White Mesa Ute, Eastern Shoshone, Hopi, Eastern Shoshone and Northern Arapaho, Santa Clara Pueblo, Southern Ute, Northwestern Band of the Shoshone Nation, Navajo Nation, Laguna Pueblo, Zia Pueblo, and Confederated Tribes of the Goshute Reservation. The Laguna Pueblo responded with a letter dated May 14, 2007 stating that the proposed project will not have a significant impact. The Hopi Tribe responded with a letter dated May 29, 2007 stating that if cultural resources are identified and would be adversely impacted by the project, that additional consultation would be appreciated.

A letter was received from the Hopi Tribe dated August 13, 2007 referencing a July 10, 2007 correspondence from the Colorado Plateau Archaeological Alliance to the BLM regarding a known cultural site. The Colorado Plateau Archaeological Alliance questioned whether large stone cairns in the Rock House project area were historic or prehistoric structures. The Hopi requested documentation concerning the sites. A letter dated September 10, 2007 transmitted the requested documentation. The Hopi Tribe responded with a letter dated September 24, 2007 stating that the subject cairns were not *Hisatsinom* shrines.

6.2.2 Coordination

Uintah County Road Department:

Data on County Roads incorporated into Chapters 2, 3, and 4.

6.3 SUMMARY OF PUBLIC PARTICIPATION

The Proposed Action was reviewed by an Interdisciplinary Team and subsequent issues were identified through internal scoping (refer to Appendix B), as well as by taking into account information submitted by the public during the June 7, 2005 public comment period on EA UT-080-04-252, and during the October 20, 2006 public comment period on EA UTU-080-05-309. A 30-day comment period for this document (UT-080-07-671) was held beginning on June 22 and ending on July 23, 2007. During the public comment period, 55,725 comment letters were received. Of that total, 231 were letters in support of the project and 55,484 were letters against the project. No substantive comments were provided in those letters. The remaining 10 letters received from the USFWS, State of Utah, Uintah County Commission, Southern Utah Wilderness Alliance (SUWA), Watershed Environmental LLC, Megan Williams, Kolano and Saha Engineers, Inc., River Outfitters, Ken Kreckel, and the Colorado Plateau Archaeological Alliance did provide substantive comments. Responses to these comments are included below, and changes to the EA have been made. Any changes that affected potential impacts were analyzed in Chapter 4.0. None of the edits warranted an additional public comment period.

6.3.1 USFWS

Comment #1

The USFWS recommends that any tanks or storage facilities associated with proposed wells located within the 100-year floodplain of Atchees Wash be placed outside of the 100-year floodplain and would be equipped with automatic emergency shut-off valves.

BLM Response #1

The applicant agreed to add the requested mitigation measure to the Applicant Committed Mitigation Measures Section of the Final EA (2.8.8).

Comment #2

Due to the close proximity of the proposed wells to designated critical habitat in the White River, there is an increased risk of contaminants reaching the White River should a spill occur and adversely impacting the endangered fish. Therefore, we cannot concur with a “may affect not likely to adversely affect” determination to the Colorado River fish and their designated critical habitat.

BLM Response #2

At the time of the public comment period, consultation with the Fish and Wildlife Service under section 7 of the Endangered Species Act had not yet been conducted. The determination for the Colorado River fish has been changed in the final EA to be “may affect, are likely to adversely affect” based upon the potential impacts discussed above. This changed determination was carried forward in the consultation with the Fish and Wildlife Service under section 7 of the Endangered Species Act. For a summary of that consultation, refer to section 6.2 of the Final EA.

6.3.2 State of Utah

Comment #1

This proposal will require an air quality permit. If any compressor or pump stations are constructed at the site, a permit application, known as a Notice of Intent (NOI) should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 North, 1950 West, Salt Lake City, Utah 84116 for review according to Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at: <http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf>

BLM Response #1

No compressors or pump stations are proposed in the EA. Despite this, the applicant added the following statement to the Applicant Committed Environmental Protection Measures Section (2.8.13): Enduring would obtain all necessary air quality permits to construct, test, and operate facilities. Please note that the proposed project is located within the restored boundary of the Uintah and Ouray Reservation, so that air quality jurisdiction remains with the EPA.

Comment #2

The project is subject to R307-205-2, Fugitive Dust, since the project could have a short-term impact on air quality due to the fugitive dust that could be generated during the excavation and construction phases of the project. An Approval Order is not required solely for the control of fugitive dust, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rule may be found at: www.rules.utah.gov/publicat/code/r307/r307.htm

BLM Response #2

The following sentence was added to Applicant Committed Environmental Protection Measures (Section 2.8.12) to specifically address the comment: Enduring would use water at construction sites and along roads to abate fugitive dust during the construction phase of the project.

6.3.3 Uintah County Commission

Comment #1

The EA ignores other uses of existing roads contained in the County's Travel Management Plan and the possible need for upgrade of these roads. The plan should acknowledge these roads and require the project proponent to work closely with the County to insure proposed upgrades and maintenance is consistent with County policy and directives.

BLM Response #1

Access to proposed well pads in the Rock House Project Area is via 8.4 miles of road included on the Uintah County Transportation Plan. All existing roads are currently used for ongoing oil and gas operations, access to private and state lands, recreation, livestock management and other public lands uses. Under some of the alternatives, Enduring would be required to realign portions of those roads. Proposed road realignments of the Saddletree Draw and Atchees Wash roads were designed in cooperation with the BLM and Uintah County during the on-site process. Enduring Resources is

currently responsible for all maintenance on County roads in the Project Area, and currently holds a maintenance agreement with Uintah County. In addition, Enduring has also secured a \$25,000 bond with Uintah County to ensure road maintenance standards are met.

Comment #2

The document discussed the discharge of production water. We find no indication in this document of the amount of water that will be produced for discharge nor is there analysis of such activities impacts.

BLM Response #2

A discussion on the amount of produced water and its disposal was added to Section 2.3.5. Impacts from the trucking of water for disposal are included in the traffic volumes estimated in the EA. The water would be trucked to a disposal well previously permitted by the EPA and State of Utah (UT-21062-07150). Potential impacts associated with the existing water disposal well were analyzed by the EPA during the application process for Enduring's water disposal well.

Comment #3

Minerals beneath state and private leases would be developed by vertically or directionally drilling from existing or proposed well pads located on state or private lands. BLM lacks the authority to make such decisions on state or private lands, unless the statement reflects an applicant proposed measure. This should be stricken.

BLM Response #3

CEQ regulations 1502.14(c) require the lead agency to include reasonable alternatives, even if they are not within the jurisdiction of the lead agency. Regardless of the decisions of this document, wells located on State and private lands require an agreement with the surface owner, and can only be approved by Utah's Division of Oil, Gas, and Mining. Please note that the development scenarios included in this document were developed in coordination with the operator.

Comment #4

It is not clear what roads are being described in section 2.3.3, 2.4.3, and 2.5.3. The first sentence describes access roads, but the second sentence refers to realignment of County roads. As a result, if the reclamation requirement in the first sentence was implemented, it could require the reclaiming of existing County roads. Strike this section or rewrite to make it clear that the requirements to install, operate, maintain, and reclaim only applies to access roads and not County roads.

BLM Response #4

New roads would be designed to provide all-weather access and support expected traffic. All new roads would be constructed, maintained, and reclaimed by the Operator or right-of-way holder. No roads included on the Uintah County Transportation Plan would be reclaimed until after the BLM has coordinated with Uintah County on the proposed reclamation.

Comment #5

Although the amount of disturbance is well reported in Table 2-4, and in other tables, such as 2-5, 2-6, and 2-7, there is little statistical difference in the number of acres to be disturbed between the alternatives.

Reclamation success and weather could easily reduce or increase the amount of surface disturbance on any given alternative.

BLM Response #5

Comment noted. However, in terms of ensuring reclamation success on public land, as stated in Section 2.3.12, Enduring has secured a bond with the BLM in order to conduct operations on their Federal leases. Bonding is required for oil and gas lease operations in order to indemnify the U.S. government against losses from failure to meet royalty obligations, wells plugged improperly and abandoned on lease, and/or surface restoration and clean up on abandoned operations (BLM and USFS 2006). The bond secured with the BLM would ensure that reclamation would be acceptable to the BLM prior to the release of the operator from responsibility for the wells.

Comment #6

According to the summary for Section 2.5.1, minerals beneath lease UTU-81737 would only be developed by directional drilling from proposed or existing well pads from state or private lands, and from federal lands for which the right to develop is in place. The County opposes management decisions that forces development on state and private lands in order to protect or lessen impacts to federal lands.

BLM Response #6

Comment noted; however, the referenced alternative is not designed to protect federal lands at the expense of state or private lands, but is designed to complete the range of alternatives necessary to fully disclose potential impacts and support an informed decision.

Comment #7

The first sentence of section 2.9.6 as written implies that all of the public has previously suggested closure of the White River area to further leasing. "The public" should be changed to "some comments" or at a minimum insure that the decision maker is clear, that the statement does not express the concerns of all "the public".

BLM Response #7

The text has been revised as follows:

Some previous public comments on the Rock House project suggested closure of the White River area to further leasing as an alternative.

Comment #8

It should be noted that the need to protect this area with the proposed ACEC has never been established, in particular the threat of irreparable damage. The analysis in this document would indicate that irreparable harm does not exist as most impacts are short-term.

BLM Response #8

Comment noted. However, the comment is beyond the scope of this document and should be reserved for the ongoing Resource Management Plan revision process. Decisions regarding the need for any potential ACEC is reserved for the Record of Decision that would be prepared based on the final RMP/EIS.

Comment #9

It should be noted that Uintah County was consulted, not the Uintah County Public Committee.

BLM Response #9

Section 6.2 was edited to read Uintah County.

6.3.4 Southern Utah Wilderness Alliance (SUWA)

Comment #1

The BLM must disclose who (BLM staff or otherwise) provided independent analysis of the information submitted by Enduring and Enduring's third-party consultants, as well as the qualifications of these reviewers. The BLM should scrutinize the information submitted on well locations and directional drilling for every alternative contained in the EA as this is a critical component of the proposed project.

BLM Response #1

A list of BLM staff that has reviewed the EA is included in Section 6.4. The BLM's review of information provided by the operator (i.e., the Proposed Action) is reflected in the comments provided in the Interdisciplinary Team (IDT) Analysis Record Checklist in Appendix A. The BLM's subsequent review of the internal draft EA was discussed during an IDT meeting held by BLM on 5/31/07. This meeting resulted in several changes or modifications to the EA prior to publication of the Draft EA for the 30-day comment period. Furthermore, the internal draft EA was also reviewed by the Vernal Field Office Manager, BLM Utah State Office employees, and the Office of the Solicitor. Their comments also resulted in changes/corrections to the document prior to publication of the Draft EA for the 30-day comment period.

In response to comments provided by SUWA and Mr. Ken Kreckel regarding the additional use of directional drilling, Enduring has provided the BLM with technical information on the viability of additional directional drilling within the Rock House Project Area (Interoffice Memorandum provided by Paul Brandt and Alex Campbell, dated 8/7/07). This information was independently evaluated by BLM petroleum engineers, who concurred that it is technically unfeasible to drill a 3,000-foot horizontal offset and get back to vertical or near-vertical at 4,2000 feet to 6,000 feet vertical depth.

Comment #2

As presented, every development alternative violates the current Book Cliffs Resource Management Plan (RMP), principally regarding management of visual resources and protections for the White River area.

BLM Response #2

The oil and gas leasing decision from the Book Cliffs RMP states that about 460,000 acres will be managed with special mitigating measures required to protect various renewable resource values including Visual Resource Management (VRM) Class II areas. (BCROD, p.7) It also states that surface occupancy will be precluded on the White River corridor, downstream from the proposed damsite. The special mitigation measures are leasing stipulations #8, #13 and #15 and lease notice #3 listed below. Please note that stipulations #8, #13 and #15, as well as lease notice #3, are leasing decisions. Leasing

decisions do not apply to rights-of-way. However, the rights-of-way decisions for the White River area are also listed and discussed below.

Conformance with BCRMP Leasing Decisions

8. No surface disturbance or occupancy will be allowed within the 100 year floodplains of the following Creeks: Bitter, Evacuation, Hill, Sweetwater, and Willow; and the Green and White Rivers. This stipulation may be waived by the authorized officer if either the resource values change or the lessee/operator demonstrates that adverse impacts can be mitigated (Figure 2-7).

- o Under all alternatives, no lease actions are proposed to occur within the 100-year floodplain of the White River. Therefore, all alternatives would be in compliance with this portion of the BCRMP.*

13. No access road, earth cut and fill, and structures other than an active drilling rig, will be permitted if it can be viewed from designated areas of the White River. This limitation does not apply to maintenance and operation of producing wells. This stipulation may be waived by the authorized officer if either the resource values change or the lessee/operator demonstrates that adverse impacts can be mitigated (BCROD, p.21). For the leases and development under consideration in this document, this stipulation only applies to lease UTU-81737, Section 30 NENE, SWNE, and N2SE (see Appendix X).

