

ways of living and protecting our natural resources.”

The new environmental evaluation was central to the court’s decision to allow the leasing program to resume, according to the Office of Legacy Management. The evaluation determined that continuing the program will result in “negligible to moderate potential environmental impacts and will provide access to a domestic source of uranium.”

All renewed leases will require a detailed environmental assessment of the impacts of future mining on the area to ensure the protection of air, water, wildlife, and cultural resources, with a renewed emphasis on safety, the DOE said. The Office of Legacy Management, in consultation with the U.S. Fish and Wildlife Service and the Bureau of Land Management, created specific guidelines to safeguard a few key species, including the yellow-billed cuckoo, the Gunnison sage grouse, burrowing owls, and sensitive bat species.

Mining plans will also be evaluated for their impact on local waterways. Lessees must design and construct mine-waste and ore-storage areas that reduce the potential for contact with stormwater runoff.

Once mining begins, the new lease agreements will mandate that leaseholders minimize disturbance to the area and save the soil displaced during mining for use in

site reclamation. In addition to reclaiming sites for environmental purposes, formerly mined land must be restored to ensure public safety.

“The ULP is important to the nuclear supply chain in the United States, which starts with responsible mining here in Colorado,” Glascock said. “I firmly believe that this domestic source of uranium ore will improve our national security by reducing our reliance on foreign sources of uranium.”

TRISO

GNF and X-energy team up to produce HALEU fuel

Global Nuclear Fuel (GNF) and X-energy on November 6 announced a collaboration to produce TRISO (tristructural isotropic) nuclear fuel. The companies have signed a teaming agreement that details their plans to use high-assay low-enriched uranium (HALEU) to produce TRISO fuel for potential customers that include the Department of Defense (for microreactor deployments) and NASA (for nuclear thermal propulsion).

“TRISO is a robust fuel form well suited for military and space applications,” said Clay Sell, X-energy’s chief executive officer. “The extremely high and unnecessary

cost of working with HALEU in a Category I NRC facility has, in the past, limited TRISO’s economic viability in the marketplace. Utilizing X-energy’s already operational state-of-the-art equipment in GNF’s licensed facility changes the dynamic for TRISO-fueled reactor deployment.”

HALEU, which is enriched to between 5 and 19.75 percent uranium-235, offers greater energy density than the LEU fuel used in today’s operating power reactors, and in its TRISO form, it is the fuel of choice for several advanced reactor designs. Existing light-water reactors are also considered part of the potential market for uranium enriched above 5 percent, but its use would require license modifications.

“GNF is excited to team with X-energy to bring the revolutionary TRISO fuel form to market,” said Jay Wileman, president and CEO of GE Hitachi Nuclear Energy. GNF is a GE-led joint venture with Hitachi. “Combining X-energy’s technical knowledge and experience as the only current producer of TRISO fuel and GNF’s licensed operating facility and half-century of commercial fuel experience and leadership make this a formidable team.” X-energy and GNF expect to be able to produce TRISO at costs “substantially lower than other potential manufacturers,” according to a GNF press release.

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