Ms. Laura Kilpatrick, Esq.
DOE ULP Program Manager
Uranium Leasing Program Programmatic EIS
Office of Legacy Management
U.S. Department of Energy
11025 Dover Street, Suite 1000
Westminster, CO 80021

Re: Scoping Comments on Uranium Leasing Program Programmatic Environmental Impact Statement

Delivered via email: ulpeis@anl.gov

September 9, 2011

Dear Ms. Kilpatrick:

The Wilderness Society has a strong interest in resource management in western Colorado, and we commend the Department of Energy for undertaking a more extensive analysis of the potential impacts of the Department’s uranium leasing program through a programmatic environmental impact statement. The unique and far-reaching effects of uranium exploration and development, combined with irreplaceable sensitive natural resources in and near the program area, warrant such a comprehensive analysis.

The Wilderness Society is a national organization with more than a half a million members and supporters nation-wide, and an active membership in Colorado. We have a very active program in the Dolores River basin, where our staff, volunteers and members live, work and recreate. The mission of The Wilderness Society is to protect wilderness and inspire Americans to care for our wild places. We have worked for more than 70 years to maintain the integrity of America's wilderness and public lands and ensure that land management practices are sustainable and based on sound science to ensure that the ecological integrity of the land is maintained.

We request that the PEIS fully determine and evaluate the impacts of managing federal oversight of the 25,000-acre Uranium Leasing Program and the associated reclamation of mined lands in the Uravan Mineral Belt of western Colorado and eastern Utah. We further request careful consideration of the following additional comments regarding the PEIS.
Role of the Uranium Leasing Program

The purpose of the uranium leasing program has changed dramatically since its inception in 1948, when there existed a defined relationship with national security. The role of uranium leasing in the Uravan Mineral Belt has also changed significantly since that time. Since the 1980s, production has continued only on a very small scale. The PEIS must clearly define the purpose and need for the uranium leasing program within the context of current and future conditions. The examination of need should consider the relationship of the leasing program to alternative uses of the lands, including but not limited to such uses as preserves of wilderness-quality lands, primitive and backcountry recreation, renewable energy, recreation, grazing, hunting, habitat for wildlife, and water sources for people and agriculture. The analysis should include evaluation of opportunity costs with respect to potential alternative uses, and consider how uranium resource development may preclude future uses which depend on preservation of sensitive natural resources and world-class scenery in the area. The analysis must also incorporate the best and most recent available economic information to weigh the benefits and impacts of uranium development with alternative uses of the land. We believe it is also critical in the analysis to separate any direct economic benefits to local communities from benefits to out-of-region interests. Similarly, the relationship to domestic uranium markets must be separated from that to foreign markets in the analysis.

The PEIS should fully consider a program purpose greatly relevant at this time, that of reclamation and cleanup. The role of reclamation and cleanup should be assessed for current mining and milling sites, for sites that are currently leased or permitted but where activity has effectively ceased for some years, and for abandoned sites that remain contaminated and unreclaimed. The associated environmental and economic benefits of reclamation of mined public lands in the Uravan Mineral Belt should underscore the general scope of the PEIS, as well as establishing and defining the extent and manner in which lands are reclaimed. The full environmental, economic and social legacy of previous uranium development in the Colorado River Basin must be evaluated in order to accurately define the need for continued reclamation. At the same time, the associated economic impacts and job generation stimulated by reclamation activities should be understood as a formative base for defining the scope of the PEIS.

The changing mission of the Department of Energy and currently defined objectives of the State of Colorado form another underlying purpose and need for the PEIS as reflected in increasing demand and desire to develop forms of renewable energy. The potential for renewable energy development in the Uravan Mineral Belt should underscore a comparative analysis of the socioeconomic benefits of energy development of all kinds, including the cumulative impact analysis of oil and gas drilling, shale production, and mining of precious metals, coal, potash, and other minerals in the same region. The initiatives of the Department of Energy to reduce national dependence on foreign oil imports and to establish U.S. leadership in global efforts to develop renewable energy standards directly correlate with the highly anticipated economic activities of the next century. At the same time, the State of Colorado has established aggressive goals to develop a renewable energy standard of 20 percent by 2020 as well as solidly establishing
the state as a national leader in this sector and developing up to 600,000 clean-energy jobs. In addition, public lands within the Uravan Mineral Belt that have previously been mined and reclaimed provide potential “brownfield” redevelopment opportunities when considered in the context of site-specific renewable energy projects.

**Environmental Impacts of the Leasing Program**

The potential impacts of renewed mining on the lease tracts on other resources are extensive and must be thoroughly analyzed. Impacts to environmental resources are highly critical to consider, along with potential impacts to other valuable resources including but not limited to cultural resources, potential for heritage and general tourism, scenery, historical resources, and recreational resources. The PEIS must analyze the full, cumulative impacts of uranium mining not only within the leasing tract study area, but also on all nearby lands where uranium development occurs, and on downstream and downwind environments.

Environmental impacts to be evaluated include but are not limited to human health and safety, ground and surface waters, regional air quality, wildlife habitat and ecosystems, endangered and sensitive flora and fauna, soil quality, wetlands and floodplains, scenic viewsheds, and the management and disposal of hazardous and radioactive wastes. These impacts must be considered cumulatively and should be determined in informed consultation with all federal, state and local agencies that manage lands or resources in the Uravan Mineral Belt and nonprofit organizations and stakeholder groups that represent the public interest in these areas. The analysis must also address the pressing and unsolved national problem of the lack of a facility to properly dispose of spent nuclear fuel and other high-level radioactive wastes.

**Impacts to Wilderness-quality lands:**

The program area contains or is near to multiple lands recognized for their precious and irreplaceable wilderness qualities. These wilderness-quality lands include: Snaggletooth Citizen Wilderness Proposal (CWP) area; Dolores River Canyons Wilderness Study Area (WSA) and CWP; Sewemup WSA and CWP; Maverick Canyon CWP; McKenna Peak WSA and CWP; and Unaweep CWP; along with wilderness-quality lands in Canyons of the Ancients National Monument. Leasing should be withheld in these areas.

It is especially important to anticipate and prevent irreversible diminishment of these wilderness-quality lands by mining activity. These lands form an increasingly rare resource for human exploration and enjoyment in a remote and primitive natural setting. The ecological benefits of undisturbed landscapes are immeasurable, and typically support rare species and habitats, sensitive natural processes and systems, high-quality game habitat, and reserves of biodiversity to strengthen resilience for adaptation to climate change.
On a practical level including economic benefits, wilderness-quality lands are especially attractive for recreation and tourism among many hikers, hunters, birdwatchers, climbers, anglers, equestrians, rafters, geologists and naturalists.

**Range of Alternatives**

The range of alternatives needs to be extended and elaborated to include several separate components:

The concept of expanding the leasing program to additional uranium claims needs to be significantly elaborated, in order to adequately analyze the potential impacts of such an action. Expansion of the leasing program to encompass additional uranium mining claims could provide benefits through increased oversight and management of mining activity, and generation of royalties. Additionally, bringing all or most uranium claims in the area under one set of rules could provide certainty and standardization for mining operators, and greater effectiveness and efficiency for federal management. Conversely, expansion of the program involves potential risks and negative environmental impacts. Significant elaboration of all these issues is necessary in the PEIS. The potential for increased federal oversight of critical uranium operations as contemplated by a greater withdrawal of public lands under the authority of the Atomic Energy Act and into the Uranium Leasing Program should be carefully considered under the broad scope of the PEIS because such an analysis would help determine the full, cumulative impacts of uranium production on public lands.

The existing economic conditions of the regional economy and the economic benefits of both reclamation and renewable energy development as potential sources of local employment should also form a basis for developing alternatives. In particular, the brownfield redevelopment of reclaimed mining areas for the purposes of developing small-scale renewable energy projects and stimulating local employment will allow the PEIS to analyze the broader purpose and need for this type of development within the region. Analysis of renewable alternatives should consider local hiring and local contracting preferences as a means to stimulate job production at the community level.

A further component that is critical to include in the range of alternatives is the potential to reduce active leases in areas that possess especially sensitive natural resources and areas that are being considered for other special designations through legislative or administrative processes. The ability to abate leasing and mining in select critical areas is necessary to preserve options for alternative land use while legislative and administrative planning processes continue. In particular, we believe that a process should be established to withhold, and make inactive, leasing in the following areas:

- Leases directly on or adjacent to the Dolores River and key tributaries, including the Slick Rock tracts, and lease tracts near the confluence of the San Miguel and Dolores rivers
- Lease tracts where community processes have been underway to develop potential legislative proposals for special designations including wilderness and national conservation areas; and leases in existing and proposed Areas of Critical
Environmental Concern, Lands with Wilderness Character, and Special Recreation Management Areas in BLM Resource Management Plan revisions; these leases likely include all or a portion of the tracts near Outlaw Mesa; tracts near the confluence of the San Miguel and Dolores rivers; and potentially also tracts along the northern side of Paradox Valley.

**Additional Scoping Issues**

**A. Water Quality and Quantity:** An increase of uranium mining within the Uravan Mineral Belt will impact the Dolores and San Miguel River watersheds and other important tributaries of the Upper Colorado River Basin, and the cumulative impacts must be analyzed and understood from a basin-wide perspective. These impacts include but are not limited to:

- Depletion of groundwater, aquifers, surface bodies, and the streams and tributaries of the Colorado River in order to supply industrial mining and milling operations, reclamation, and waste disposal and management;

- Correlation between water depletions for uranium production and pressure placed on regional compacts and agreements governing the use of the Colorado River;

- Potential for conflict with competing municipal, agricultural, industrial, recreational and conservation uses and demands; the analysis should carefully consider increasing interest in instream uses for boating, fishing and other recreation;

- Cumulative impacts of radioactive and toxic substances emitted into water supplies;

- Cumulative impacts to floodplains, wetlands, riparian zones and intermittent streams.

- Complex impacts to unique hydrological features of the Dolores River basin; such features include those associated with the juxtaposition of differentially permeable geologic strata, salt domes and geologic faults. This analysis must consider that impacts to water quality and hydrologic function may have extreme or unpredicted outcomes when unique geologic and hydrologic features may concentrate introduced substances in surface- or groundwater, or transport introduced substances through highly permeable layers to more distant locations and other water sources. The sort of unique hydrologic features that may be affected in the leasing program area include ephemeral streams, waterfalls and pools; elevated pools; seeps and springs; and alkaline streams and wetlands.

In addition, the PEIS should fully consider the program-wide actions necessary to comply with all Clean Water Act and state water protection regulations. Clean Water Act and permit violations within the existing lease tract areas should be fully documented and
disclosed in order to accurately understand water quality impacts from new development and facilitate enforcement by federal and state regulators.

B. Air Quality and Climate Change: To date, air quality impacts have not been adequately or cumulatively analyzed from a regionwide perspective, and cumulative, regional air modeling and studies should be included in the PEIS in order to fully analyze the impacts of increased uranium production both within the Uranium Leasing Program study area and on neighboring public lands in Colorado and Utah. These studies should include analysis of toxic emissions, radon gas, and radionuclide particles carried by the region’s extensive dust and wind activity as well as air emissions generated from hauling and transportation to and from uranium sites. Impacts to be analyzed should include but are not limited to:

- Disclosure and analysis of all emissions and airborne substances released from uranium mining and milling operations and the associated impacts to all downwind communities, municipal watersheds, soil conservation areas and deposition zones;
- Dust impacts generated by hauling and transport of ore, yellowcake and supplies to and from mines, and from mining and associated disturbances of land and soils;
- The cumulative and project-specific impacts of mine venting and portals, as well as from ore pads, stockpiles, waste piles, exploration sites, evaporation ponds, and tailing compounds;
- Analysis of the available radon emissions control technology for each leasing tract area;

In addition to air quality issues, the PEIS should analyze likely and possible impacts to the climate caused by mining and milling development in the Uravan Mineral Belt. These impacts include but are not limited to:

- Cumulative carbon and greenhouse gas emissions from mining, milling, transporting, shipping, and export of ore and yellowcake;
- Analysis of the likelihood and potential impacts from storm events and natural catastrophes;
- Analysis of how increased mining and milling in the region will exacerbate larger climate change trends and impacts to vegetation already at work in sensitive ecosystems present in the study area, such as high desert and canyon ecosystems, submontane and montane forests, and critical riparian zones;
- Analysis of impacts in the context of changing federal regulation of carbon dioxide and other industrial air pollutants.
C. Species Protection, Wildlife Habitat, and Healthy Ecosystem Management: The development of uranium mining across the Uravan Mineral Belt should be fully analyzed in terms of impacts to all sensitive species, economically valuable game species, natural systems and processes, sensitive habitats and wildlife movement corridors. Species that need extensive consideration in the PEIS include those with federal listing status - endangered, threatened and candidate species; as well as BLM sensitive species; Colorado state threatened and endangered species and species of special concern; species and communities with a Colorado Natural Heritage Program (CNHP) ranking G1, G2, and G3; CNHP Potential Conservation Areas with rankings of B1, B2, and B3; and important rare plant areas recognized by the Colorado Rare Plant Conservation Initiative (see: [http://conserveonline.org/workspaces/corareplantinitiative](http://conserveonline.org/workspaces/corareplantinitiative) for reports and maps).

The PEIS should particularly elaborate the analysis for species whose status has changed in recent years, or for whom significant new research is available. Such species include Gunnison sage grouse, recently ranked by the USFWS as a priority “2” for listing under the ESA, and for whom extensive new research is becoming available from federal and state sources; and Colorado hookless cactus, recently reevaluated by the USFWS and taxonomically split from the Uinta Basin hookless cactus.

Other species of special interest and concern with relevance to the program area include but are not limited to: Uncompahgre Fritillary butterfly, Bald eagle, Peregrine falcon, Southwestern Willow flycatcher, Western Yellow-Billed cuckoo, Mexican Spotted owl, Burrowing owl, Spotted bat, Allen’s Big-Eared bat, Small-Footed myotis, Big Free-Tailed bat, Pale Townsend’s Big-Eared bat, river otter, Bighorn sheep, Canada lynx, Gunnison prairie dog, White-Tailed prairie dog, Colorado Pikeminnow, Razorback sucker, Humpback chub, Bonytail, Bluehead sucker, Flannelmouth sucker, Roundtail chub, and Canyon tree frog. The potential impacts on the four endangered Colorado River fish downstream are of high concern, as are impacts to the candidate species roundtail chub and the other declining native fish species found in the Dolores river.

The PEIS should consider as an underlying protocol to analysis of wildlife and habitat impacts the interconnectedness and fragility of ecosystems in the Uravan Mineral Belt, and the necessary broad perspective and study that an ecosystem-based analysis requires. Mitigation and management plans should take into account conservation goals of maintaining healthy and diverse ecosystems in order to sustain the web of life upon which human habitation is dependent.

Impacts to be analyzed should include but are not limited to:

- Analysis of impacts, including site-specific data, to critical habitat of candidate and listed species by state or federal governments;
- Impacts to recovery efforts of Colorado River fish species;
- Impacts to reintroduction efforts of threatened and endangered species such as Bighorn sheep, Canada lynx, and River otter;
- Impacts to cryptobiotic soils and rare soil lichens;
- Impacts to species viability for species with a very limited range, or who depend particularly on habitat in the vicinity of the program area; such species may include, but are not limited to, Gunnison sage grouse, Gypsum valley cateye, Payson lupine, Naturita milkvetch, Paradox breadroot, and additional rare plants;
- Analysis of cumulative impacts to wildlife from past and current mining and milling;
- Impacts to migratory bird species protected under the Migratory Bird Treaty Act;
- Exclusion of critical habitat area from leasing tract areas;
- Analysis of impacts from seasonal wildlife closures, such as limits on mining operations in winter range for elk and deer.

D. Unique Characteristics of the Area, Recreation, and Land Management Concerns: The Uravan Mineral Belt is home to the spectacular Colorado Plateau canyonlands formed by the San Miguel and Dolores Rivers and is defined by its predominantly agricultural and rural character. The region includes sweeping rangelands and sagebrush habitat, pinyon-juniper and pine forests, and dramatic geological formations that attract multitudes of visitors and extensive use of public lands. The region includes federally designated wilderness areas and extensive roadless areas suitable for wilderness designation. Adjacent public lands include state parks and wildlife areas; national parks, monuments and recreation areas; and many stream segments of the Dolores and San Miguel rivers that have been found eligible and preliminarily suitable for Wild and Scenic River designations. Multiple public uses of these lands co-exist, including conservation, concentrated and dispersed recreation, hunting, and grazing; however, an increase in mining activities deters alternative uses of the land, alternative uses that may present longer-term and more stable economic benefits for the region.

Impacts to the unique characteristics of the region and current uses of the land that should be fully analyzed in the PEIS include but are not limited to:

Emerging Recreation and Tourism Trends:
The program area encompasses lands increasingly valued for recreational use and tourism. The Dolores River corridor and adjacent lands provide unique and exceptional recreation opportunities that are significant at the regional and national scale, including but not limited to rafting and boating, hunting and angling, backcountry equestrian use, climbing, geologic study, motorized recreation, hiking and heritage tourism. The PEIS should fully evaluate the potential impacts to recreational uses and the accruing economic benefits. Specific potential impacts to recreation include, but are not limited to:
• Impacts to the development of the Paradox Trail and bicycle recreation;

• Impacts to hunters in terms of lost habitat and changes to wildlife areas and the introduction of hazardous and radioactive materials into the local food web;

• Impacts to hanggliders, paragliders and gliders from air emissions and visual disturbances;

• Impacts to boaters, paddlers, anglers and other river-based recreational users;

• Impacts to hikers, climbers, birders, artists, photographers and other non-mechanized and non-motorized recreational users.

• Impacts to scenery and natural appearance, and desirability as a recreational or visitor setting

• Impacts to designated Scenic Byways, roads and other tourist attractions;

• Protection of the predominantly natural and wild character of the San Miguel and Dolores Rivers and potential degradation caused by increased mining;

• Compatibility with the existing land management plans and future revisions to Bureau of Land Management and U.S. Forest Service resource, forest and travel plans; this is particularly important in light of the fact that the BLM field offices in the region are all currently revising their resource management plans, with that of the San Juan Public Lands Center (a joint BLM/USFS plan) nearing completion, and that of the Uncompahgre and Grand Junction Field Offices well underway;

• Compatibility with existing county master plans;

• Impacts to existing and future ranching and farming, impacts to water quality for stock water and irrigation, and potential loss of grazing acreage;

E. Historical, Cultural and Paleontological Resources:
The leasing program area encompasses a vast array and impressive diversity of intact cultural and historical resources. It is critically important to preserve the records of natural and human history in the area, as some of this history is unique and uncommonly preserved in the area, and of national significance. Important resource considerations to address in the PEIS include:

• Preservation of paleontological resources, including fossil records of interest to science and heritage tourism

• Preservation of cultural resources including exceptional features of rock art, dwelling sites, game drives, and much more
• Analysis of impacts to Colorado Plateau areas sacred to Native Americans, areas and materials used in current times for ceremonial purposes, and burial sites

• Analysis and protection of historic artifacts and sites, including Spanish and Anglo settlement, mining era and Cold War history, and associated potential for interpretation and heritage tourism

