



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

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AUG 22 2016

Ref: 8EPR-N

Brent Northrup, Project Manager
Bureau of Land Management
Canyon Country District Office
Attn: MLP Comments
82 East Dogwood
Moab, Utah 84532

RE: Moab Master Leasing Plan and Proposed RMP Amendments / Final EIS for the Moab and Monticello Field Offices, **CEQ #20160171**

Dear Mr. Northrup:

The U.S. Environmental Protection Agency Region 8 has reviewed the July 2016 Final Environmental Impact Statement (EIS) prepared by the Bureau of Land Management (BLM) for the Moab Master Leasing Plan and Proposed Resource Management Plan Amendments. Our comments are provided for your consideration pursuant to our responsibilities and authorities under Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act (CAA).

Project Background

The Final EIS analyzes the potential impacts of mineral leasing decisions in the Planning Area, as managed by the BLM's Moab and Monticello Field Offices. The Planning Area covers approximately 785,000 acres of public land in Grand and San Juan Counties, Utah, and is adjacent to Arches and Canyonlands National Parks. Through the MLP process, the BLM will reconsider mineral leasing decisions within the Planning Area, and prepare amendments to the Moab and Monticello RMPs. The scope of the analysis and decisions in the MLP is limited to oil, gas and potash leasing and development.

Four management alternatives are analyzed in the Final EIS:

- Alternative A, the No Action Alternative, would continue existing management in the Moab and Monticello RMPs;
- Alternative B minimizes impacts to sensitive resources and recreational use by limiting oil, gas and potash leasing – Alternative B1 separates oil and gas leasing and development from that for potash, while Alternative B2 would only allow oil and gas, and no new potash leasing would occur;
- Alternative C emphasizes protection of sensitive resources and recreational uses over oil and gas leasing and development, and no new potash leasing would occur; and

- Alternative D, BLM's Preferred Alternative, minimizes surface disturbance by separating oil and gas from potash development while maximizing protection for BLM lands adjoining the National Parks.

EPA's Comments and Recommendations

As the first EIS analysis for a MLP in Utah, the BLM has robustly analyzed potential air and water resource impacts of oil, gas and potash development, and developed appropriate planning-level stipulations for those resources to be applied to future activities in the MLP area. The EPA appreciated the opportunity to work with the BLM and other Federal Agencies as part of the Air Quality Technical Workgroup for this project, as well as the opportunity to provide input regarding water resource analysis and protection through our informal cooperating agency involvement. We note that numerous changes were made to the document in response to our comments on the Draft EIS to improve disclosure of potential impacts to water resources. This letter highlights several remaining areas the EPA recommends for BLM's attention when finalizing the Record of Decision (ROD) and when analyzing subsequent projects.

1. Air Quality

The analysis of impacts to air quality related values (AQRVs) shows the potential for visibility and nitrogen deposition impacts to Arches and Canyonlands National Parks. Consequently, the application of air emission control measures to future development will be important to reduce the potential for impact. The stipulations for air quality that have been applied and documented in Appendix A (Mineral Leasing Stipulations) are appropriate measures to require at this planning stage. By including the stipulations, the BLM has created a consistent framework for minimizing future development emissions from certain sources. In addition, future project-specific air quality analyses, as described in the proposed "Air Quality Analysis" lease notice, will enable the BLM to determine whether any additional measures are necessary to protect air quality and AQRVs from potential future development.

An important aspect of this EIS/MLP is that it is near Class I areas that could be significantly impacted by oil and gas development as well as potash mining operations. In the EIS/MLP *Response to Comments* section, BLM commits to develop a monitoring program to track air quality trends in the planning area and at Class I areas in conjunction with National Park Service and the U.S. Geologic Survey. Given the difficulties in accurately predicting specific development scenarios at this MLP stage, we support this monitoring plan as an important addition to the MLP. Beyond the mention in the *Response to Comments*, we were unable to find any specific information about the post-ROD monitoring and research study within the EIS/MLP. We recommend that additional information regarding the monitoring program and timeline be included in the MLP and that the ROD include a requirement that the monitoring study will be conducted and used to inform management decisions moving forward. Such a commitment provides significant assurance that impacts from development will be mitigated further if monitoring shows unacceptable degradation of air quality or AQRVs in and around the planning area. The EPA requests an opportunity to review the monitoring plans, so that we can understand and provide input on its utility in informing decision makers regarding air quality impacts and trends.

2. Greenhouse Gas Emissions and Climate Change

While the Final EIS estimates the direct greenhouse gas (GHG) emissions caused by the projected oil and gas development under each alternative, BLM indicated that they did not quantitatively or

qualitatively discuss the GHG emissions associated with potash development due to a lack of information regarding development, operations, or emissions factors. We continue to recommend quantitatively estimating these emissions given that a substantial difference in GHG emissions among the alternatives would be expected due to the difference in potash development restrictions analyzed. Example tools for estimating and quantifying GHG emissions can be found on CEQ's NEPA.gov website¹. The Final EIS cites a list of controls for "Air Quality and Greenhouse Gas Mitigation," which includes measures for reducing ozone precursor emissions, some of which will have co-benefits for GHG emissions. The EPA recommends that the ROD identify the mitigation measures that will reduce GHG emissions and disclose the estimated GHG reductions associated with such measures.