- o Under alternative A, all four wells proposed for the protected areas would be directionally drilled from other locations outside of the stipulation area. Therefore, the proposed action is in compliance with this portion of the BCRMP.*
- o Under alternative B, lease UTU-81737 would be cancelled; therefore, the Resource Protection Alternative would be in compliance with the BCRMP.*
- o Under alternative C, all four wells proposed for the protected areas would be directionally drilled from other locations outside of the stipulation area. Therefore, for this portion of the BCRMP, the restricted surface use alternative would be in compliance with the BCRMP (see section 1.5 of the EA for discussion of this alternative and BCRMP compliance with another portion of the BCRMP).*
- o Under alternative D, the protected areas would not be developed. Therefore, the No Action Alternative would be in compliance with the BCRMP.*

15. All of the land in this lease is included in the White River Recreation and Wildlife Corridor. Therefore, no occupancy or disturbance of the surface of the land described in this lease is authorized. The lessee, however, may extract the oil and gas resources in this lease by directional drilling from sites outside this lease. If a proposed drilling site lies on land administered by the Bureau of Land Management, a permit for use of the site must be obtained from the BLM District Manager before drilling or other development begins (BCROD, p.21)

- o For the leases and development under consideration, this stipulation does not apply (see Appendix X). Therefore, in this matter, alternatives A through D would be in compliance with the BCRMP.*

3. The lessee/operator is given notice that the area has high quality visual resources. Modifications may be required in the Surface Use Plan to help protect the visual qualities of the area (BCROD, p.24). For the leases and development under consideration in this document, this lease notice only applies to lease UTU-81737, Section 30 NENE, SWNE, and N2SE (see Appendix X).

- o Under alternative A, all four wells proposed for the protected areas would be directionally drilled from other locations outside of the information notice area. Therefore, the proposed action is in compliance with this portion of the BCRMP.*

- Under alternative B, lease UTU-81737 would be cancelled, therefore the Resource Protection Alternative would be in compliance with the BCRMP.
- Under alternative C, all four wells proposed for the protected areas would be directionally drilled from other locations outside of the information notice area. Therefore, for this portion of the BCRMP, the restricted surface use alternative would be in compliance with the BCRMP (see section 1.5 of the EA for discussion of this alternative and BCRMP compliance with another portion of the BCRMP).
- Under alternative D, the protected areas would not be developed. Therefore, the No Action Alternative would be in compliance with the BCRMP.

Conformance with BCRMP Right-of-Way Decisions

The rights-of-way decision from the Book Cliffs RMP states that to give additional protection to wildlife habitat, severe and critical erosion areas, visual resources, and productive woodlands, 23,000 acres of land will be designated as exclusion areas where rights-of-way and corridors will be allowed only if adequate mitigation, reclamation, or habitat enhancement could be accomplished. As shown in Figure 2-14 of the BCROD (see Appendix X), the White River area is a right-of-way exclusion area for approximately ½ mile either side of the river.

- *Under alternatives A and B, a right-of-way would be necessary for both water pumps, the entire electrical line, the generator, approximately 1.5 miles of water pipeline, and approximately ½ mile of new road. Impacts and mitigation are disclosed in chapter 4. A determination as to the adequacy of the mitigation and reclamation will be reserved for this EA's decision record. If the impacts are not adequately mitigated or reclaimed, then the Proposed Action and the Resource Protection Alternatives would not be in compliance with this portion of the BCRMP. If the impacts are adequately mitigated or reclaimed, then the Proposed Action and Resource Protection Alternatives would be in compliance with this portion of the BCRMP.*
- *Under alternative C, a right-of-way would be necessary for both water pumps, the entire electrical line, the generator, approximately 1.5 miles of water pipeline, approximately 2 miles of new road, and approximately 2.5 miles of steel gas-gathering pipeline. A determination as to the adequacy of the mitigation and reclamation will be reserved for this EA's decision record. If the impacts are not adequately mitigated or reclaimed, then the Restricted Surface Use Alternative would not be in compliance with this portion of the BCRMP. If the impacts are adequately mitigated or reclaimed, then the Restricted Surface Use Alternative would be in compliance with this portion of the BCRMP.*
- *Under alternative D, a right-of way would not be necessary within the right-of-way exclusion area. Therefore, alternative D would be in compliance with this portion of the BCRMP.*

Comment #3

The Resource Protection Alternative fails to even significantly minimize surface impacts when compared to the other development alternatives, particularly Alternative C.

BLM Response #3

As Alternative B - Resource Protection Alternative cancels lease UTU-81737, this leasing alternative provides the greatest protection to surface and subsurface resources in this lease area, while still allowing for complete development of valid existing rights (leases UTU-76281, UTU-75109, and UTU-13451). Please refer to Table 2-7 in the Final EA for a comparison of the various alternatives. As is documented in this table, alternative B results in the fewest number of wells, miles of road and pipeline, and acres of disturbance (initial or residual) of any of the action alternatives. It is noted that alternative C results in fewer well pads than alternative B, but alternative C does not allow for complete drainage of

lease UTU-76281 (see figure 4). Due to the restriction of surface disturbance on lease UTU-81737, it is not possible to reach the NWSW of Section 30 under alternative C. Therefore, alternative C is not completely consistent with existing lease rights or the purpose and need for the project.

Comment #4

The BLM is responsible for disclosing the full nature of conflicts between the proposal, the Book Cliffs RMP and the Draft Vernal RMP and for attempting to eliminate them. Such irreconcilable conflicts serve to underscore the need for the agency to prepare an EIS to fully evaluate and disclose the environmental impacts of this project and demonstrate the feasibility and attractiveness of a lease exchange/buyback alternative. Regardless of what alternative BLM ultimately selects it must also prepare a land use plan amendment to address this conflict and permit the public to review this proposed change to the land use plan.

BLM Response #4

Please note that the proposed action cannot conflict with the Draft Vernal RMP because there is no decision. Until a ROD is rendered on the ongoing Vernal RMP, management of the lands within the Rock House Project Area will be in accordance with the existing land use plan, which is the Book Cliffs RMP (BLM 1984) and its ROD (BLM 1985). For a discussion regarding perceived conflicts between the proposal and the Book Cliffs RMP please refer to comment #2 and its response.

For further discussion regarding the exchange/buyback alternative refer to the response to Ken Kreckel comment #7.

Please note that BLM's consideration of an alternative that is not consistent with the governing land use plan does not trigger a legal requirement for BLM to initiate the land use plan amendment process. BLM is not proposing to amend the Book Cliffs RMP though this EA. If a land use planning decision is necessary to implement any action considered in the EA, it will be undertaken during or after the completion of the ongoing Vernal RMP revision process.

Comment #5

The BLM should consider requiring Enduring to pipe water from the unnamed wash located principally on state trust lands, sitting west of Saddletree Wash.

BLM Response #5

Comment noted; however, as the majority of Enduring's proposed development occurs to the east of this location, running the water pump system up this unnamed draw would involve constructing a larger pipeline network as well as a larger compressor. These additional requirements would make the water pump system uneconomic for Enduring and would also have greater impacts on the existing resources in the area. Consequently, BLM will not consider this proposal further.

Comment #6

The EA fails to fully consider the cumulative impacts of this project and others to the important values of the proposed ACEC, such as boating, recreation, and the Goblin City overlook. It dismisses impacts that might result from this project to those values, even though any alternative will undoubtedly significantly impact such values.

BLM Response #6

Potential cumulative impacts to the relevant and important values for which the White River ACEC was nominated are discussed in detail in the following sections: potential cumulative impacts on wetland and riparian habitats are discussed in Section 5.2.6; potential cumulative impacts on Goblin City, the campsite, river recreation and the White River viewshed are discussed in Section 5.2.8; and potential impacts on wildlife are discussed in Section 5.2.11. However, no statement as to the significance or non-significance of impacts is included within the analysis as that determination is reserved for this EA's decision record.

Comment #7

The EA's discussion of the ACEC (pages 4-1 and 4-2) completely fails to disclose the fact that BLM retained authority to cancel UTU-81737. There is no statement that impacts will be significantly diminished or eliminated altogether from Alternative B because of lease cancellation.

BLM Response #7

Under alternative B, lease UTU-81737 would be cancelled as is disclosed in section 2.4.1. However, development impacts would occur in the potential ACEC area under Alternative B as disclosed on pages 4-1 and 4-2 from the development of the three valid, existing leases (UTU-76281, UTU-75109, and UTU-73451). These impacts are not related to the decision whether or not to cancel lease UTU-81737.

Comment #8

The EA quantifies direct surface impacts to the ACEC; however, it contains no discussion or quantification of the indirect impacts of well pads, roads, and pipelines, which will extend beyond acreage figures.

BLM Response #8

Potential indirect impacts to the relevant and important values for which the White River ACEC was nominated are discussed in detail in the following sections: potential indirect impacts on wetland and riparian habitats are discussed in Section 4.6.1; potential indirect impacts on Goblin City, the campsite, river recreation and the White River viewshed are discussed in Section 4.8.1; and potential indirect impacts on wildlife are discussed in Section 4.11.1.

Comment #9

The Rock House EA improperly dismisses the role of the BLM in regards to the possible wells located on the fee lands of Section 30, T10S, R23E. The BLM may not have authority over those lands; however, the BLM does have some authority and influence over access to these parcels. There is no discussion of the extent of this authority and the type of access that Enduring may receive to these fee lands.

BLM Response #9

Under court precedence set in Cotter vs. Andrus, the BLM is required to allow reasonable access for use of state and private land. Section 2.4.1 of the EA accurately describes that surface disturbance on Federal lands is necessary to allow reasonable access to the proposed well pads on the subject private lands, since those private lands cannot be reached without crossing BLM-administered lands.

For the well pad located in the SENE of Section 30, there is only one possible access route due to topography, which is the route depicted in all three action alternatives of the Rock House EA. The subject well pad is located in a steep drainage that can only be accessed by building a road up the drainage. The steep ridges surrounding the proposed well site (east, west, and south) preclude the construction of a road for access from those directions. The proposed gas pipeline would follow the road in alternative C. Under alternatives A and B, the proposed pipeline would come from the south over the edge of the ridge. This construction method would be the least surface disturbing, as it would require approximately ¾ mile of pipeline. Comparatively, should the pipeline follow the road under alternatives A and B, approximately 3 miles of pipeline would have to be installed to reach a tie-in point.

For the well pad located in the NENW of Section 30, there are only two possible access routes due to topography. The route accessing the well pad from the south is depicted in alternatives A and B. The route accessing the well pad from the north is depicted in alternative C. The subject well pad is located on the finger-like edge of a ridge. The most reasonable (least cut and fill) access route is along the ridge from the south. It is also possible to cut a road into a drainage that works its way up to the ridge from the north. The steep ridges to the east and west of the subject well pad preclude the construction of a road for access from those directions. The proposed gas pipeline would follow the road.

Comment #10

The acknowledgement of indirect impacts to cultural resources fails to create adequate mitigation measures to avoid such impacts.

BLM Response #10

Section 2.8.1 describes mitigation measures that would be utilized to reduce or eliminate both direct and indirect impacts to cultural resources in the Project Area. Section 4.2 accurately describes indirect impacts that would potentially occur to cultural resources both in and around the Project Area. These mitigation measures were deemed adequate during internal review of the document. In addition, SHPO consultation and tribal consultation have been conducted as disclosed in section 6.2.1 of the Final EA, and no corrections to the mitigation measures or additional mitigation measures were identified as being necessary during this process. Since the commenter failed to identify which mitigation measures are inadequate, or to suggest adequate mitigation measures, a more specific response to this comment is impossible. Consultation with SHPO and the Tribes will be re-initiated on a site-specific basis as necessary, and any corrected mitigation measures or additional mitigation measures suggested during that process would be appropriately implemented.

Comment #11

The Book Cliffs RMP requires that the BLM prepare a watershed resource management plan for the White River. The BLM must prepare a watershed resource management plan before approving this project so that it may fully and completely analyze the impacts of this proposal on the watershed of the White River.

BLM Response #11

The Record of Decision for the Book Cliffs RMP identifies the preparation of the White River Watershed Management Plan as a priority 4 project to begin in year 18 of the implementation schedule, or in about 2003. However, it is not stated that the White River plan must be completed prior to approval of new oil and gas projects. In addition, on page 1 of the ROD, under Implementation, it is stated that some delays in the completion schedule may occur.

Comment #12

The watershed discussion fails to analyze the likelihood that increased erosion and sedimentation will lead to increased turbidity and biological oxygen demand in the White River. This possibility must be discussed, in particular, it must evaluate the effect that this would have on aquatic life of the White River.

BLM Response #12

The EA estimates that additional sedimentation of 53.4 to 61.4 tons per year to the White River could result from the alternatives. In comparison to the current average annual sediment loading of 2,200,000 tons per year, this additional sedimentation would be de minimis. The phrase "Turbidity could be expected to increase by a similar amount." has been added to the text under each alternative. The minimal increases in sedimentation and turbidity associated with project activities would not lead to an increase in biological oxygen demand.

Comment #13

The EA admits that the proposed project will result in a lost and/or diminished recreational experience for those visiting the area. Because of these significant impacts to recreation on the White River- as well as the overall significant change to the quiet, backcountry experience found by visitors to this remote river – the BLM must prepare an EIS. The BLM must also consider additional alternatives that would eliminate these impacts.

BLM Response #13

The EA appropriately discloses that the proposed project will result in a lost and/or diminished recreational experience for those visiting the area; however, no statement as to the significance of non-significance of impacts are included within the analysis as that determination is reserved for the Decision Record. The additional alternatives suggested by the commenter are addressed in response to comments #5 and #25, and in response to Kreckel comments #1, #3 and #7.

Comment #14

The Book Cliffs RMP closed portions of the project area to ORV travel. The EA improperly waives away substantive discussion of increased illegal ORV use in this closed area. Because of the increased illegal ORV use that will result in the area the BLM must prepare an EIS to evaluate this significant impact.

BLM Response #14

The EA appropriately discloses that the proposed project could result in increased illegal ORV use in closed areas. To reduce this impact, an applicant committed mitigation measure was added to Section 2.8.6 that would include placing signs along the proposed access route to notify the public as to where OHV travel is prohibited. No statement as to the significance or non-significance of impacts is included within the analysis as that determination is reserved for the Decision Record.

Comment #15

The Book Cliffs RMP requires the BLM to prepare and implement a White River Recreation Management Plan to prepare an ORV designation plan for lands south of the White River, and to publish

those designations and implement the ORV plan. The BLM has not prepared these plans or fulfilled these steps. It must do so before approving this project.

BLM Response #15

The Record of Decision for the Book Cliffs RMP identifies the preparation of the White River Recreation Management Plan and an ORV Designation Plan as priority 6 and 9 projects respectively to begin in year 18 of the implementation schedule, or in about 2003. However, it is not stated that the White River plans must be completed prior to approval of new oil and gas projects. In addition, on page 1 of the ROD, under Implementation, it is stated that some delays in the completion schedule may occur.

Comment #16

The EA appears to incorrectly assume that reclamation will reduce the size of the initial disturbance from the construction activity and that reclamation before the retirement of producing wells will be productive.

BLM Response #16

Due to soil characteristics of the area, and low average annual precipitation, reclamation in the area is difficult to achieve, and may not be successful in the short term. To address this issue, surface disturbance impact analysis is analyzed using the initial disturbance (worst case scenario) calculations. However, in terms of ensuring reclamation success on public lands, as stated in Section 2.3.12, Enduring has secured a bond with the BLM in order to conduct operations on their Federal leases. Bonding is required for oil and gas lease operations in order to indemnify the U.S. government against losses from failure to meet royalty obligations, wells plugged improperly and abandoned on lease, and/or surface restoration and clean up on abandoned operations (BLM and USFS 2006). The bond secured with the BLM would ensure that reclamation would be acceptable to the BLM prior to the release of the operator from responsibility for the wells.

Comment #17

The EA contains no discussion of biological soil crusts or their distribution in the project area and their potential to be impacted by this project.

BLM Response #17

Surveys for specific biological soil crust types have not been conducted in the Vernal Field Office or within the Rock House Project Area; therefore, the exact location or extent is not known. During the onsite, all resources present are taken into account, and steps are taken to minimize or mitigate any impacts that may occur. Please note that potential impacts to soils are addressed in section 4.10 of the Final EA.

Comment #18

The EA describes potential erosion rates that would be rather high. This is a significant impact and requires the preparation of an EIS.

BLM Response #18

The increased gross erosion is estimated to be about 267-307 tons per year, depending on alternative, or an increase of about 4.3 percent for the total erosion rate for the Project Area. However, as discussed

elsewhere, natural factors and implementation of erosion control measures would minimize the amount of increased sedimentation to project area drainages and the White River. The estimated increased sedimentation to the White River of 0.003 percent would be negligible.

Comment #19

The EA states that bald eagles could be impacted by the noise of the generator located along the White River but ultimately concludes that bald eagles would not be impacted by the noise based on erroneous figures for sound levels in the project area. As discussed below, the sound analysis suffers from significant defects that make it impossible for the agency to conclude that generator sound levels would be minor. In addition, the EA has cited no support for its conclusion that noise levels of the type it describes would not impact bald eagles.

BLM Response #19

No historic bald eagle roosts occur on the White River within 20 miles of the Project Area. The EA has been revised to include this information. Despite this, Enduring has committed to only operate the proposed generator during hours when bald eagles are typically not at roost locations (i.e., 9:00 am – 4:00 pm). In addition, the generator would be placed inside of an insulated steel building that would reduce noise impacts (Section 2.8.9). As such, impacts to roosting bald eagles in the area are not likely to occur.

Comment #20

The EA inexplicably concludes that while individual birds may be affected there is not likely to be a decrease in sage grouse viability.

BLM Response #20

As no breeding (leks) or nesting sage-grouse habitat occurs in the Project Area, the EA adequately discloses that impacts to sage-grouse utilizing habitats in the Project Area would primarily consist of displacement or avoidance of potentially suitable habitats due to increased disturbance from human activity, increased traffic, and noise associated with construction and drilling activities. As these impacts would be temporary and would not occur in breeding (leks) or nesting habitats, they are not likely to affect the viability of sage-grouse populations.

Comment #21

The EA fails to consider the likelihood that the increased energy development activity in the area will lead to increased rates of poaching.

BLM Response #21

The UDWR considers the majority of the area to be limited value mule deer habitat. No crucial big game ranges were identified by BLM or UDWR within the Project Area. Also, the existing roads in the area are generally kept open year round, so the only increased access to deer and elk during the winter months will be through the construction of up to approximately 10 miles of new road. In addition, the UDWR and the BLM have not reported increased poaching as a result of oil and gas development in the Uinta Basin. As such, this potential impact need not be discussed in the EA.

Comment #22

The Rock House EA lacks any substantial discussion of the potential impacts of invasive and noxious weeds on existing vegetation. This appears to be a significant omission since the EA states that this project will likely result in the introduction and spread of invasive and noxious weeds. The EA admits that invasive and noxious weeds could be a potential impact to habitat of two special status plant species within the project area but then inappropriately concludes that such impacts would not be significant. Without further analysis it is improper for the BLM to conclude that impacts to vegetation will not be significant.

BLM Response #22

A more detailed discussion of the potential impacts of noxious and invasive weeds was added to Section 4.7 of the EA. Applicant committed measures regarding weeds include reclamation efforts, obtaining a pesticide use permit prior to application of herbicides, and minimizing truck traffic through a water pumping system. These measures are expected to minimize the impact of weeds to special status and general vegetation by control and avoidance. Consultation with the Fish and Wildlife Service has occurred, and no inappropriate conclusions or additional mitigation measures were identified during that process. Since the commenter failed to identify which mitigation measures were inadequate, and how the conclusions were inappropriate, a more specific response to this comment is impossible. Please note that no statement as to the significance or non-significance of impacts is included within the analysis as that determination is reserved for the Decision Record.

Comment #23

The Goblin City overlook, the riverside campsite, and other areas offer recreationists outstanding views of the natural surroundings. The EA fails to discuss and analyze these unique resources in the visuals section and therefore understates the true impacts on visual resources from the proposed project.

BLM Response #23

A cross-reference has been added to the Visual Resource Section (4.13). Impacts to the viewshed of the Goblin City Overlook, the Atchee Wash campsite, and river recreation are addressed in Section 4.8. Recreation. Since the commenter failed to identify which "other areas" need to be included in the EA analysis, a more specific response to this comment is impossible.

Comment #24

The EA summarily dismisses potential conflicts with VRM classifications in the Draft Vernal RMP

BLM Response #24

As no decision has been made for the Draft Vernal RMP, no conflict is possible. However, the EA, as written, adequately analyzes impacts to existing VRM classifications.

Comment #25

The visual impacts from Alt. B are expected to be the same as those from the other development alternatives. This fact indicates a significant failing of Alt. B itself, as the BLM has not even developed an alternative that results in fewer visual impacts.

BLM Response #25

Visual impacts under all alternatives are minimized to varying degrees. Five wells are located within the area managed as VRM Class II under alternative A, (four under C), and the operator has committed to directionally drill them to eliminate surface impacts. Alternative B differs from other alternatives in that it considers the cancellation of suspended lease UTU-81737, so that no wells would be located within the VRM Class II area. As far as supporting development is concerned, in the VRM II area under alternatives A, B and C, approximately 2.5, 2.5 and 3 miles of road respectively are proposed in VRM II areas to provide reasonable access to private land as well as valid existing BLM leases, approximately 1.5, 1.5, and 4 miles of surface gas pipelines are proposed to move produced gas to market; approximately 3.5 miles of surface water pipelines are proposed to minimize impacts from water truck traffic (reduce miles traveled and minimize truck traffic at the river); and one portable generator, two submersible pumps, and the electrical cord connecting the system are proposed, again to minimize impacts from water truck traffic (reduce miles traveled and minimize truck traffic at the river). All other development would be in VRM Class IV areas, so no special management was identified as necessary. The No Action Alternative (D) would not permit any new disturbance in VRM class II areas. Therefore, the alternatives as written comprehend a range from some VRM impacts (C) to none (D). The statement that visual impacts from B are the same as the other development alternatives is therefore incorrect, since Alternative B results in fewer visual impacts than Alternatives A and C. For clarification, VRM maps for each alternative have been added to the EA. Visual impact alternatives suggested by the commenter are also addressed in the responses to River Outfitters comment #3 and Kreckel comment #3.

Comment #26

The Book Cliffs RMP discusses significant and very stringent restrictions regarding visual impacts in the White River viewshed. Acknowledgement of these restrictions and the conflicts that the present proposal creates is completely absent from the EA. These conflicts certainly represent significant impacts and must be evaluated in an EIS.

BLM Response #26

See the responses to SUWA comments #2, #24, and #25.

Comment #27

The conclusion that impacts to the proposed wild and scenic river are not significant is inexplicable because the conclusion ignores the potential disqualification of the area due to augmented rates of access and use in this proposed “wild” corridor. It also ignores the substantial intrusion of a generator in the area and water pumps. In addition, these potentially significant impacts to these resources supporting BLMs proposal to designate this stretch of the river as “wild” require the preparation of an EIS.

BLM Response #27

The EA adequately discloses the existing environment and potential direct, indirect and cumulative impacts within the White River WSR corridor in Sections 3.2.14, 4.14, and 5.14. No statement as to the significance or non-significance of impacts is included within the analysis as that determination is reserved for the Decision Record. Please note that the water pumping system is designed to reduce potential impacts to the White River. Currently, water trucks have the right to pump water from the river at the mouth of Atchee Wash, using the road in Atchee Wash for access. The proposed water pump system would nearly eliminate the need for water trucks to access the river, by moving the water into tanks that are placed away from the river. To further minimize impacts, the pump and generator would

be hidden from viewshed of anyone on the river, and the applicant has committed to take steps to minimize sound impacts along the river. By reducing or eliminating the water truck traffic at the river, the proposed water pump system is expected to at a minimum preserve the "wild" characteristics of the river.

Comment #28

The EA fails to consider the impacts of the project to perceived naturalness outside of the immediate physical boundaries of the proposed well pad and road upgrades after drilling has finished. This project will affect visitor perceptions of naturalness and opportunities for solitude in an area much greater than acreage figures presented in the EA. Although the EA mentions that these values will be impacted in the project area, it does not attempt to quantify this impact or the extent of the impact to perceived naturalness and solitude beyond the acres of terrain denuded of vegetation and after drilling operations have ceased. Thus, the proposed project has the potential to impact wilderness character to an extent much greater than is discussed in the EA.

BLM Response #28

Contrary to the comment provided, Section 4.15 of the Rock House EA provides an adequate qualitative analysis of how the Proposed Action and alternatives would impact naturalness and solitude outside the immediate boundaries of the proposed well pad and road upgrades after drilling is finished. For example, while the EA indicates that 84 acres of surface disturbance within the White River wilderness characteristics area would be disturbed under Alternative A, it discloses that Alternative A may result in the loss of up to 3,701 acres of the Wilderness Characteristics Area.

Comment #29

The EA does not analyze the impacts to supplemental values of the White River wilderness characteristics area.

BLM Response #29

A section has been added to the wilderness characteristics analysis which cross-references the reader to an analysis of the impacts on the supplemental values of the White River wilderness characteristics area, which is discussed in other resource sections. Impacts to supplemental values within the White River wilderness characteristics area are appropriately discussed in Sections 4.13 Visual Resources; 4.11 Threatened, Endangered, and Sensitive Animal Species and other Wildlife; and 4.12 Vegetation including Special Status Plants.

