



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Ref: EPR-N

FEB 29 2008

Mr. Michael Blenden
San Luis Valley NWR Complex
U.S. Fish and Wildlife Service
Region 6, National Wildlife Refuge System
9383 El Rancho Lane
Alamosa, Colorado 81101

Re: Baca National Wildlife Refuge Oil
Explorations Draft Environmental
Assessment

Dear Mr. Blenden:

The United States Environmental Protection Agency (EPA) has reviewed the Draft Environmental Assessment (DEA) for the Baca National Wildlife Refuge (Refuge) Oil Explorations Project prepared by the U.S. Fish and Wildlife Service (USFWS). In accordance with our responsibilities under the National Environmental Policy Act (NEPA), 42 U.S.C. §4371 *et seq.* and the Clean Air Act (CAA) §309, 42 U.S.C. §7609, EPA offers the following comments for your consideration.

This proposed exploratory drilling project will occur inside the Baca National Wildlife Refuge, which is near the town of Crestone, within Saguache County, Colorado, and in close proximity to the Great Sand Dunes National Park. The Great Sand Dunes National Park is a federal Class I area under the Clean Air Act, requiring special protection of air quality and air quality related values, such as visibility. As noted in the DEA, the Baca Refuge was established to protect the region's hydrology as well as the ecological, cultural, and wildlife resources of the area. The USFWS' stated objective for the DEA is to ensure that initial exploration of the mineral estate under the Refuge by Lexam Exploration Inc. (Lexam) is conducted in a reasonable manner and to establish stipulations and recommendations that would protect the Refuge's surface estate and resources. Lexam has proposed to drill two exploratory wells approximately 14,000 feet deep from two separate well pads and construct access roads to each well pad in the Refuge. Lexam has identified three potential well pad sites, but will use only two of these sites for the exploratory phase of their project. The DEA estimated that up to 14.5 acres of land disturbance would occur in the construction of the well pads and access roads.

NEPA requires agencies to study the potential environmental impacts of any major federal action. USFWS's involvement in Lexam's drilling proposal via the establishment of stipulations and recommendations to ensure protection of the area's resources renders this a major federal action covered under NEPA (40 C.F.R. §1508.18). Pursuant to NEPA, USFWS has prepared this DEA to ensure that initial exploration of the mineral estate is conducted in a reasonable manner and to determine whether the proposed action by Lexam will have a significant impact(s) on the surrounding environment as defined by NEPA, 40 CFR Part 1501.4(2)(c). The DEA does not consider and evaluate the potential impacts of production for these two exploratory wells. Should the wells go to production, additional NEPA analysis will be required to evaluate the potential significant environmental impacts associated with that activity.

Environmental assessments, such as this one, must provide sufficient evidence and analysis to address whether a project's impacts will be significant. If the agency finds that the action will significantly affect the quality of the human environment, it must prepare an Environmental Impact Statement (EIS). After our review of the DEA prepared for Lexam's proposal, EPA's position is that the DEA does not provide sufficient information to allow USFWS to determine whether this project will have significant impacts and whether preparation of an EIS is necessary. EPA has identified four major areas of concern that we believe warrant further explanation, studies and analysis to allow USFWS to make this determination. These areas include: air quality, water quality, groundwater, and socioeconomics.

Air Quality

The DEA discusses air quality in very general terms. Because of this, EPA has found it difficult to understand or evaluate air impacts caused by the proposed exploratory drilling operation. It is our determination that there needs to be a more rigorous air analysis undertaken to understand the significance of the proposed action on the surrounding airshed. The critical need for this additional information is amplified due to the location of the proposed drilling pads and operations near sensitive air sheds. The proposed drilling operations are to be conducted approximately 12 miles from the Great Sand Dunes Class I area and 1.5 miles from a sensitive Class II area.

