

U.S. Department of Energy  
Environmental Management  
Consolidated Business Center

Moab UMTRA Project: Background Radium-226 Investigation  
Categorical Exclusion Determination Form

***Proposed Action Title:*** Moab Uranium Mill Tailings Remedial Action (UMTRA) Project: Background Radium-226 (Ra-226) Investigation

***Program or Field Office:*** Grand Junction Field Office

***Location(s) (City/County/State):*** Scott and Norma Matheson Wetlands Preserve Wildlife Management Area (WMA). Moab/Grand County/Utah

***Proposed Action Description:***

The proposed action consists of determining the Ra-226 concentration in soil at the Scott and Norma Matheson Wetlands Preserve Wildlife Management Area (also referred to as the “Matheson Wetlands”), located across the Colorado River from the Moab UMTRA Project site (Figure 1). The Ra-226 concentration may be used as background for the Moab UMTRA project to determine the net Ra-226 soil concentration for site clearance and release. The activities involved are:

1. Surveying the concentration of Ra-226 at the ground surface using non-intrusive methodology.
2. Sampling near-surface soil for laboratory analysis to determine the concentration of Ra-226 below the surface.

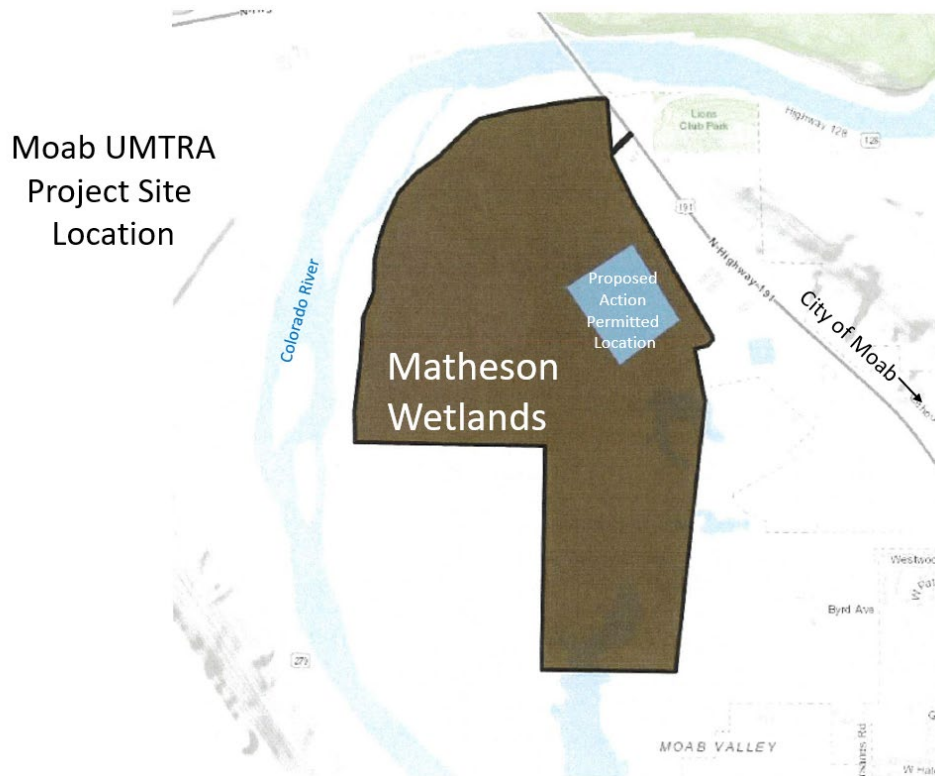


Figure 1. Site of Matheson Wetlands (blue is the Proposed Action Permitted Location)

### ***Background:***

The Department of Energy Environmental Management (DOE/EM) Moab UMTRA Project began moving the tailings pile from the Moab Site in 2009 to the permanent disposal cell in Crescent Junction, Utah. The estimated volume of the tailings pile was 16 million tons (with a bounding number of 20 million tons; Supplement Analysis, May 2022). As of Oct. 2022, over 13 million tons (approximately ~85%) of tailings have been moved.

As the Moab UMTRA Project nears closure of remediating the uranium mill tailings pile, it is imperative the Project meets the Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings (40 CFE 192), which establishes standards for protection of public health, safety, and environment from radiological and non-radiological hazards associated with uranium and thorium ore processing, and their associated wastes.

The purpose of this background Radium-226 soil investigation is to determine the concentration of Ra-226 in the soil of the Matheson Wetlands Preserve Wildlife Management Area.

Background Ra-226 concentration must be determined from a property nearby, but unaffected by, past operations of the Atlas uranium mill site. The soil needs to be of similar type as the soils at the mill site (alluvial sediments from the Colorado River). After evaluating other local areas, the Matheson Wetlands is the best option for this investigation.

It is noted that in 2020 a similar Ra-226 investigation was conducted by the Technical Assistance Contractor and a Categorical Exclusion also written. It was determined that the Matheson Wetlands would be a better location.

***Procedures:***

The Moab UMTRA Project has obtained the necessary Special Use Permit from the Utah Department of Natural Resources, Division of Wildlife Resources (UDWR) to conduct research and collect samples.

It is proposed that a team of up to four Moab UMTRA Project personnel will perform the following tasks:

1. Surveying the background concentration of Ra-226 at the ground surface.
  - A mobile gamma survey unit will be utilized, consisting of a small trailer equipped with radiation detectors and associated electronics, pulled by a small all-terrain vehicle (ATV) or utility terrain vehicle (UTV). The survey unit will travel over the site and collect the radiation emitted from the decay of Ra-226, with the data processed by computer.
  
2. Sampling surface and near-surface soil to determine the concentration of Ra-226 on and below the surface for correlation with the results of the gamma survey system.
  - Sampling personnel will follow procedures for sampling, packaging, and transporting soil samples.
  
  - Approximately 30 soil samples will be collected at a depth not to exceed 12 inches. The samples will be small volume samples with estimated weight of 600 grams each. A direct push tube sampler of no more than 2 inches diameter will be used so no excavation activities will be required to collect the small samples. Holes will be backfilled after sampling with native soil.
  
  - The samples will be analyzed in an offsite laboratory.

***Resource Areas Evaluated:***

***Soils***

Off-road driving of ATV/UTVs will take 1-2 days and be minimized as necessary. Possible soil compaction may occur. Holes from soil sampling will be backfilled after sampling with native soil. No significant impacts to soil.

***Air Quality***

Emissions from passenger vehicles and the ATV/UTVs will be minimal. No significant impacts to air quality will be associated with this project.

### ***Surface Water***

If surface water is present in the subject area, no work will occur. No significant impacts to surface water will occur with this project.

### ***Floodplains***

Off-road driving will be minimal and is approved in the permitted location of the Utah Department of Natural Resources, Division of Wildlife Resources, Special Use Permit. This investigation will take place during base flow conditions of the Colorado River. No significant impacts to floodplains will occur with this project.

### ***Terrestrial Ecology***

Overall, no installation of equipment or instrumentation is involved. The permitted location has sparse vegetation, wildlife, and habitat. No significant impacts will affect terrestrial ecology.

### ***Human Health***

Workers will be monitored under existing Moab UMTRA Project radiological and Health & Safety work plans and procedures. No significant impact to human health from this project.

### ***References***

- *Moab UMTRA Project Supplement Analysis for the Remediation of the Moab Uranium Mill Tailings, Grand and San Juan Counties, Utah, Final Environmental Impact Statement* (DOE/EIS-0355 SA-3).
- Utah Department of Natural Resources, Division of Wildlife Resources (DWR). Special Use Permit. DWR Contract #: 703316. UDWR Project L162Su0125.

### ***Categorical Exclusion(s) Applied:***

B3.1 Site characterization and environmental monitoring.

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)

All questions were answered with a “concur,” allowing the NEPA Compliance Officer (NCO) to document that the proposed project has been reviewed and a final NEPA determination will be concluded.

**Concur:** 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.

**Concur:** There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal.

**Concur:** 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, I have determined that the proposed action fits within the specified classes of actions, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

X *Pete Yerace*

8-11-2023

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Pete Yerace  
DOE EMCBC NCO