Comment #30

The wilderness section of the EA mentions that impacts from Alternative B would be proportional to the level of development, yet it fails to quantify and discuss this level of development.

BLM Response #30

The statement has been revised as follows.

Impacts to those characteristics for which the area was identified as Non-WSA lands with wilderness characteristics are similar in nature to those described in Section 4.15.1 for Alternative A - Proposed

Action. However, when compared with Alternative A, direct impacts would be reduced in proportion to the reductions in proposed development.

Under Alternative B – Resource Protection Alternative, 13 new well pads, approximately 7 miles of access roads and pipelines, two pumps, 2.4 miles of connecting line, one generator, and 6 miles of water pipe would be constructed within the White River wilderness characteristics area. Total surface disturbance would be approximately 71 acres (or approximately 0.3% of the total unit), which is approximately 15 percent less than what is proposed under Alternative A. However, the Alternative B would result in the segregation of up to 3,701 acres of wilderness characteristics from the larger block of wilderness characteristics that occurs north and east of the Project Area, which is identical to that which would result from the implementation of Alternative A.

Comment #31

The EA provides no information regarding the way in which noise levels were measured at this location and how they were measured. Were the instruments used capable of measuring sound levels as low as 5 dBA? It is possible that actual noise levels in this location could be somewhere between 10-15dBA, even dropping as low as 4 dBA. At such rates, the generator would be very noticeable, loud, and intrusive.

BLM Response #31

A reference was added to the EA that describes the methodology for recording noise measurements at the White River. The noise meter used for recording sound levels had a measurement range of 20-140 dBA. Measured noise values recorded at the river were approximately 55.9 dBA.

Comment #32

The EA fails to fully analyze cumulative impacts to the White River wilderness characteristics from other past, present, and reasonably foreseeable actions because it does not consider every potential project in the area. For example, it failed to evaluate a nearby oil shale project proposed by Oil Shale Exploration Company. This failing applies to every aspect of the cumulative impacts analysis and is not limited to wilderness characteristics alone.

BLM Response #32

The oil shale project proposed by Oil Shale Exploration Company is completely outside the boundaries of the White River wilderness characteristics area, which constitutes the cumulative impact area of analysis (CIAA) for lands with wilderness characteristics (See Section 5.2.15). The proposal is outside the defined CIAA for ACEC (5.2.1), WSR (5.2.14), visual resources (5.2.13), cultural resources (5.2.2), and paleontological resources (5.2.3).

The defined CIAA for all other resources analyzed in detail, with the exception of Air Quality, is the Vernal FO planning area. Each of these resources contains a statement which recognizes that mining activities (Gilsonite, sand and gravel, and, potentially, oil shale), could contribute to impacts within the CIAA.

Comment #33

The proposed project comes in the midst of significant planning processes, including the preparation of the Vernal RMP and the consideration of an ACEC nomination in the area. As explained below, a decision on the proposed project should wait until after the ongoing planning efforts are complete or

consider a directional drilling alternative that would eliminate impacts to the proposed ACEC, as proposed by Mr. Kreckel.

BLM Response #33

Under FLPMA the valid existing rights and associated obligations conferred under previously granted leases are not pre-empted or otherwise excused by BLM's consideration of potential future ACEC designations for portions of the lease areas. Assuming that the potential ACEC is adopted in the ROD for the final Vernal RMP, the proponent would not be precluded from developing its existing leases. In addition, new stipulations that may be associated with the management of the ACEC would not be applicable to the pre-existing leases, since they constitute a contractual relationship between BLM and the lessees (valid existing rights).

Until a decision is rendered on a new RMP, management of the land will be in accordance with the existing resource management guidance, the Book Cliffs RMP (1984) and its ROD (1985). For a discussion of the preclusion of alternatives in the planning process, refer to comment #4.

With regard to directional drilling, see the response to SUWA comment #1.

Comment #34

The proposed action authorizes landscape-changing activity. Selection of either development alternative would limit the BLM's choice of reasonable alternatives in the ongoing Vernal RMP process because it would allow a fundamental change in the character of the project area. Selection of any development alternative in the EA effectively precludes other reasonable, less-extractive land use alternatives in the Vernal RMP. A decision on the Enduring proposal should wait until after the Vernal RMP is completed.

BLM Response #34

For three out of the four leases related to Enduring's proposal, land use is already allocated in the existing land use plan and carried forward with the issuance of the leases. These three leases now constitute valid existing rights including the right to "use so much of the leased lands as is necessary to explore for, drill for, mine, extract, remove and dispose of all the leased resource in a leasehold subject to: Stipulations attached to the lease; restrictions deriving from specific, nondiscretionary statutes; and such reasonable measures as may be required by the authorized officer to minimize adverse impacts to other resource values, land uses or users not addressed in the lease stipulations at the time operations are proposed" (43 CFR 3101.1-2). The finalization of the Vernal RMP would not eliminate or impose new restrictions on these rights. The fourth lease is being examined to determine the potential impacts associated with lifting the suspension on the lease, cancelling the lease, and modifying the lease. Please note that the BLM is not prohibited from following the current land use plan, even though the plan is being revised.

Comment #35

Past, present, and reasonably foreseeable development in the project area could lead to large cumulative impacts in the White River ACEC, ranging from 15% to 32% of the VRM II areas as being affected by development. This is a significant impact that must be evaluated in an EIS.

BLM Response #35

The EA appropriately discloses potential cumulative impacts to the Proposed White River ACEC as well as potential impacts to VRM II areas. For a further discussion regarding VRM II impacts, refer to the response to comment #25. No statement as to the significance or non-significance of impacts is included within the analysis as that determination is reserved for the Decision Record.

Comment #36

Past, present, and reasonably foreseeable development in the project area could lead to large cumulative impacts in the White River wilderness characteristics area, over 21% of this area would lose wilderness characteristics as a result of this project. This is a significant impact that must be evaluated in an EIS.

BLM Response #36

The EA appropriately discloses potential cumulative impacts to the Proposed White River wilderness characteristics area. No statement as to the significance or non-significance of impacts is included within the analysis as that determination is reserved for the Decision Record.

Comment #37

The BLM failed to identify the area of potential effect (APE) thereby limiting its ability to identify historic properties and understand the potential effects of the proposed action. The APE is likely to extend beyond the project area boundary.

BLM Response #37

The APE is defined as the geographic area, or areas within which an undertaking or project may directly or indirectly cause changes in the character or use of the historical properties or historical resources, should any be present. The APE is generally 100 feet to either side of proposed roads or pipelines, and 10 acres centered on the well pad.

Comment #38

The EA does not document that BLM has consulted with the SHPO. In addition, the EA does not disclose which Native American tribes were consulted in this process, the BLM should disclose this. Finally, the BLM has not made any information regarding historic properties available for public inspection.

BLM Response #38

RE: SHPO Consultation

Consultation with the SHPO was initiated with letters dated May 9, 2005 and May 29, 2007. A response was received dated May 29, 2007 requesting further information. Follow-up is pending. SHPO consultation will also be re-initiated as necessary on a site-specific basis.

RE: Tribal Consultation

Consultation with the Native American Tribes was initiated on May 9, 2005. The Confederated Tribes of the Goshute Reservation responded with a letter dated May 18, 2005 that indicated they did not have any concerns with the project. The Santa Clara Pueblo responded with a letter dated June 21, 2005 indicated that the project would not impact their traditional cultural properties.

A consultation was re-initiated with the following tribes on May 3, 2007: White Mesa Ute, Eastern Shoshone, Hopi, Eastern Shoshone and Northern Arapaho, Santa Clara Pueblo, Southern Ute, Northwestern Band of the Shoshone Nation, Navajo Nation, Laguna Pueblo, Zia Pueblo, and Confederated Tribes of the Goshute Reservation. The Laguna Pueblo responded with a letter dated May 14, 2007 stating that the proposed project will not have a significant impact. The Hopi Tribe responded with a letter dated May 29, 2007 stating that if cultural resources are identified and would be adversely impacted by the project, that additional consultation would be appreciated.

A letter was received from the Hopi Tribe dated August 13, 2007 referencing a July 10, 2007 correspondence from the Colorado Plateau Archaeological Alliance to the BLM regarding a known cultural site. The Colorado Plateau Archaeological Alliance questioned whether large stone cairns in the Rock House project area were historic or prehistoric structures. The Hopi requested documentation concerning the sites. A letter dated September 10, 2007 transmitted the requested documentation. The Hopi Tribe responded with a letter dated September 24, 2007 stating that the subject cairns were not Hisatsinom shrines.

RE: Public inspection of historic properties

The BLM has disclosed all information with respect to known historic properties in Section 3.2.2. This EA provides a review of existing conditions in the Project Area based on a Class I inventory. All known cultural resources that occur in the Project Area, identified through the Class I inventory, are discussed in Section 3.2.2. Class III surveys (100 percent pedestrian coverage) have not yet been conducted for the project. Class III inventories will occur on a well-by-well basis in accordance with 36 CFR 800.

6.3.5 David Atkins – Watershed Environmental LLC

Comment #1

Conditions near existing wells in the Project Area are not described in the EA, including the effectiveness of mitigation measures. For example, data from existing wells could be used to determine the validity of the assumption that 80% of sediment generated from well construction will be controlled by BMPs.

BLM Response #1

There are no data of this type available. The following statement was added to the text: “Studies concerning the amount of increased erosion generated by the construction of oil and gas facilities have not been conducted in the project area.” As discussed in Section 4.4.1, EPA (1999) estimated that the expected TSS removal efficiency for retention basins, infiltration basins, and vegetated filter strips are all in the range of 50-80%. Actual performance for these sedimentation control devices was reported to be 70% for retention basins, 89% for infiltration basins, and 81% for vegetated filter strips. In another study, EPA (2004) reported ranges of TSS removal of 58-78% for retention basins, 75% for infiltration basins, and 54-84% for vegetated filter strips. Using these studies as examples, it is assumed that the sedimentation control devices employed for this project would be about 80% effective at removing TSS from runoff.

Comment #2

Because the project site only receives six to eight inches of precipitation per year, these ephemeral drainages serve a critical ecological function and the baseline assessment should include a flow and water quality assessment for each of the drainages.

BLM Response #2

There are no flow or water quality data available for these ephemeral drainages. Flow is present only during runoff events. The water quality is expected to be similar to that in the White River.

Comment #3

The EA does not describe the hydrogeology of the proposed development areas, nor does it include an analysis of whether existing groundwater in the alluvium beneath the site would be a tributary to White River alluvial groundwater.

BLM Response #3

Groundwater resources are limited in the Project Area and are considered to be tributary to the White River alluvium. Deeper isolated groundwater sources also exist below the Project Area in the Uinta Formation, Parachute Creek Member of the Green River Formation (the "Birds Nest Aquifer), and Wasatch Formation. These groundwater sources are not tributary to the White River. This information was added to Section 3.2.4.

Comment #4

The EA gives no information on existing water rights and groundwater wells (including monitoring data) in the vicinity of the project.

BLM Response #4

Existing water rights are cited in Section 2.3.10. Enduring would use water from Approved Water Right Application #49-2249 (T76934). As groundwater resources would not be impacted by the proposed project (see Appendix A – IDT Checklist), details regarding groundwater wells were not included in the EA.

Comment #5

Section 4.11 of the EA discusses several threatened and endangered Colorado River fish species. Because surface and ground water quality impacts have not been fully characterized, the section should also note the potential for discharge from the site to degrade water quality and fish habitat.

BLM Response #5

The small amount of estimated increased sedimentation of the White River (0.003%) is hydrologically negligible. In addition, Section 4.11 adequately addresses the impacts of potential spills or leaks on fish species.

Comment #6

The EA should establish significance criteria to aid interpretation of whether this increase in sediment load constitutes an acceptable level of impact to water resources and threatened and endangered species.

BLM Response #6

As stated above, the small amount of estimated increased sedimentation is hydrologically negligible. Therefore, impacts to threatened and endangered species are assumed to also be negligible. However, no statement as to the significance or non-significance of impacts is included within the analysis as that determination is reserved for the Decision Record.

Comment #7

Table 5-4 compares predicted Rock House Project EA alternative sediment loads to the sediment load from gas well RFD in the CIAA and determines that the incremental load is insignificant in comparison to the load from all foreseeable gas well development. This analysis highlights the fact that each individual project may not be significant, but the cumulative impact may still be large. It would be more useful to present a similar table with percentages calculated for all gas wells under the RFD Scenario.

BLM Response #7

Section 5.2.4 currently quantifies increased erosion and sediment yield for RFD oil and gas development. Surface disturbance associated with past, present and reasonable foreseeable oil and gas development (i.e., 12,201 wells = 44,091 acres) in the CIAA would increase background erosion rates from 63,932 tons per year to approximately 191,795 tons per year. Assuming that sedimentation control devices employed for the reasonably foreseeable projects would be about 80 percent effective, the sediment delivery from these projects would be about 38,359 tons per year.