The Clean Air Act (CAA) requires special protection of air quality and air quality related values (such as visibility) in many of the nation's wilderness areas and national parks. Specifically, section 160 of the CAA requires measures "to preserve, protect and enhance the air quality in national parks, national wilderness areas, national monuments and other areas of special national or regional natural, recreation, scenic, or historic value." (42 U.S.C §7470.) The CAA contains provisions aimed at "remediating... impairment of visibility in mandatory class I Federal areas," (42 U.S.C. §7491), as well as general provisions for a Prevention of Significant Deterioration (PSD) program designed to protect federal Class I areas from air quality degradation under Subpart I of Part C. Class I Areas include national parks and wilderness areas of a certain size and are allowed only very small increments of new pollution above already existing air pollution levels. Class II areas (the default designation) also are limited in their

allowable increments of new pollution, though not as stringently as Class I. The PSD program places an affirmative responsibility on federal land managers to protect air quality in many of the most important national parks and wilderness areas in the nation from human-caused pollution. (42 U.S.C §7475(d)(2)(B).) The Wilderness Act, 16 U.S.C §1131 *et seq.*, further directs the federal land management agencies to protect the wilderness character of those areas designated as wilderness. In that Act, Congress recognized the importance of preserving designated areas in their natural condition and declared a policy to “secure for the American people of present and future generations the benefits of an enduring resource of wilderness.” (16 U.S.C §1131(a).)

Despite the proximity of the proposed drilling operations to the federal Class I Great Sand Dunes National Park, the DEA fails to provide any analysis of potential impacts to visibility at the National Park. Depending on local meteorology, emissions from even a small number of drilling operations may impact visibility in the Class I area. To support a Finding of No Significant Impact, the NEPA document should include an analysis of potential impacts to visibility at the neighboring Class I and sensitive Class II area. Should the analysis indicate the potential for impacts to visibility, EPA recommends the NEPA analysis consider mitigation measures, such as low-emission drilling rigs (i.e. Tier II, Tier III).

While the DEA provided the Colorado Department of Public Health and Environment (CDPHE) Emission Inventory for Saguache County and generally described the drilling operations, it did not offer specific details, such as emission rates, duration of drilling or completion operations, or type of drilling rig. Further, no discussion on the type and volume of support vehicular traffic was included. Similarly, the DEA contains minimal air quality and meteorological data for the area. Typically EPA prefers a summary of existing ambient air conditions from monitoring sites located nearby (see: <http://www.epa.gov/air/data/index.html>, <http://www2.nature.nps.gov/air/monitoring/ads/adsreport.cfm>, and <http://vista.cira.colostate.edu/views/>.) Such monitoring and drilling operation information forms the basis for completion of a project-specific emission inventory and the subsequent air analyses that are typically found in NEPA documents for oil and gas operations. For full disclosure, EPA recommends the NEPA analysis include a specific accounting of all air emissions for the project. In addition, EPA suggests the NEPA document include evaluation of the project’s potential impacts on relevant air quality standards, including (1) the National Ambient Air Quality Standard (NAAQS) and Colorado Ambient Air Quality Standards (AAQS), (2) Prevention of Significant Deterioration (PSD) increments including NO₂, PM₁₀, CO, and SO₂, and (3) nitrogen and sulfur deposition rates.

In our further review of the DEA, we found no information regarding the cumulative effects to air quality. Without this information, it is not possible for the USFWS, EPA, the State and the public to determine whether the cumulative effects indicate that this project will have a significant impact. In addition, given that this project involves an exploratory drilling operation, an anticipated reasonable foreseeable development (RFD) plan is needed in the event natural gas or oil is found to be viable for production purposes. The DEA notes that oil and gas exploration is an iterative process, but then states that it is not possible to determine whether any future exploration will occur. While agencies are not required to evaluate effects that are highly speculative or indefinite, it is not unreasonable that following the initial exploration, additional

exploration wells would be necessary. Because of the omission of an RFD, EPA, other federal and state agencies, and the public cannot determine the full extent of the potential impacts to the surrounding areas from this project.