F. Hazardous and Radioactive Waste and Tailings: Uranium mining and milling are associated with the generation of large amounts of radioactive and toxic wastes; over 90 percent of mined rock becomes waste material in a typical uranium mining operation, and additional radioactive and toxic wastes are generated at milling operations that require extensive treatment techniques at tailing compounds. The PEIS must analyze and provide an accurate picture of the amount and character of hazardous and radioactive wastes associated with uranium mining on public lands. This must include a full analysis of the waste generated throughout the entire nuclear fuel cycle, from the waste rock piles at mining sites, to the tailing compounds at mill sites, to the waste generated at enrichment and fuel fabrication facilities, to the waste generated at nuclear power plants and national laboratories that require technologically advanced disposal techniques and permanent storage facilities that must withstand the test of time. The final destination for each type of waste should be analyzed in order to understand and mitigate the site-specific impacts of waste transportation, storage and disposal.

G. Exploration and Prospecting: Active leasing under the auspices of the DOE Uranium Leasing Program will stimulate further exploration and prospecting activities on adjacent public lands and further burden the Bureau of Land Management’s ability to review and approve permits for mining operations and conduct associated environmental assessments. The PEIS must thoroughly evaluate the related environmental and socioeconomic impacts of increased exploration activity over the extent of unpatented mining claims in western Colorado and eastern Utah. The actual and potential impacts on these lands due to prospecting activities must be considered, as well as the ability of federal land management agencies to manage and mitigate those impacts. A baseline inventory of all abandoned, reclaimed and current mining sites should be conducted in order to facilitate monitoring of public lands and their eventual cleanup.

H. Transportation: A reactivated uranium industry in the Uravan Mineral Belt contemplates a significant increase in traffic on regional highways and roads under the jurisdiction of multiple entities, creating environmental and fiscal concerns. Impacts to be analyzed include but are not limited to:

• Potential impacts from new road development to accommodate exploration and mining activities, including run-off and water pollution;

• Specific impacts to Montrose County Road Y11 (the “River Road”), which closely follows the San Miguel and Dolores River corridors, poses special problems to protecting the river during accidents that involve hazardous or
radioactive releases, and is likely to see a significant increase in truck trips as the lease tracts are mined and if the proposed Piñon Ridge Mill is operating;

- Impacts of truck traffic and hauling through populated areas and communities;
- Impacts and benefits of closing some backcountry roads and reducing road inventories to enhance habitat protection and environmental qualities rather than allowing access for mining;
- Impacts of truck traffic carrying finished uranium products out of the region;
- Impacts to low-quality county-maintained roads that would be subject to use by trucks accessing mines throughout the region and the associated increase in costs to local governments to maintain the roads;
- Analysis of easements, approvals and permits necessary to authorize hauling on regional roads.

I. Socioeconomic Issues: For the past three decades, the interconnected regional economies of western Colorado and eastern Utah have become dependent upon the economic drivers of agriculture, tourism, recreation, real estate, and the outside investment of retirees and part-time residents who cherish the natural landscape. Since the early 1980s, the region has experienced steady declines in most natural resource industries, including mineral extraction. Uranium mining presents the potential for short-term job creation, however also poses significant potential for negative environmental and socioeconomic impacts.

The PEIS should conduct analysis of impacts that include but are not limited to:

- Impacts to the agriculture, ranch and farm sector, including the burgeoning growth of sustainable and organic farming in the region;
- Impacts to the existing growth sectors of tourism, recreation, and outside investment;
- Impacts to renewable and alternative energy development, including hydro and solar power;
- Evaluation of hiring preferences and preferential bidding for local employees and employers;
- Analysis of fair wage and labor practices;
- Analysis of the need for housing development in proximity to uranium mines and mills;
• Analysis of impacts to median wages and other prosperity indicators;

• Analysis of impacts from the volatility and instability of the uranium industry, including effects of intermittent employment and lay-offs;

• Analysis of the socioeconomic impacts of light, noise and dust pollution created by uranium mining and milling;

We appreciate your thoughtful consideration of our comments.

Sincerely,

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