U.S. DEPARTMENT OF ENERGY

Finding of No Significant Impact, Uranium Lease Management Program

AGENCY: U.S. Department of Energy

ACTION: Finding of No Significant Impact

SUMMARY: The U.S. Department of Energy (DOE) has prepared a programmatic environmental assessment (EA) of the proposed action to continue leasing withdrawn lands and DOE-owned patented claims for the exploration and production of uranium and vanadium ores. The Domestic Uranium Program regulation, codified at Title 10, Part 760.1, of the *U.S. Code of Federal Regulations* (CFR), gives DOE the flexibility to continue leasing these lands under the Uranium Lease Management Program (ULMP) if the agency determines that it is in its best interest to do so. A key element in determining what is in DOE's "best interest" is the assessment of the environmental impacts that may be attributable to lease tract operations and associated activities. On the basis of the information and analyses presented in the EA for the ULMP, DOE has determined that the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment, as defined in the National Environmental Policy Act (NEPA) of 1969 (42 United States Code 4321 et seq.), as amended. Therefore, preparation of an environmental impact statement is not required for the ULMP, and DOE is issuing this Finding of No Significant Impact (FONSI).

SUPPLEMENTARY INFORMATION:

Background

In the post-World War II era, the U.S. Atomic Energy Commission (AEC) was charged with the responsibility of developing a supply of domestic uranium adequate to meet the nation's defense needs. That responsibility was met through the Ore Purchase Program, the Exploration Program, and the initial Uranium Leasing Program (1949-1962). These programs gave AEC the authority to withdraw Federal lands for the exploration and development of a viable domestic uranium source.

In 1974, the ULMP was initiated under the Domestic Uranium Program (10 CFR 760.1). The program's purpose was to maintain and preserve the nation's immediately accessible supply of domestic uranium and vanadium ores, to maintain a viable domestic mining and milling infrastructure required to produce and mill these ores, and to provide assurance of a fair monetary return to the U.S. Government. AEC (and its successor agencies, the U.S. Energy Research and Development Administration [ERDA] and DOE) was tasked with administering the program. Forty-three lease tracts located in Colorado (38 lease tracts), Utah (4 lease tracts), and New Mexico (1 lease tract) that comprise approximately 25,000 acres were included in the ULMP. Most of these lease tracts lie in a mineralized area known as the Uravan Mineral Belt, which includes a significant, if not dominant, portion of the known domestic uranium ore reserves.

Since 1974, AEC, ERDA, and DOE (in succession) have controlled and administered these 43 lease tracts for the exploration and development of viable uranium and vanadium resources. In 1984, only 33 of the original 43 lease agreements were renewed for a second 10-year period under the leases' renewal option. During the ensuing 10 years, three additional lease agreements were either relinquished to DOE or terminated by DOE. In 1994, the remaining 30 lease agreements were allowed to expire. Former leaseholders for 22 of the 30 lease tracts indicated to DOE a desire to participate in a future leasing program. The 22 tracts leased by these former leaseholders are addressed in the EA. The former leaseholders for the remaining 8 lease tracts requested relinquishment of their respective leases. While the NEPA process is being completed, the former leaseholders are being allowed to continue maintenance, security, and reclamation activities at the lease tracts to ensure that the mines and associated facilities do not deteriorate.

Proposed Action

DOE proposes to continue the ULMP by retaining the lands in withdrawn status and leasing the lands to former leaseholders interested in continuing their participation in the program. Continuation of the ULMP would allow 10 years of exploration, development, and mining on the 22 lease tracts. At the end of 10 years, DOE would evaluate the ULMP to determine if leasing activities should continue.

On the basis of current demand for uranium and vanadium, the level and types of mining activity expected under the proposed action could be similar to historical activities that occurred during the 1974–1994 lease period. Historically, activities conducted on the lease tracts occurred in three phases: preoperational (exploration), operational (mining), and postoperational (reclamation). On 7 of the lease tracts, only preoperational activities occurred; on the remaining 15 lease tracts, two or more phases occurred. Of the 11,536 acres encompassed by the 22 lease tracts, approximately 258 acres were actually disturbed or environmentally affected by past lease tract operations. About 75 percent of this disturbance (approximately 190 acres) was associated with operations on one lease tract.

Under the proposed action, new lease agreements, including applicable stipulations, would be issued to leaseholders before operations were resumed. DOE approval would be required for all lease activities.

Some new surface disturbances would require review or approval by agencies outside DOE, such as the Colorado Mined Land Reclamation Board, Colorado Division of Wildlife, Colorado Historical Society, U.S. Fish and Wildlife Service, U.S. Bureau of Land Management, U.S. Army Corps of Engineers, and U.S. Environmental Protection Agency (EPA). Prior to starting many activities, leaseholders would be required to obtain permits from, or comply with regulations specific to, these agencies. Consultation with the appropriate agencies would be required to ensure mitigation of impacts to natural and cultural resources.

Leaseholders also would be required to protect the health and safety of mine workers and the public by complying with Mine Safety and Health Administration (MSHA), U.S. Nuclear Regulatory Commission (NRC), and EPA regulations.

New surface disturbances associated with the three phases of mining are expected to affect an estimated 250 acres (about 2 percent of the 11,536 acres within the lease tracts) of previously undisturbed land. Approximately 50 percent of this new disturbance would be associated with the placement of mine-rock waste piles. Other new disturbances would be associated with roads, drill pads, small (encompassing less than 5 acres) surface mines, mine portals, or other surface-plant support facilities.

Environmental Impacts

The EA indicates that the environmental impacts from the proposed action would be minimal and are summarized in this FONSI. Impact descriptions have been made on the assumption that mining activities would continue at a level similar to that of historical activities and that an estimated 250 acres of previously undisturbed land would be affected during the next 10 years.

Socioeconomics

If the market were to allow a resumption of uranium and vanadium production, the local economies of communities in Montrose, San Miguel, and Fremont Counties, Colorado, and San Juan County, Utah, would benefit by increases in the number of jobs (up to an additional 250 jobs) and local and secondary wages. The increase in jobs could increase housing construction in the smaller communities near the lease tracts (located in Montrose and San Miguel Counties) and near the processing mills (located near Canon City, Colorado [Fremont County], and Blanding, Utah [San Juan County]).

Transportation

Under the proposed action, an average of 30 trucks (or truck-and-pup combinations) per day would transport uranium and vanadium ores to the processing mills near Canon City, Colorado, and/or Blanding, Utah. This increase in truck traffic along the transportation routes is not expected to (1) noticeably increase the number of accidents that occur along the routes, (2) affect the environment, or (3) increase radiation exposure to humans. Assuming a transportation rate of 30 trucks per day, a maximum of 0.12 deaths and 7.4 injuries per year could be expected to occur from ore-truck accidents. If an accident involving a spill were to occur, impacts to natural resources could include soil and vegetation disturbance (from cleanup activities) or, if the spill were to occur in a water source, a temporary increase in turbidity and total suspended solids. Wildlife could be injured or killed along the haul routes through collisions with haul trucks. Species most likely to be affected would include mule deer, elk, porcupines, rabbits, prairie dogs, ground squirrels, golden eagles, and turkey vultures. Radiation exposures to the truck driver and public during ore transport would be negligible and well below applicable standards.

Land Uses

Land uses on and adjacent to the lease tracts would continue to include mining (considerable mineral exploration and development has occurred historically in the vicinity of the lease tracts), recreation, piñon-juniper harvesting, and grazing. Activities occurring on the lease tracts under the proposed action would constitute a small portion of the activities occurring on lands adjacent to the lease tracts.

Mining: Mining of uranium and vanadium resources under the proposed action would deplete domestic reserves; however, the continuation of associated exploration activities could result in the discovery of previously unidentified ore reserves.

Recreation: Resuming preoperational, operational, and postoperational activities under the proposed action would have minimal effects on recreation in the lease tract areas. Potential increases in noise, dust, and human activity might deter recreationists from using public lands adjacent to the lease tracts; however, the numerous unimproved roads in the vicinity of the lease tracts would allow easy access to other areas.

Timber Harvesting: A small number of piñon pine and juniper trees could be removed as a result of access road and drill pad construction or mine site expansion. Because of the abundance of piñon pine and juniper on and adjacent to the lease tracts, however, impacts to these species would be negligible.

Agriculture and Grazing: Under the proposed action, a maximum of 5 to 8 animal unit months of forage (the amount of forage required to feed one cow and one calf for 5 to 8 months) could be lost over a period of 10 years as a result of surface-disturbing activities associated with preoperational and operational activities. This small loss in forage would have a negligible effect on the overall volume of forage in local grazing allotments.

Air Quality

Resumption of lease activities under the proposed action would result in local increases in fugitive dust. Regional air quality is not expected to be affected by these local increases. The leaseholder would be responsible for obtaining an air emissions permit from the State of Colorado if lease operations could result in the exceedance of the State opacity limit. However, lease tract operations would not likely require an air emissions permit.

Groundwater

Preoperational, operational, and postoperational activities under the proposed action are not expected to adversely affect groundwater resources on any of the lease tracts. The shallowest significant groundwater is in the Entrada Sandstone. Because this aquifer is generally several hundred feet below the surface of the lease tracts, surface-disturbing activities would have no effect on the aquifer. Downward percolation of recharge water, which could infiltrate at the surface, would be slowed considerably by the presence of the thick (several hundred feet), relatively impermeable Brushy Basin Member of the

Morrison Formation. The Entrada aquifer is hydrologically separated from the surface by the Brushy Basin and Salt Wash Members of the Morrison Formation and by the Summerville Formation.

Subsurface activities would have negligible effects on groundwater. With the exception of mines on three lease tracts, groundwater would not be present in notable amounts within the subsurface areas encountered during mining. Water might be brought into underground mines during drilling to prevent dust from becoming airborne and to remove cuttings from drill bits. This water would not be present in large enough quantities to transport mineral contaminants from the ore-bearing layer to underlying layers. Even if contaminants were to percolate downward, the Entrada aquifer would not be affected because it is hydrologically separated from the ore-bearing layer by the low-permeability Summerville Formation. In the three mines where water is present within the ore-bearing layer, groundwater would be pumped into surface treatment ponds and would not be available for seepage into underlying layers.

Surface Water

Potential impacts to surface water would be negligible under the proposed action. On disturbed areas of the lease tracts, the potential for erosion and transport of contaminant-laden sediments would be minimized by the implementation of storm-water management controls that would be required by the lease agreements and the Colorado Mined Land Reclamation Board. The storm-water management controls would ensure that runoff from lease tract features would not reach a perennial stream or river. Additionally, water released from treatment facilities to the environment would be required to meet all applicable National Pollutant Discharge Elimination System requirements.

Soils

Under the proposed action, an estimated 250 acres of soil could be expected to be disturbed by preoperational and operational activities. Disturbance of the soil surface and removal of vegetation would increase the soil erosion potential. Adverse impacts would be minimized by incorporating erosion-control techniques (e.g., use of water bars, vegetation, erosion-control fabric, and land contours) in the construction design and by reclaiming disturbed areas that are no longer needed for routine operations.

Vegetation

Preoperational and operational activities under the proposed action could be expected to disturb or destroy native plant communities and cryptobiotic soil crusts on an estimated 250 acres of presently undisturbed land.

Wildlife

Under the proposed action, wildlife habitat would likely be lost as a result of vegetation removal, surface disturbance, and rock blasting during preoperational and operational activities. For animals that have large home ranges (e.g., deer, birds of prey, coyotes),

mine-related habitat loss would have only minimal impacts. For animals that have small home ranges or that have specific habitat requirements (e.g., rodents, rabbits, and bats), displacement and some localized loss of population would be expected.

Wildlife displacement from increased noise, light, traffic, and other human activities probably would occur to some extent on all of the lease tracts. Large mobile animals would be affected less than small animals that depend exclusively on local habitat. A negligible number of small animals also would be lost as a result of accidental roadkill.

Cultural/Historical Resources

The leaseholder would be required to inventory areas targeted for disturbance and, if cultural/historical sites were present, to develop a mitigation plan to protect the sites. The State Historic Preservation Officer would approve the mitigation plan before surface disturbance was approved by DOE. With implementation of mitigation measures, adverse impacts to existing cultural/historical resources are expected to be negligible.

Visual Resources

Under the proposed action, the primary visual impacts would be barren areas and dust associated with preoperational and operational activities. The severity of the visual impacts would be dependent on the location of the disturbance and its visibility from access roads or corridors. Overall, proposed activities are not expected to adversely affect natural contrasts, colors, or skylines that occur throughout the lease tract areas.

Wilderness Areas

Under the proposed action, the only activities that would be visible from or within hearing distance of the Dolores River Canyon Wilderness Study Area (WSA) would be those that occurred on the uppermost elevations of two of the lease tracts. The two lease tracts are approximately 1 mile south of the WSA and are geographically separated from the WSA by deep canyons. Exploratory drilling, which has occurred historically, would be the most likely activity to occur on the upper elevations of the two lease tracts. Depending upon the wind direction and velocity, a WSA visitor could potentially see dust or hear noise emanating from the lease tracts. Because drilling is typically short term, the impacts, if any, are not anticipated to be long term. If mining were to occur on the lease tracts, operational activities would most likely occur at lower elevations that would not be visible from the WSA.

Noise

Minor to moderate increases in local noise levels would occur on lease tracts during preoperational and operational activities. Noise associated with preoperational activities such as drilling and access-road construction generally would be short term; noise associated with operational activities probably would be intermittent but long term.

Wild and Scenic Rivers

The sections of the Dolores River that are proposed for Wild and Scenic status would not be affected by the proposed action.

Floodplains and Wetlands

Three lease tracts contain wetland-type vegetation that is supported by mine dewatering activities and storm-water accumulation. If mining activities warranted the dredging or filling of areas containing wetland-type vegetation, compliance with the Clean Water Act could be required, depending on whether the areas were considered "waters of the U.S." under U.S. Army Corps of Engineers regulations. Floodplain and wetland areas are not expected to be adversely affected under the proposed action.

Human Health

Under the proposed action, humans could be exposed to radiological and nonradiological hazards on the lease tracts. The level of impact would depend upon the type and level of mine operation. During all phases of mine operation, the leaseholder would be required to ensure protection of workers by providing proper training and protective equipment, as specified by MSHA. The leaseholder also would be responsible for controlling public access to the mine sites during all phases of mine operation. The maximum total effective dose equivalent that would be received by workers or the public is expected to be 79 millirems per year, which is below the NRC standard of 100 millirems per year.

Alternatives to the Proposed Action

No Action Alternative

Under the No Action Alternative, DOE would not issue leases on the withdrawn lands, and all mining activities currently being performed on the lease tracts would cease. Reclamation activities would be initiated by former leaseholders immediately following DOE approval of individual reclamation plans. DOE would be responsible for monitoring and evaluating reclamation activities in accordance with the reclamation plans and with the binding environmental stipulations contained in the former lease agreements. Following completion of reclamation activities, DOE would retain the lands in withdrawn status. DOE's responsibilities would then be limited to periodic inspections of the reclaimed sites.

This alternative would not allow the U.S. Government immediate access to domestic uranium and vanadium ore reserves. In addition, socioeconomics of local communities would be adversely affected over the long term by the elimination of work opportunities associated with exploration and mining activities on the lease tracts. Most natural and cultural resources, however, would realize a net positive impact as a result of the reduction in access to remote areas of the lease tracts and reclamation of disturbed areas.

ULMP Termination Alternative

The ULMP Termination Alternative would be the same as the No Action Alternative, with one exception: following completion of reclamation activities, DOE would relinquish the lease tracts to the U.S. Bureau of Land Management for return to the public domain. This alternative would not allow the U.S. Government immediate access to domestic uranium and vanadium ore reserves and would not ensure long-term access to the reserves. Impacts under this alternative would be the same as those under the No Action Alternative.

FINDING: On the basis of the preceding information and analyses presented in the EA, DOE has determined that the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment, as defined by NEPA. Therefore, preparation of an environmental impact statement is not required for the ULMP, and DOE is issuing this FONSI.

PUBLIC AVAILABILITY: Copies of the EA (DOE/EA-1037) are available from

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