Surface Water (Wetlands)

In EPA's review of the DEA, we found limited information on the impact of Lexam's proposed action on aquatic resources. This is particularly troublesome given that the proposed purpose of the Refuge is "to restore, enhance and maintain wetland, upland, riparian and other habitats for wildlife, plants and fish species." (DEA, page 1-1).

The DEA has identified 1,585 acres of wetlands within the project area (Table 3-2). The DEA goes further in breaking down the project area's wetlands into wetland and vegetation types in Tables 3-3 and 3-4. When EPA reviewed the DEA's description of wetlands, we could find no information on the acreage of wetlands, wetland type or value of the wetlands impacted by the proposed alternatives. This information is essential in order to properly evaluate the project impacts to existing aquatic resources, meet NEPA requirements and federal wetland regulations and policy, and develop mitigation options. The NEPA document should contain sufficient information to support a USFWS decision on the significance of the aquatic impacts as well as the decision on whether a CWA Section 404 permit is necessary. Furthermore, the NEPA document should include how the federal land management agency will adhere to the guidance provided in the 1990 Corps of Engineers and EPA Memorandum of Agreement (MOA) concerning the determination of mitigation under the Clean Water Act Section 404(b)(1) Guidelines.

In addition, we recommend that the USFWS consider the requirements of the Wetlands Protection Executive Order 11990 in the NEPA analysis. Executive Order 11990 directs federal agencies in certain circumstances to provide leadership and take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. EPA requests that the USFWS provide discussion on how Executive Order 11990 applies to the proposed action at the Refuge and how USFWS will comply with this Executive Order.

Groundwater

As groundwater is an especially important and vulnerable resource in the San Luis Valley, EPA recommends the USFWS provide additional information on potential impacts to resources in the area. The aquifers that underlie the valley store very large amounts of groundwater which is critical for maintaining groundwater dependant ecosystems, providing water for irrigation, and providing drinking water. Though the aquifers hold large quantities of groundwater in storage, there is little annual recharge. The Baca Wildlife Refuge is located near the mountain front where recharge to the aquifers occurs. The NEPA analysis should provide more detailed information, including data and maps, on the occurrence of groundwater in the valley fill sediments that underlie the proposed drill site. In addition, the NEPA analysis should present information on the total thickness, saturated thickness, recharge and discharge for the

aquifers that underlie the site. The DEA, and numerous reports on the hydrogeology of the San Luis Valley, indicate that the "deeper" aquifer extends to 4500 feet below the land surface - yet the plan only requires casing to be set to 3000 feet. EPA requests information regarding how the lower part of the aquifer will be protected.

In addition, EPA recommends the NEPA analysis include information about permitted and actual use of groundwater in the vicinity of the Refuge. Information may be obtained from the Colorado State Engineer on the number and location of existing, permitted wells (domestic, irrigation, stock, and public supply.) Finally, EPA recommends more detail be provided on the proposed groundwater monitoring program that is included in the DEA such as: the party(ies) responsible for development and implementation of the monitoring program; sampling frequency; and monitoring data management.

Socioeconomic Resources

The DEA has not fully evaluated the impacts that exploratory drilling and potential full field development will have on the communities surrounding the Refuge. As stated in the DEA, "Recreation and tourism also has a substantial role in regional economy." (DEA, page 3-39). It is EPA's understanding that the recreational attractions and economics to this portion of the San Luis Valley is supported by an environmental setting that is based on natural beauty, lack of industrialization and a spiritual attraction of the area. The DEA has not evaluated or analyzed fully how the proposed action from Lexam will impact this unique environment and its uses.

In conclusion, EPA does not believe the DEA provides sufficient information to allow USFWS to determine whether this project will have significant impacts and whether preparation of an EIS is necessary. To this end, EPA recommends the NEPA document be supplemented with additional analysis and study on potential impacts to air quality, water quality, and socioeconomics. If you have any questions or would like to discuss our comments, please contact Dick Clark of my staff at (303) 312-6748 or by email at clark.richard@epa.gov.

Sincerely,



Larry Svoboda
Director, NEPA Program
Office of Ecosystems Protection and Remediation