Comment #8

Project related water depletion estimates do not consider any water depletion that could result from well operation. The EA has no information on expected volumes of produced water. The lack of quantitative information on produced water together with the limited hydro-geologic information presented in the EA make it impossible to determine if well operation will result in depletion and have an impact on White River flow and associated habitat and fish species.

BLM Response #8

Due to the state-of-the-art drilling and well completion techniques, the impact to groundwater quality or prospectively valuable mineral deposits by the proposed action will be negligible. Well completion must be accomplished in compliance with "Onshore Oil and Gas Order No. 2, Drilling Operations." These guidelines specify the following: proposed casing and cementing programs shall be conducted as approved to protect and/or isolate all usable water zones, potentially productive zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use. The Proposed Action and alternatives would produce gas and water from deep bedrock formations that have no known hydraulic connection to alluvial groundwater or surface water. Therefore, production of water from these wells will not result in depletion of flow in the White River.

Comment #9

The criteria that will be applied to determine the necessity of closed-loop technology should be specified in the EA, including proximity of well pads to floodplains, depth to groundwater, slope of pad location, etc.

BLM Response #9

It is not possible to create criteria that would accurately determine the need for closed-loop technology due to variable topography and other site-specific characteristics of the area. For example, a hypothetical well may be within 300 linear feet from a floodplain, but should a hill or butte be between that hypothetical well and the floodplain, any spills would have to travel around the hill before reaching the floodplain. To eliminate this potential variability, the need for a closed-loop system would be considered on the onsite, and use of the closed-loop system would be mandated through the site-specific conditions of approval as necessary.

Comment #10

The EA makes no reference to a water quantity and quality monitoring program. Such a program should be developed to ensure that fluids used in drilling and hydrofracturing, produced water, and condensate are properly contained and that sediment and chemical spill control measures are adequate.

BLM Response #10

There is no water quantity and quality monitoring program proposed or necessary for this project. Existing water quality monitoring conducted on the White River by the USGS and Utah DEQ are sufficient to detect any substantial changes in water quality occurring in the river. In addition, BLM inspections would occur to ensure required or committed mitigation/protection measures would be implemented. These inspections would occur during both drilling and production.

6.3.6 Megan Williams

Comment #1

The BLM must change the EA to reflect the new EPA PM_{2.5} standard. Specifically, the BLM must revise Table 3-7 in the EA which established background concentration used in the EA to show the new PM_{2.5} NAAQS. In addition, the EA did not include any assessment of the impacts of fine particle emissions from the proposed development on compliance with PM_{2.5} NAAQS.

BLM Response #1

The table has been changed to reflect the new standard. However, please be aware that Table 3-7's background concentrations are based on Utah Department of Environmental Quality – Division of Air Quality (UDEQ-DAQ) estimates. Although the UDEQ-DAQ installed a PM_{2.5} monitor in December 2006 in Vernal, UT to obtain background concentration data, the required three-year average concentration data is not available for the Uinta Basin. The closest monitoring station with the three-year average is located in Grand Junction, and is not representative of the Uinta Basin.

PM_{2.5} (24-hour averaging period) modeling has been performed to evaluate potential impacts during both development and long-term operations. Modeling was performed for development that included the effects from traffic during drilling. The maximum PM_{2.5} impacts were predicted to be 6.3 ug/m³. When added to the presumed background concentration of 25.0, the impact would be 31.3 ug/m³, or 90 percent of the PM_{2.5} National Ambient Air Quality Standard (NAAQS). During operations, the effects were considered on the assumption that one pumper pickup truck, one condensate truck, and one water truck would travel along any given road segment to a well pad every day. While this traffic scenario would not occur every day of the year, this modeling scenario does evaluate the meteorological conditions during any 24 hour period. The maximum PM_{2.5} impacts were predicted to be 7.3 ug/m³. When added to the

presumed background concentration of 25 ug/m³, the impact would be 32.3 ug/m³ or 92 percent of the PM_{2.5} NAAQS. All modeling files are available for review.

Comment #2

The EA should have assessed the public health and environmental impacts that could occur due to ozone formation from the Enduring Resources project and all existing and reasonably foreseeable growth in contributing ozone precursor emissions to the area.

BLM Response #2

As ozone prediction is often based upon a regional analysis, it is highly doubtful that the impacts from this individual project would be detected. Further, the time and cost (9-12 months; 200-300K) are simply not justifiable or reasonable. Lastly, the NO_x and VOC emissions from this project would also be in the noise of all the emissions from the surrounding activities in the region.

Comment #3

The EA should have included a comprehensive cumulative assessment of impacts to Air Quality Related Values (AQRVs) at affected Class I areas so it can be determined whether the Enduring project will cause or contribute to significant adverse impacts on any AQRVs at affected Class I areas.

BLM Response #3

As discussed in Section 5.1.1, the cumulative air quality analysis conducted by BLM for the draft Vernal Field Office Resource Management Plan evaluated a long term development of over 6,000 wells and associated ancillary facilities. The methodology emissions inventory and results are documented in the Air Quality Assessment Report for the Vernal and Glenwood Springs Resource Management Plans, Vernal Resource Management Area, Utah, and Glenwood Springs Resource Management Area, Colorado, November 2005. No significant near- or far-field impacts were predicted with the 6,000+ wells. Therefore, any impact from the Rock House project to air quality related values would be negligible because of the Rock House level of development of 60 wells is well within the umbrella of the Air Quality Assessment.

Comment #4

If the BLM is going to base its analysis on a development rate of 15 wells per year then the BLM must make that an enforceable limit on development in the EA. A faster development rate could result in higher emissions than what is presented in the inventory.

BLM Response #4

The EA, including emissions analysis, was written based on the assumed development rate of 15 wells per year. Enduring Resources has accepted 15 wells per year as a maximum drilling rate.

Comment #5

Typically, a 50% reduction in fugitive emissions through road watering is considered maximum possible control. This assumption, if not actually achieved in practice, results in a significant under-prediction of PM emissions (up to 50%) and places an even greater emphasis on the importance of ensuring future compliance with PM_{2.5} NAAQS. The BLM must make a clear commitment to establish, as an enforceable

measure, this and any other assumed control requirements if it will be basing its final decision on specific levels of control.

BLM Response #5

Annual fugitive dust emissions from road traffic were calculated assuming that the only “control” would be naturally occurring precipitation. In Section 2.3.10 of the EA, it is stated “Enduring estimates utilizing about 0.1 acre-feet per well, or an estimated total of about 6.0 acre-feet, for dust abatement.” No claims are made concerning the efficiency of applying 6.0 acre-feet of water for dust abatement. A 50% reduction in dust emissions was used as the assumption for construction emissions. Predicted PM₁₀ and PM_{2.5} were 0.09 tons/year and 0.05 tons/year respectively. If no dust suppression was implemented at all these predicted numbers would double to 0.18 tons/year and 0.1 tons/year, respectively for impacts during construction activities. As these dust emissions would still be considered minimal, enforceable measures would not need to be implemented.

Comment #6

The BLM must account for all potential fugitive dust emissions that could occur from the construction-related activities of the Enduring project assuming reclamation efforts do not effectively reduce emissions – this includes potential windblown dust emissions from storage piles, etc.

BLM Response #6

Windblown erosion is a very small portion of fugitive dust generated by construction, and is calculated to be 0.43 tons per year of PM₁₀ and 0.17 tons per year of PM_{2.5}. This would increase overall project PM₁₀ emissions from 123 tons per year to 123.43 tons per year. Overall project PM_{2.5} emissions would increase from 43 tons per year to 43.17 tons per year.

Comment #7

The emissions inventory also does not include any emissions from grading operations even though there are emission factors, operating assumptions and emissions calculations included for this emission source – the emissions are shown as “0” in the “Grader Construction Emissions” table on page 2 of “Rockhouse Air Modeling 1.pdf”. Also, the construction traffic PM_{2.5} fugitive dust emissions calculations do not agree with the proposed equation and operating assumptions identified. For example, PM_{2.5} road dust emissions from completion activities should be:

$$E [\text{lb PM}_{2.5}/\text{VMT}] = 0.23 (11/12)^{0.9} * [(26,556/2000)/3]^{0.45} = 0.42 \text{ lb PM}_{2.5}/\text{VMT}$$

$$E [\text{TPY}] = 0.42 \text{ lb/VMT} * 135 \text{ trips} * 30 \text{ mi/trip} * (1 \text{ ton}/2000 \text{ lb}) * 15 \text{ wells/yr} = 12.6 \text{ TPY}, \text{ compared to } 11.1 \text{ TPY from the inventory (a 14\% difference in emissions).}$$

This is true for all PM_{2.5} construction traffic fugitive dust emissions.

BLM Response #7

The grading operations were incorrectly calculated. The corrected annual totals indicate PM₁₀ would be 0.61 tons per year and PM_{2.5} would be 0.07 ton per year as follows. Both of the corrected values do not represent a significant difference.

$$0.49 \text{ miles/road plus } 0.52 \text{ miles pipeline plus } 332 \text{ ft}^2 \text{ pad (10 ft swath for } 332 \text{ ft} * 33 \text{ lengths)} = 10954 \text{ ft} = 2.1 \text{ miles} = 3.09 \text{ miles.}$$

Mean grader speed = 8 mph

Emissions (TSP lbs) = 0.040(Mean Vehicle Speed)^{2.5}*Distance Graded = 22.39 lb/40 hr/pad = 0.56 lb/hr/pad*

Emissions (PM₁₅ lbs) = 0.051(Mean Vehicle Speed)^{2.0}*Distance Graded = 10.09 lb/40 hr/pad = 0.24 lb/hr/pad*

Emissions (PM₁₀) = 6.06 lb/40 hr/pad = 0.24 lb/hr/pad = 0.15 lb/hr/pad

Emissions (PM_{2.5}) = 0.69 lb/40 hr/pad = 0.018 lb/hr/pad

The BLM disagrees with the comments regarding road traffic fugitive dust. The calculations were first performed for PM₁₀. The PM_{2.5} emissions were then scaled by the factor of (0.23/1.5) which are the respective PM_{2.5} and PM₁₀ k factors for calculating road dust. The commenter is referred to AP-42, Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Chapter 13.2.2.

Comment #8

The proposed action inventory calculates emissions from drilling operations based on a drill rig size of 2,280 horsepower (hp), which seems on the low end of rig sizes in other oil and gas development areas. The BLM should provide more detailed justification as to why the assumed size is adequate for the proposed development.

BLM Response #8

The figures for average drill rig size were provided by Enduring Resources based upon drilling rigs previously used in the Rock House Project Area. Enduring Resources does not anticipate using or needing larger drill rigs, and it is reasonable to assume none are needed.

Comment #9

The air quality inventory is based on a well development rate of 240 hours per well. This number appears to be an underestimate of drill duration times compared to drilling times in other oil and gas development areas. For example, the Pinedale Anticline development area is proposing well development rates, on average, of 1,368 hours per well. The BLM must show why less time will be needed to drill wells in this area compared to other areas.

BLM Response #9

The figures for average well development rates were provided by Enduring Resources based upon previous drilling in the Rock House Project Area. Enduring does not anticipate drilling taking longer than 10 days, and it is reasonable to assume 10 days would be needed.

Comment #10

The emissions inventory includes production-related emission estimates, however, there are no details on how the emissions were calculated. The public should have access to the details of the emissions calculations for the production heaters, dehydrators, and production-related vehicle exhaust and fugitive dust. Without these details the public cannot be sure that the BLM is adequately accounting for these sources. In addition, the BLM should include VOC emission estimated for any storage tanks associated with gas production operations.

BLM Response #10

Emissions inventory assumptions and calculations have been added as Appendix F. VOC emissions were omitted and are listed in Table 4-1 below.

Table 4-1. Annual Emissions Based on Maximum Development

<i>Pollutant</i>	<i>Project Emissions (tons/year)^a</i>		<i>Total Emissions (tons/year)</i>
	<i>Well Development</i>	<i>Well Production</i>	
<i>NO_x</i>	81	13.9	94.7
<i>CO</i>	35	13.4	48.2
<i>VOC</i>	7.45	368	376
<i>SO₂</i>	1.34	0.03	1.37
<i>PM₁₀</i>	145	45	190
<i>PM_{2.5}</i>	23.9	5.4	29.2
<i>Benzene</i>	0	49.7	49.7
<i>Toluene</i>	0	75.6	75.6
<i>Ethylbenzene</i>	0	5.50	5.50
<i>Xylene</i>	0	42.6	42.6
<i>n-Hexane</i>	0.07	7.46	7.53
<i>Formaldehyde</i>	0.03	0.01	0.04

^a Assumes development scenario of 15 wells and 5 pads per year for 4 years.

Comment #11

A near-field modeling analysis of localized maximum ambient air impacts should be performed to assess whether the activities proposed under the Rock House EA alternatives would comply with all NAAQS and PSD Class II increments, not just the NAAQS for NO₂. The inputs for this analysis should include all of the air pollution source categories allowed under the alternatives of the Rock House EA. The maximum emission rates from sources over the averaging times of the standard for which compliance is being assessed should be modeled. The modeling analysis should be based on at least one year of quality-assured, on-site, representative meteorological data or, if no on-site data is available, five years of meteorological data from the closest meteorological station representative of the area. For the NAAQS analysis, appropriate background concentrations reflective of current air quality in the area should be added to the modeling results. It is not appropriate to rely on monitoring data to reflect existing source emissions, unless such monitoring data has been demonstrated to truly reflect maximum concentrations in the area due to all existing sources that are impacting the area. If the sources being modeled are not isolated, as is the case in this modeling assessment, then modeling of existing sources is necessary to determine the potential contribution of background sources.

BLM Response #11

Near-field air quality modeling is generally not undertaken for such small projects because previous large-scale analyses showed no significant impacts. For example, the Greater Deadman Bench Region EIS considered the full-scale effect of 1,239 wells drilled at a rate of about 120 wells per year, 15 compressors stations, and 22 central tank batteries. No exceedances of the NAAQS occurred with this

level of development. Consequently, BLM has not undertaken a similar analysis for the Rock House project.

Comment #12

The BLM must also perform a far-field modeling analysis to assess whether the activities allowed under the various alternatives of the Rock House EA would adversely impact air quality in nearby Class I areas. The maximum emission rates from sources over the averaging times of the standard for which compliance is being assessed should be modeled. For visibility impacts, this requires modeling of the maximum 24-hour average emission rates.

BLM Response #12

See response to Comment #3 and #11.

Comment #13

The BLM must also perform a cumulative analysis of air quality impacts that could occur under the various alternatives of the Rock House EA.

BLM Response #13

As discussed in Section 5.1.1, the cumulative air quality analysis conducted by BLM for the draft Vernal Field Office Resource Management Plan evaluated a 15-year development of over 6,000 wells and associated ancillary facilities. The methodology emissions inventory and results are documented in the Air Quality Assessment Report for the Vernal and Glenwood Springs Resource Management Plans, Vernal Resource Management Area, Utah, and Glenwood Springs Resource Management Area, Colorado, August 2004. No significant near- or far-field impacts were predicted with the 6,000+ wells. Therefore, any impact from the Rock House project to air quality related values would be negligible because of the Rock House level of development of 60 wells is well within the umbrella of the Air Quality Assessment.

Comment #14

The BLM cannot rely on the outdated modeling in the Vernal DEIS and DRMP, which, consequently has its own set of shortcomings and therefore does not adequately assess cumulative air quality impacts in the area.

BLM Response #14

The modeling that was done for the Vernal DEIS and DRMP met BLM and EPA standards. Consequently, BLM stands behind the modeling performed for the DEIS. Any perceived shortcomings will be addressed in the Vernal RMP Final EIS. Regardless, other subsequent large-scale analyses showed no air quality NAAQS exceedences. For example, the Greater Deadman Bench Region EIS considered the full-scale effect of 1,239 wells drilled at a rate of about 120 wells per year, 15 compressors stations, and 22 central tank batteries. No exceedences of the NAAQS occurred with this level of development.

The BLM has commissioned an independent study of cumulative emission impacts for the Uinta Basin. Completion of this study is expected by mid-200. In part the study will serve as a planning tool for the BLM to address future growth and related Air Quality impacts in the Basin.

6.3.7 Kolano and Saha Engineers, Inc.

Comment #1

A reference to a 1991 handbook by Harris is provided, but without a specific page or even chapter cited.

BLM Response #1

Chapter 3 of Harris 1991 was cited for information on sound propagation in the open air.

Comment #2

In terms of sound level, the level drops by 6 dB for every doubling of distance away from a simple, small sound source. So, as one moves from 3 feet away from the source to 6 feet, the sound level drops by 6dB; at twelve feet, the level drops another 6 dB, etc. Mathematically, the relationship for sound level reduction with distance is 20 times the base logarithm of the distance by the reference distance. For example:

Reduction in noise level at distance “X” = $20 \log_{10} [(X) / (\text{reference distance})]$

Assuming the noise level for the generator reported in the subject assessment study of 67 dB(A) measured at a distance of 21 is correct, than a simple projection of that noise level out to 100 feet would provide the following reduction:

Reduction in noise level at 100ft. = $20 \log_{10} [(100\text{ft.} / 21 \text{ ft.})] = 13.5 \text{ dB}$

Noise level at 100 ft. = Noise level at 21 ft. – 13.5 dB = 53.5 dB(A)

This is considerably higher than the 37 dB(A) noise level provided in the subject assessment. There is little additional attenuation within 100 feet of the sound source that can be obtained without the use of sound barriers, acoustical enclosures, or other deliberate means of noise control. As a result, based upon available information in the EA, there appears to be a gross understatement of the generator noise level.

BLM Response #2

The errors in the calculated sound propagation of the generator have been changed in the document. However, to put the noise expected from the generator in context, please refer to the following charts.

Noise Source	Average Noise (dBA)	“Loudness” (compared to normal conversation)	Range of Noise (dBA)
Ambulance siren at 100 feet	100	16	95-105
Motorcycle at 25 feet	90	8	85-95
Typical construction site	85	6	80-90
Single truck passing at 25 feet	80	4	75-85
Urban shopping center	70	2	65-75
Single car passing at 25 feet	65	1.5	60-70
Average highway noise at 100 feet	60	1	55-65
Normal conversation 5 feet apart	60	1	57-63
Residential area during day	50	50%	47-53
Recreational area	45	37%	40-50
Residential area at night	40	25%	37-43

Rural area during day	40	25%	37-43
Rural area at night	35	18%	32-37
Quiet whisper	30	12%	27-33
Threshold of Hearing	20	6%	17-23

Source: EPA (1974), Harris (1991)

Project Specifics

Generator at 21 feet	67
White River Measurement	55.9
Generator at 100 feet	53.5

Comment #3

The EA reports an average sound level of 55.9 dB(A) of the White River at the mouth of Saddletree Draw. However, no other information is provided about this measurement, such as the period over which the averaging was made (i.e., 1 second or 1 hour), distance from the river, and distance from turbulent water. Furthermore, there is no indication of what specific sound source(s) from the river created this noise level.

BLM Response #3

The following information has been cited by reference in the EA.

- *Date: 5/3/06*
- *Locations: 10 feet from White River at mouth of Saddletree Draw, on south bank of the river.*
- *UTM: 12S 0640349, 4421801*
- *Temperature: 62 degrees F*
- *Wind 1-3 mph*
- *Sky: Overcast*
- *USGS Water Flow of White River: 1,730 ft³/s*
- *Model: Quest Technologies Model 2900 Integrating/Logging Sound Level Meter*
- *Measurement Range: 20-140 dBA*
- *Measurement Time Period: 2:27 PM – 5:27 PM (i.e., 3 hours)*
- *Measurement Interval: 1 Minute*
- *Total Number of Measurement: 180*
- *Primary Sound Sources: Flowing water, wind, isolated truck traffic (none within 1/8-mile)*

As the commenter provides no definition of turbulent water, this information can not be provided.

Comment #4

The noise level was reportedly measured in May of 2006. Spring is generally a time period where maximum flow occurs due to melting snow cover. Based upon USGS Surface-Water Monthly Statistics for Utah, the average cubic feet per second flow rate for the White River near Watson, Utah for the five year period of 2000 to 2004 (last date available) is 1,186 ft³/sec for the month of May which is generally the month with the highest flow rate. The lowest flow rate is August, with a five year average rate of 183 ft³/sec. The average differential between high flow rate monthly average and lowest flow rate average is nearly 6.5 times. Given that the sound power level produced by turbulent flow varies in accordance with the velocity in a relationship that varies from v² to v⁸ suggests that the noise level produced by disturbed river flow may be from 16- to 4-dB lower in sound level than that reported for the higher average flow

month. This is likely to result in much lower average sound levels that are representative for this area than the single number offered in the Enduring EA, assuming no other noise sources.

BLM Response #4

The BLM acknowledges that noise measurements were recorded along the White River during higher than average flow (May 3 = 1,730 cfs; 2006 average = 692 cfs) and that background noise levels would be decreased during other portions of the year. Please note that noise levels at the river in the area where the proposed generator would be installed are currently highly variable due to utilization of the site for water removal via tanker truck, and intermittent noise level increases would continue from truck traffic not associated with this project. Overall, utilization of the proposed water pump system would decrease potential impacts to multiple resources (including noise impacts) of the proposed project by reducing truck traffic along the river.

Comment #5

The EA is also devoid of background sound levels measures in any other area of the Project Area.

BLM Response #5

Although noise impacts would occur throughout the Project Area, sensitive receptors (i.e., T&E species, recreationists, etc.) would be concentrated along the White River. As such, background sound levels were only measured near the White River.

Comment #6

The EA also does not provide estimates of the noise levels or otherwise offer an assessment of the noise impact of other potentially high noise equipment associated with the proposed operation. Typical noise levels of various construction equipment for oil and gas well activity are provided in a reference for a similar but much more comprehensive study of similar well drilling operation. The footnoted reference further offers that probable, significant noise impact extends out to approximately 2,800 feet for residences within line-of-sight of the activity, and within 1,600 feet of any threatened and endangered wildlife species.

BLM Response #6

Other high noise equipment operation is expected to occur during the drilling process. These impacts would occur in isolated areas for relatively short time periods (i.e., construction = 5 days; drilling = 10 days; completion = 15 days). Impacts to wildlife including T&E species are addressed in Section 4.11. However, no statement as to the significance or non-significance of impacts is included within the analysis as that determination is reserved for the Decision Record.

Comment #7

The background noise level measurements should be made over 16 to 48 hour periods (and averaged hourly at each position) during at least two different seasons of the year, given the variation in the flow volume of the White River plus changes that may occur due to the loss of foliage in colder months. Noise level impact of the activities associated with the proposed construction and operation of the gas wells should be made using representative spectral data for each of the proposed activities input into a three dimensional computer modeling software routine such as Cadna A or Soundplan.

BLM Response #7

Please refer to comment #3 and #4 for information regarding the collection of the noise measurement and conditions during the collection time. As the noise data collected for this EA was for comparative purposes, and as there are no management objectives specified for noise levels in the project area, the methodology used to collect noise measurements was deemed adequate for the EA. Please refer to comment #1 for comparative information regarding noise level impacts.

6.3.8 River Outfitters

Comment #1

The EA must account for the cumulative impacts associated with continuing gas development, new roads, pipelines, and compressors stations in and around the BLM's White River WIA.

BLM Response #1

Cumulative impacts to lands to White River wilderness characteristics area are discussed in Section 5.2.15.

Comment #2

We conclude that the EA fails to take an accurate or hard look at the project's impacts to the White River's wilderness qualities, and opportunities for solitude and primitive recreation (canoeing, rafting, kayaking, hiking, camping, and photography). For example, those floating down the river will have the sound of a riverside generator and views of intrusive roads to remind them of the surrounding development, if this project is approved. Likewise, if they should hike to the Goblin City overlook to enjoy a view once glimpsed by Major John Wesley Powell, it will be marred by the sights and sounds of gas wells.

BLM Response #2

Direct and indirect impacts to the resources of concern are discussed in the following resource sections: Section 4.8 Recreation, 4.13 Visual Resources, 4.15 White River wilderness characteristics area. In particular, impacts to the viewshed of the Goblin City Overlook as well as potential noise impacts from the generator are disclosed in Section 4.8 Recreation. Please note that existing roads as well as oil and gas development are currently visible from the Goblin City trail and overlook. However, as the proponent has sited their well pads taking into account the viewshed from the overlook to the maximum extent feasible, visual impacts to visitors would not be substantially altered under any of the proposed alternatives.

Comment #3

The BLM must consider an alternative that would eliminate the riverside generator, waterlines, and roads from the area between Saddletree and Atchees washes and would eliminate visual and auditory impacts from the Goblin City overlook. Such an alternative would completely reject any leasing in the disputed lease UTU-81737.

BLM Response #3

Re: No Water Pump System

As removal of the proposed water pump system would substantially increase the amount of truck traffic in the Project Area, impacts of this alternative (i.e., increased fugitive dust, weed invasion, and noise) would be greater. As such, this alternative was dismissed by the BLM (see Section 2.9.7).

Re: No Visual and Auditory Impacts to Goblin City overlook

Impacts to visitors utilizing the Goblin City overlook are discussed in detail in Section 4.8.1. Please note that existing roads as well as oil and gas development are currently visible from the Goblin City trail and overlook. However, as the proponent has sited their well pads taking into account the viewshed from the overlook to the maximum extent feasible, visual impacts to visitors would not be substantially altered under any of the proposed alternatives.

Re: No Leasing of UTU-81737

Alternative B currently analyzes cancellation of lease UTU-81737.

Comment #4

The EA, as drafted, shows that the BLM considered recreational opportunities, wilderness characteristics, and solitude to be of lower priority than natural gas development. Such a determination is contrary to the specific mandate given to the BLM in the Federal Land Policy and Management Act. In order to give these resources the same weight and value as natural resource extraction the BLM must fully consider and analyze a lease exchange/buyback alternative.

BLM Response #4

The Rock House EA is prepared under the management guidelines for the Book Cliffs RMP, which was prepared under the authority of FLPMA and the planning regulations (43 CFR 1600). The Book Cliffs RMP determined that exploration and development of energy resources is an appropriate use for lands in the project area, so long as other resource values are protected or potential impacts are mitigated. The applicant is a permitted user of public lands in the Rock House Project Area with valid, existing lease rights to explore and develop the mineral resources of those Federal leases. Alternative B of the Rock House EA appropriately considers no leasing of UTU-81737. However, an alternative that considers a lease exchange/buyback does not meet the purpose and need of the project as disclosed in Section 2.9.5.

6.3.9 Ken Kreckel

Comment #1

It is possible to achieve a significant reduction in impacts while allowing the maximum number of wells. Referring to Figure 1, new well pads [in orange squares] have been both reduced in number and relocated as much as possible to the lower draws. This achieves a great reduction in impacts:

- 1) The number of new well pads is reduced from 17 pads on Alt A to 6 pads.
- 2) Well pads are moved off the ridge lines, where visual impacts are greatest, and relocates many impacts to the draws, where a road net already exists. The need for pipelines and so on is similarly reduced and relocated.
- 3) Note all possible 40 acre downhole development locations are available for drilling.
- 4) This modification avoids crossing NSO stipulated lands.

BLM Response #1

In response to the additional use of directional drilling, an interoffice memorandum from Enduring Resources engineers was submitted to the BLM which shows the feasibility, or lack thereof, of additional

directional drilling in the Rock House Project Area. This information was independently evaluated by BLM petroleum engineers, who concurred that it is technically unfeasible to drill a 3,000-foot horizontal offset and get back to vertical or near-vertical at 4,2000 feet to 6,000 feet vertical depth. (see response to SUWA comment #1.) As stated in the memorandum, because well depth ranges from 7,030-8,255 feet with perforations from 4,230-7,963 feet; and, given the necessary +/- 2,000 feet of surface casing, torque and drag considerations make it difficult if not impossible to drill an S-shape directional well and hit the legal window for a Wasatch interval using a 3,000 foot directional reach. Included in the memo is a directional survey which illustrates this on an actual well, the Rock House 10-22-42-36. On this well the top completed interval in the Wasatch was at 5,184 feet. The offset at this depth is only 1,280 feet. For a discussion regarding the surface disturbance on NSO lands, refer to the response to SUWA comment #2. Consequently, to the extent that the commenter is suggesting that BLM consider his proposal as a new alternative, BLM does not find his proposal to be reasonable and adequate to meet the purpose and need for the action.

Comment #2

In recognition of the two fee tracts in the northern portion of the proposal, this modification develops that area from two well pads on those lands. However, even under this scenario, impacts are reduced:

- 1) The number of new well pads is reduced from 17 on Alt A to 6 pads.
- 2) Some well pads are moved off the ridge lines
- 3) Again, all possible 40 acre downhole development locations are available for drilling

BLM Response #2

See response to Kreckel #1

Comment #3

This is essentially a corrected version of Alternative B. As pointed out in the EA, “under Alt B, lease UTU-81737 would be cancelled, and Enduring would not be able to develop minerals beneath this lease” However, as shown on the map of Alt B in the EA, some wells are still shown on the cancelled lease. This modification corrects that problem by removing these wells.

BLM Response #3

There was one well (downhole) erroneously located on lease UTU-81737 in Figure 3 of the draft EA (NENE Section 30). This error has been corrected in the final EA.

There are two well pads and a road and pipeline located on the lease UTU-81737. These disturbances would be rights-of-way to access other valid, existing leases. Please note that with the cancellation of lease UTU-81737, the operator would not be able to develop that lease; however, such a decision would not restrict the decision maker's discretion to authorize a right-of-way across the unleased area. Therefore, the proposal to authorize the subject well pads, road, and pipeline under Alternative B is not an error.

Comment #4

Modification C would remove any well pads on the surface of UTU-81737 and the access to the fee lands from the north, since this violates the NSO provisions of the lease. Instead, minerals to either side of the lease, and those contiguous fee lands to the northeast, would be drilled directionally from well pads to either side of UTU-81737 [see Figure 3].

BLM Response #4

See response to Kreckel comment #3 and SUWA comment #2 for a discussion regarding NSO provisions. Please refer to the response to Kreckel comment #1 for a discussion regarding the feasibility of the proposed alternative.

Comment #5

A horizontal reach of 3000' is feasible for the proposed wells. Note all of my recommended wells are within this reach, which, in any case, is only about 360' greater than that already advocated by BLM for the area. Note my modifications do not exceed 7 wells per pad, but afford a much more efficient use of those pads in comparison to the proposal.

BLM Response #5

Comment noted. However, please see response to Kreckel #1

Comment #6

Section 1.5 of the EA states: "The ROD indicates that the N2SE, SWNE, and NENE portions of Section 30 are available for lease subject to a no surface occupancy stipulation." Nevertheless, Alt. A, B, and C all show surface occupancy in these areas. BLM should endeavor to remove these violations of the NSO stipulation.

BLM Response #6

Please note that the "no surface occupancy" stipulation is a leasing stipulation only. It does not apply to rights-of-way that may be necessary on those lands. Also, please note that under the Book Cliffs RMP, the subject portions of section 30 are not right-of-way exclusion areas.

Alternative A: Although three downhole well-bores would be located in these areas, no well pads would be located on the subject portions of section 30. One road, one gas pipeline, and one water pipeline are proposed to be located within the subject portions of section 30. The road and gas pipeline would both be permitted as a right-of-way under Title V of FLPMA because they provide access and service to private land. The water pipeline would also be permitted as a right-of-way under Title V of FLPMA because it would benefit all four BLM leases, as well as state leases in the area. Because the road and two pipelines would be right-of-way actions, they are not in violation of the no surface occupancy stipulation.

Alternative B: One road, one gas pipeline, and one water pipeline are proposed to be located within the subject portions of section 30. The road and gas pipeline would both be permitted as a right-of-way under Title V of FLPMA because they provide access and service to private land. The water pipeline would also be permitted as a right-of-way under Title V of FLPMA because it would benefit all four BLM

leases, as well as state leases in the area. Because the road and two pipelines would be right-of-way actions, they are not in violation of the no surface occupancy stipulation.

Alternative C: One road and one gas pipeline are proposed to be located within the subject portions of section 30. The road and gas pipeline would both be permitted as a right-of-way under Title V of FLPMA because they provide access and service to private land. Because the road and pipeline would be right-of-way actions, they are not in violation of the no surface occupancy stipulation.

Comment #7

Re-evaluate the dismissal of the “lease exchange option”. This dismissal was based in part on the assertion that there was a lack of well control in the area. In fact, there have been numerous wells drilled nearby. In addition, the assertion that the lease exchange would be the same as the ‘No Action’ alternative is not strictly correct. The lease exchange solves the problem for the long term. On the other hand, the ‘No Action’ alternative could be re-visited in the near future.

BLM Response #7

The EA accurately discloses that only one well has been developed on BLM leases in the Rock House Project Area and that establishing a value for four BLM leases in the area could not be accurately assessed from this information.

The assertion that lease exchange solves the problem for the long term is not technically correct. Although the commenter does not specifically identify the “problem,” it is assumed that the problem is surface disturbance in the project area. Lease exchange would eliminate the potential for impacts to the surface and subsurface resulting from development on the leases in the project area. However, exchange of those leases would not prevent the permitting of rights-of-way across the project area. The decision to prevent rights-of-way is known as a right-of-way exclusion, and can only be made through the land use planning process. The Book Cliffs RMP did not designate the project area as a right-of-way exclusion area.

In addition, no areas were identified by the commenter as potential exchange areas, so there is no way to determine the potential impacts development would have on the hypothetical alternative leases. Depending on the areas selected for exchange, the development of the hypothetical alternative leases could as easily result in more impacts to the surface, as it could less.

6.3.10 Colorado Plateau Archaeological Alliance

Comment #1

On July 9, 2007 CPAA conducted a Class I review of previous archaeological research initiated within the project area, and found the data to be generally consistent with those reflected in the EA but with minor discrepancies. There are actually nine (not eight) previously recorded historic sites identified as being within the project area, and two sites (not one) determined eligible for listing on the National Register.

BLM Response #1

This discrepancy is likely due to the time difference between when the Class I inventory was completed for the Rock House EA (April 26, 2006) and when CPAA conducted its Class I inventory (July 9, 2007). However, as Enduring has committed to conduct Class III inventories on a well-by-well basis prior to

construction activities, all previous surveys and previously-recorded sites within the area of potential affect, as well as newly-recorded sites, will be encompassed within and documented appropriately in each accompanying report.

Comment #2

Data derived from previous archaeological inventories do not comprise a meaningful and statistically valid sample in that these investigations were driven by the location of extraction projects and did not result in the investigation of all environmental and ecological ranges where cultural resources are likely to occur. Hence, the location of sites is actually a reflection of the amount of Section 106 Class III survey work that has been done in this particular area and may not reflect actual site densities or site types.

BLM Response #2

Comment noted. This point is clarified within the EA, Section 3.2.2.

Comment #3

The CPAA analysis of previous research in the region (see Spangler 2002 for an overview of this research) also determined that there is a high to moderate potential for significant numbers of archaeological sites in the northern portion of the project area in proximity to the White River, which constitutes a permanent water source in an otherwise water-stressed environment. It would also be expected that site density would decrease with increased distance from a permanent water source, site types in the southern portion will reflect seasonal exploitation of faunal and floral resources adapted to arid environments, and that sites will reflect increased human mobility as food resources become more dispersed across an arid landscape. Given this hypothesis (as yet untested in this area) the density of sites would be expected to be quite low in the southern portion, reflecting a seasonal dispersal of human populations over a broader geographic range.

BLM Response #3

Comment noted.

Comment #4

The EA asserts no prehistoric sites have been identified in the project area. However, CPAA takes issue with the identification of large rock cairn at 42Un3696 (and possibly 42Un3075) as the work of bored shepherders, and that it is insignificant and not eligible for the National Register. Large stone cairns are ubiquitous in lower Nine Mile canyon, in Desolation Canyon, the White River and as far east as the Texas-Missouri Creek drainage in western Colorado, usually in prehistoric contexts.

BLM Response #4

Comment noted, however, the commenter has not demonstrated that the sites of concern are within the area of potential affect (generally defined as 100 feet either side of the roads and/or pipelines, and 10 acres centered on the well pads). If the sites are within the area of potential effect (100-feet either side of the pipeline and road right of way, and 10 acres centered on the well pad), the sites will be revisited during the Class III site-specific inventory. If the archaeologists feel that a previous eligibility assessment is inaccurate, they can make the necessary adjustments on the required IMACS site forms and in their report, which is then sent to the SHPO for concurrence. SHPO concurrence is required for all

findings of eligibility and non-eligibility, and is beyond the control of the archaeologists and/or BLM's opinion regarding site eligibility.

Comment #5

The three cairns described and photographed at 42Un3075 may indeed be historic, given their association with historic camping activities. The size and shape of the larger of the three cairns is consistent with prehistoric cairns, but the casual construction stands in contrast to the more careful construction evident at prehistoric cairns in the region. Of note, the EA and the original archaeological report (Elkins and Montgomery 2002) indicate this site was "ineligible" for the National Register, although the official state site form indicates it is eligible. This site is located in Section 31, T10S, R23E, at the edge of a steep canyon on the west side of Saddletree Draw.

BLM Response #5

The eligibility status for site 42Un3075 has been changed within the EA. As such, analysis of impacts to this site have been incorporated into Chapter 4 – Environmental Impacts, Section 4.2, Cultural Resources.

Comment #6

A more carefully constructed drylaid stone cairn was documented at 42Un3696 on state lands near Archy Bench. This site consisted of a large cairn measuring 1.6 meters at the base and 1.85 meters high, that is strikingly similar in size, shape, and topographical location to the large prehistoric cairns in Nine Mile Canyon and Desolation Canyon. No historic artifacts were identified to support the determination of an insignificant historic cairn. Consequently, this cairn could actually be a prehistoric feature that is part of a poorly understood (and poorly documented) prehistoric hunting strategy, ceremonial feature, or communication network that enveloped the Tavaputs Plateau and White River drainage. This site is located in the Sect 36, T10S, R22E, on a sandy slope abutting Archy Bench.

BLM Response #6

Consultation with the Native American Tribes was initiated on May 9, 2005. The Confederated Tribes of the Goshute Reservation responded with a letter dated May 18, 2005 that indicated they did not have any concerns with the project. The Santa Clara Pueblo responded with a letter dated June 21, 2005 indicated that the project would not impact their traditional cultural properties.

A consultation was re-initiated with the following tribes on May 3, 2007: White Mesa Ute, Eastern Shoshone, Hopi, Eastern Shoshone and Northern Arapaho, Santa Clara Pueblo, Southern Ute, Northwestern Band of the Shoshone Nation, Navajo Nation, Laguna Pueblo, Zia Pueblo, and Confederated Tribes of the Goshute Reservation. The Laguna Pueblo responded with a letter dated May 14, 2007 stating that the proposed project will not have a significant impact. The Hopi Tribe responded with a letter dated May 29, 2007 stating that if cultural resources are identified and would be adversely impacted by the project, that additional consultation would be appreciated.

A letter was received from the Hopi Tribe dated August 13, 2007 referencing a July 10, 2007 correspondence from the Colorado Plateau Archaeological Alliance to the BLM regarding a known cultural site. The Colorado Plateau Archaeological Alliance questioned whether large stone cairns in the Rock House project area were historic or prehistoric structures. The Hopi requested documentation concerning the sites. A letter dated September 10, 2007 transmitted the requested documentation. The

Hopi Tribe responded with a letter dated September 24, 2007 stating that the subject cairns were not Hisatsinom shrines.

Comment #7

Given the dispersed nature of prehistoric adaptations in this region, Class III surveys of small well pads (10 acres) and linear corridors (200 feet) are not likely to result in significant augmentation of the archaeological database. Nor is it probable that surveys of such small areas of direct impact, as specified Section 4.2.1 of the EA, result in the identification of adjacent sites outside the project area boundaries that could be indirectly impacted by development.

BLM Response #7

Please note that cultural resource surveys are designed to determine the presence or absence of cultural sites within the area of potential affect. Subsequent consultation would develop measures to avoid or minimize impacts to potentially impacted cultural resources. The surveys committed to by the proponent are expected to be sufficient to accomplish this purpose. For a discussion of indirect impacts to cultural resources, please refer to Section 4.2.1 of the Final EA.

Comment #8

Although native American consultation remains a fundamental component of federal land management as it relates to development of public lands, the EA offers no evidence that tribal consultation have been initiated, only that “if necessary, consultation with the Native American Tribes having ties to the Uinta Basin would occur” (Section 2.8.1).

BLM Response #8

For a summary of consultation that has been conducted, please refer to comment #6.

Comment #9

Section 4.2.1 states National Register sites will be avoided, as will areas with a high probability of subsurface materials, with the implication that site avoidance results in no adverse effects. Such assumptions are problematic. The premise that site avoidance results in no adverse effects, or insignificant effects, is inherently flawed and is at odds with 36 CFR 800. Avoidance of cultural sites evident on the ground surface may avoid direct damage to the surface evidence. However, there is a potential for damage to archaeological sites not clearly evident on the site surface, as well as adverse effects to sites outside the area of direct impact. It can also be concluded that re-routing or relocating ground-disturbing activities to avoid direct impacts to known historic properties visible on the surface may not avoid, minimize or mitigate the indirect effects of such undertakings.

BLM Response #9

Section 2.8.1 describes mitigation measures that would be utilized to reduce or eliminate both direct and indirect impacts to cultural resources in the Project Area. Section 4.2 accurately describes potential indirect impacts that would potentially occur to cultural resources both in and around the Project Area, including inadvertent damage to sites unknown.

Comment #10

It should also be acknowledged that data recovery is a destructive activity that constitutes an adverse effect that should be fully considered in the planning process.

BLM Response #10

Data recovery is a mitigation measure that is implemented when no other alternative is feasible, such as when a previously unknown site is discovered during construction activities.

Comment #11

The EA briefly states the potential for cumulative impacts from large-scale energy development, in particular visual and auditory effects that could impinge on sites or locations of sacred or traditional importance to Native American tribes (Section 5.2.2). However, there is no discussion that cumulative impacts also adversely affect site setting and integrity, even if the historic property itself is avoided (see 36 CFR 800.5(a)(2)(v)). The cumulative impacts of increased artifact collection and vandalism due to increased vehicular access are also understated.

BLM Response #11

An expanded cumulative impacts discussion has been added to Section 5.2.2.

Comment #12

The EA also understates the serious potential that known and unknown historic properties will be directly or indirectly affected by OHV use of new access routes constructed to accommodate development.

BLM Response #12

As the impact analysis was based on BLM's best available data, and as no data was provided by the commenter that demonstrates that the potential for impact from OHV is greater than what was analyzed in the EA Section 4.2 accurately describes potential indirect impacts that would potentially occur to cultural resources both in and around the Project Area.

Comment #13

The BLM should, in consultation with the State Historic Preservation Officer, develop a proactive plan to involve the public in the Section 106 process, including the consulting party status for individuals and entities concerned about the preservation of historic properties that could be impacted by development of public lands, as articulated in 36 CFR 800.3(e) and 36 CFR 800 3(3). CPAA may request consulting party status at the appropriate time.

BLM Response #13

Comment noted.

Comment #14

Given the possibility of additional energy development in the region, it is recommended that the BLM require or initiate a Class II sample survey or a large Class III block survey of the region to determine

actual site densities, types, character, and significance. These surveys would generate scientifically accurate data sets now absent for the area that would greatly facilitate future management decisions related to cultural resources in the region. These data also ensure future development avoids area of high cultural sensitivity and/or religious significance to the tribes.

BLM Response #14

Speculation regarding additional energy development in the region is beyond the scope of this EA. However, Class III inventories are required to be conducted in all areas potentially affected by proposed surface disturbance. For oil or gas development the area of potential affect is defined as 100-feet either side of the proposed road and/or pipeline, and 10 acres centered on the proposed well pad. Additional area would be surveyed as deemed necessary by the archeologist conducting the survey or the BLM authorized officer. Before approval of each proposed location, a BLM archaeologist would examine the Class III inventory report to ensure that no sites would be impacted, and would conduct any necessary consultation.

Comment #15

It is therefore recommended that Section 4.2.1 be modified to require additional surveys of those areas visible from a well pad or access route that is likely to contain cultural resources (e.g., cliff faces suitable for rock art and rock shelters with potential cultural deposits) that could be adversely affected due to vehicular access facilitated by the development.

BLM Response #15

See the response to comment #14.

Comment #16

Although indirect effects are acknowledged in the EA, the document should also clearly articulate the BLM's strategies for avoiding, minimizing, and mitigating indirect adverse effects to historic properties.

BLM Response #16

Section 2.8.1 describes mitigation measures that would be utilized to reduce or eliminate both direct and indirect impacts to cultural resources in the Project Area. Section 4.2 accurately describes potential indirect impacts that would potentially occur to cultural resources both in and around the Project Area, including inadvertent damage to previously unknown sites.

Comment #17

It is recommended that subsequent energy development be limited to those areas immediately accessible by existing routes. In the absence of such limitation on new road construction, it is recommended that any new roads created to facilitate energy development be designated as administrative routes not open to OHV travel, and that the BLM enforce these restrictions.

BLM Response #17

Recommendation noted. However, it is not possible to limit the proposed energy development to those areas immediately accessibly by existing routes. Therefore, during the site-specific review of the

proposed roads, the need for gating would be evaluated and implemented as necessary to minimize impacts to resources of concern.

Comment #18

Given the serious potential for OHVs to intentionally or inadvertently damage cultural resources, it is recommended the planning document limit OHV travel to existing routes authorize for such activities, and OHV users should be clearly informed about prohibitions on off-trail or cross-country travel.

BLM Response #18

Comment noted. However, please note that this EA is not a planning document.

Comment #19

It is recommended that the APD require Enduring to have a clearly stated company policy regarding employees who violate state and federal laws protecting cultural resources and historic properties and that training of company employees be initiated by individuals qualified in all aspects of ARPA, NHPA, and NAGPRA.

BLM Response #19

The following mitigation measure was added to Section 2.8.1: Enduring and its contractors would inform their employees about Federal regulations intended to protect cultural resources. All personnel would be informed that collecting artifacts, including arrowheads, is a violation of Federal law.

Comment #20

The BLM and Enduring should be commended for initiating and funding a historically sensitive and restoration project for the Rock House (42Un5015), as well as public education outreach related to that site. However, the plan as articulated in the EA is inadequate in that it contains no provision to actually nominate this National Register-eligible site to the National register. Section 110 of the NHPA clearly states that federal agency's (BLM) responsibility to identify, evaluate, and nominate historic properties under its jurisdiction. It is therefore recommended that the BLM prepare and submit the nomination of this site to the National Register, or to require Enduring to complete the nomination as part of its mitigation efforts at this site.

BLM Response #20

Comment Noted.

6.4 PREPARERS

The list of BLM preparers for the EA is provided in Table 6-1.

Table 6-1. List of Preparers

Non BLM Preparers		
Name	Title	Responsible for the Following Section(s) of this Document
Kirby Carroll	Project Manager/Senior Ecologist	Review and Edits of EA
Dawn Martin	Project Manager/Senior Ecologist	Review and Edits of EA
Chad Powell	Air Quality Specialist	Air Quality
Dave Nicholson	Hydrogeologist	Watershed Resources, Floodplains, Soils, Paleontology
Shina DuVall	Archaeologist	Cultural Resources
Colin Mann	Environmental Scientist	Wildlife, Vegetation, Livestock Grazing
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Kendall Johnson	Word Processor	Document Formatting
BLM Preparers		
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Blaine Phillips	Archaeologist	Cultural Resources/Native American Religious Concerns
John Mayers	Geologist	Paleontology, Water Quality
Dixie Sadlier	Wildlife Biologist	T&E Wildlife/Special Status Species
Kim Bartel	Recreation Planner	Wilderness/Wilderness Characteristics Recreation/Visual Resource Management
Stan Olmstead	Range/Riparian	Riparian/Floodplain/Watershed
Stephanie Howard	Environmental Coordinator	NEPA Compliance/Technical Coordination/Quality Control
Dylan Tucker	Natural Resource Specialist	Livestock Grazing, Soils
Amy Torres	Wildlife Biologist	Wildlife
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Charlie Sharp	Natural Resource Specialist	Vegetation and Special Status Plant Species
Delbert Clark	Natural Resource Specialist	Noxious and Invasive Weeds
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Stephanie Howard	Environmental Coordinator	Entire EA
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Blaine Phillips	Archaeologist	Cultural Resources/Native American Religious Concerns

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Stephanie Howard	Environmental Coordinator	NEPA Compliance/Technical Coordination/Quality Control
Amy Torres	Wildlife Biologist	Wildlife
Dylan Tucker	Natural Resource Specialist	Livestock Grazing, Soils
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7.0 REFERENCES, ACRONYMS, AND APPENDICES

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7.2 ACRONYMS

ACEC – Area of Critical Environmental Concern
AO – Authorized Officer
APD – Application for Permit to Drill
AUM – Animal Unit Month
BCRMP/ROD – Book Cliffs Resource Management Plan / Record of Decision
BLM – Bureau of Land Management
CIAA – Cumulative Impact Assessment Area
COA – Conditions of Approval
CFR – Code of Federal Regulations
EA – Environmental Assessment
EIS – Environmental Impact Statement
ESA – Endangered Species Act
FEMA – Federal Emergency Management Agency
FLPMA – Federal Land Policy and Management Act
FONSI – Finding of No Significant Impact
HUD – U.S. Department of Housing and Urban Development
IBLA – Interior Board of Land Appeals
IDT – Interdisciplinary Team
MBTA – Migratory Bird Treaty Act
NEPA – National Environmental Policy Act
NOS – Notice of Staking
OD – Outer Diameter
OHV – Off-Highway Vehicle
ORV – Outstanding Remarkable Values
OSHA – Occupational Safety and Health Act
RFD – Reasonably Foreseeable Development
RIPRAP – Recovery Implementation program Recovery Action Plan
RMP – Resource Management Plan
ROD – Record of Decision
ROW – Right of Way
SITLA – State and Institutional Trust Lands Administration
SPCC – Spill Protection, Countermeasure and Control
THEC – The Houston Exploration Company
VFO – Vernal Field Office (of the Bureau of Land Management)
UDOGM – Utah Division of Oil, gas, and Mining
UDEQ-DWQ - Utah Department of Environmental Quality, Division of Water Quality
UDWR – Utah Division of Wildlife Resources
USFWS – United States Fish and Wildlife Service
USHPO - Utah State Historic Preservation Officer
VRM – Visual Resource Management

7.3 APPENDICES

- Appendix A: Federal Laws, Statutes, Regulations and Executive Order to Which the Rock House EA Complies
- Appendix B: Interdisciplinary Team Analysis Maps
- Appendix C: Special Status Plant Conservation Measures
- Appendix D: Maps
- Appendix E: Special Status Species Lists
- Appendix F: Stipulations and Notices for Leases in the Rock House Project Area
- Appendix G: Public Comment Period
- Appendix H: Consultation Letters