



NEPA Categorical Exclusion Determination Form

Program or Field Office: U.S. Department of Energy (DOE) Office of Legacy Management (LM)

Project Title: Evapotranspiration Conversion Cover Pilot Study at the Grand Junction, Colorado, Disposal Site

Location: Grand Junction, Colorado, Disposal Site

Proposed Action or Project Description:

LM is proposing to conduct a pilot study on the low-permeability rock-armored earthen cover of the disposal cell at the LM Grand Junction, Colorado, Disposal Site (GJDS), a Uranium Mill Tailings Radiation Control Act (UMTRCA) Title I site approximately 18 miles southeast of Grand Junction, Colorado. The GJDS disposal cell is engineered for the permanent disposal of approved radioactive materials. The pilot study would assess the viability of managing the GJDS cell cover and similar LM disposal cell covers as evapotranspiration (ET) covers, which would use vegetation to increase ET. The proposed study would be designed to (1) determine if allowing or enhancing vegetation establishment at a large scale on an in-service disposal cell would provide adequate ET to limit percolation of precipitation into radioactive materials without unacceptable increases in risk due to plant uptake of associated contaminants or radon gas diffusion into the atmosphere; and (2) evaluate methods for long-term, large-scale monitoring of changes in cover system performance.

Proposed activities for assessing GJDS cell cover performance related to precipitation percolation would include:

- Establishing study areas on the GJDS cell cover and on the Enhanced Cover Assessment Project lysimeter facility near the GJDS disposal cell.
- Discontinuing current vegetation management practices (e.g., herbicide treatment) in certain study areas and (1) allowing vegetation to grow without assistance from other methods or (2) enhancing vegetation growth with other methods such as transplanting new plants, broadcasting plant seeds, or hydroseeding.
- Collecting soil samples of cell or lysimeter cover materials using a Geoprobe and/or hand tools and analyzing those samples for various radiological, physical, biological, and chemical properties.
- Installing instrumentation and telemetry equipment for measuring, recording, and transmitting soil moisture data.
- Monitoring progress of vegetation growth using satellite imagery and, possibly, unmanned or manned aircraft.
- Cover performance data generated and analyzed for the pilot study for an unspecified number of years.

None of the proposed intrusive work would contact radioactive materials. LM and Legacy Management Support (LMS) staff responsible for evaluating impacts to historic and cultural resources have determined that the proposed disposal cell cover study would not require a consultation with Colorado's State Historic Preservation Office in accordance with Section 106 of the National Historic Preservation Act. LMS staff would conduct most of the proposed work, with subcontractors or vendors possibly being used to plant vegetation or to obtain monitoring imagery. Study areas on the GJDS cell cover and lysimeter facility would be accessed by foot or with passenger vehicles (e.g., sport utility vehicles), pickup trucks (possibly towing trailers to transport equipment), or subcontractor/vendor trucks using existing site roads. The Geoprobe would travel on the cell cover using rubber tracks. Vehicle and equipment traffic are permitted on the cell cover for limited activities, such as those associated with the pilot study.

No proposed aviation activities would commence until required flight safety plans are approved by a certified DOE aviation manager and permission is received from LM to proceed with aviation activities. Any follow-on aviation activities would require new flight safety plans approved by a certified DOE aviation manager.

Proposed soil sampling and instrument installation are expected to occur in March or later in 2020. Proposed planting activities to enhance vegetation growth in the study areas would start during the spring or later in 2020.

Categorical Exclusion(s) Applied:

- B1.3 Routine maintenance
- B3.1 Site characterization and environmental monitoring
- B3.2 Aviation activities



NEPA Categorical Exclusion Determination Form

For the complete DOE National Environmental Policy Act (NEPA) regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of Title 10 *Code of Federal Regulations* Section 1021 (10 CFR 1021).

Regulatory Requirements in 10 CFR 1021.410(b): (See full text in regulation)

- The proposal fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D

To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

- There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal.
- The proposal has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

Based on my review of the proposed action, as NEPA Compliance Officer (as authorized by the LM Director per DOE Policy 451.1), I have determined that the proposed action fits within the specified classes of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

NEPA Compliance Officer Signature and
Determination Date

Tracy A. Ribeiro

Digitally signed by Tracy A.

Ribeiro

Date: 2020.03.09 09:05:28 -06'00'