As mentioned above, the Final EIS estimates the direct greenhouse gas (GHG) emissions from the exploration, development and operation of the projected oil and gas. To enable a full comparison of GHG emissions among alternatives and to consider appropriate mitigation, the NEPA analyses should also quantify indirect GHG emissions caused by the projected development for each alternative. The Council on Environmental Quality's (CEQ) Final Guidance on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews (Guidance)² clarifies that indirect effects of proposed actions involving fossil fuel extraction includes GHG emissions associated with refining and combustion of the fossil fuel being extracted. For this EIS, we recommend that the direct and indirect GHG emissions be considered when selecting the final alternative for the ROD.

BLM should not evaluate GHG emissions by comparing them to state and U.S. emissions. According to CEQ, such comparisons are "not an appropriate method for characterizing the potential impacts associated with a proposed action and its alternatives and mitigations because this approach does not reveal anything beyond the nature of the climate change itself: the fact that diverse individual sources of emissions each make a relatively small addition to global atmospheric GHG concentrations that collectively have a large impact" (Guidance, pg.11). In future NEPA documents, the EPA recommends that the BLM follow the approach outlined by the CEQ's Guidance regarding the analysis of GHG emissions and climate change.

As the BLM proceeds with implementation of the selected alternative, the EPA recommends considering climate adaptation measures based on how future climate scenarios may impact the projected development. The National Climate Assessment (NCA), released by the U.S. Global Change Research Program³ contains scenarios for regions and sectors, including energy and transportation. We recommend that the BLM use NCA or other peer reviewed climate scenarios to inform implementation because this can improve resilience and preparedness for climate change. Changing climate conditions can affect a proposed MLP, as well as the plan's ability to meet the purpose and need presented in the Final EIS. If impacts may be exacerbated by climate change, additional mitigation measures may be warranted. For example, remediation of disturbed sites may become more challenging if the MLP area becomes hotter and drier.

¹ https://ceq.doe.gov/current_developments/GHG-accounting-tools.html

² *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews*. Footnote 42 p. 16. August 1, 2016.

https://www.whitehouse.gov/sites/whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf

³ <http://nca2014.globalchange.gov/report>

3. Protection of Water Resources

A high level of water resource protections have been included in the BLM's Preferred Alternative, which are critical for protecting the valuable resources in the planning area. Our one remaining water resource comment is regarding springs, a very valuable resource in the MLP area due to the lack of water in the desert environment. Despite the 500 foot no surface occupancy (NSO) buffer proposed around the springs themselves, impacts to the hydrologic structure of the area could still affect the quantity or quality of water in the springs. If the supporting hydrology is impacted, springs could not be restored to their prior condition. For this reason, the EPA supports the inclusion in Alternative C of an NSO stipulation for the key spring areas (defined where multiple springs in the area may be hydrologically connected by the geologic setting) as more appropriately protective than the controlled surface use (CSU) stipulation proposed under Alternative D. As proposed, the CSU would require a hydrologic assessment, a drilling plan that demonstrates how water resources would be protected, and a water monitoring plan. While the intention of this stipulation is sound, it may be difficult or impossible to develop a drilling plan that "demonstrates how water resources would be protected," as proposed in the CSU. For example, cement failure can allow movement of fluids, including gas, up and down the wellbore and potentially into other aquifers. According to a large study of the Marcellus Shale, well barrier or integrity failure rates on wells inspected between 2008-2013 was about 6% (<http://www.sciencedirect.com/science/article/pii/S0264817214000609>).

Ensuring a good cement bond all the way to the surface helps limit the potential for migration of fluids, including natural gas, into the aquifer feeding the springs. It also helps to ensure that flow of local groundwater to the springs is not intercepted and lost down the well. In addition to ensuring that surface hydrology is protected, the EPA offers the following suggestions for protection of groundwater and below-ground hydrologic structure in order to protect the flow and quality of groundwater to the springs:

1. Ensure adequate cement volumes and cement returns to surface.
2. Require well-integrity testing including cement bond logs (both initially and as part of on-going maintenance) to ensure a good cement bond and a formation integrity test on the surface casing shoe to ensure the formation is competent and does not fracture creating a conduit for fluid flow outside of the well casing and cement.

Closing

Thank you for your responses to the air and water quality concerns the EPA has identified and for the opportunity to review and comment on this Final EIS. If you have any questions or would like to discuss our comments, please feel free to contact me at 303-312-6704. You may also contact Molly Vaughan, lead reviewer for this project, at 907-271-1215 or by email at vaughan.molly@epa.gov.

Sincerely,



Philip S. Strobel
Director, NEPA Compliance and Review Program
Office of Ecosystems Protection and Remediation