U.S. Department of Energy
Environmental Management
Consolidated Business Center
Moab UMTRA Project: Freshwater Pond Sediment Removal

Categorical Exclusion Determination Form

Proposed Action Title: Moab UMTRA Project: Freshwater Pond Sediment Removal

Program or Field Office: Grand Junction Field Office

Location(s) (City/County/State): Moab, