



**U.S. Department of Energy
Office of Legacy Management
Categorical Exclusion Determination Form**



Program or Field Office: Office of Legacy Management (LM)

Project Title and I.D. No.: Unmanned Aerial Systems Operations at the Shiprock, New Mexico, Disposal Site (LM 10-16).

Location: Shiprock, New Mexico

Proposed Action or Project Description:

The U.S. Geological Survey (USGS), U.S. Department of Energy (DOE), and University of Arizona (UA) propose use of unmanned aerial systems to acquire high-resolution spectral data needed to estimate spatial and temporal variability in evapotranspiration (ET) in southwestern riparian ecosystems that are dominated by tamarisk (*Tamarix spp.*) to acquire the high resolution needed to monitor defoliation and other subtle changes in tamarisk populations.

LM, UA, and the Southwest Biological Science Center have collaborated on landscape-scale estimation of effects of ET on groundwater (GW) recharge and discharge and GW phytoremediation at uranium mill sites in the southwestern United States. LM has applied this research to model GW flow and contaminant transport. LM also plans to use the research to develop GW remediation strategies in compliance with the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA) and Environmental Protection Agency (EPA) GW quality standards. At some UMTRCA sites, GW elevation, flow, and contaminant transport appear to vary seasonally and annually in response to changes in riparian ecosystems dominated by tamarisk. Therefore, effects of tamarisk and beetle interactions on ET are particularly relevant at these sites.

The study area, a flat floodplain along the San Juan River just south of Shiprock, New Mexico, is about 1,900 meters long and 800 meters wide. The actual flight lines are expected to be considerably smaller and include the area between the river and the terrace escarpment that runs northwest to southeast, just north of the disposal cell.

Categorical Exclusion(s) Applied:

- B3.1 Site characterization and environmental monitoring
- B3.2 Aviation activities that comply with Federal Aviation Administration regulations

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of 10 CFR Part 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 under DOE Order 451.1B), I have determined that the proposed action fits within the specified class(es) 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:

Date Determined: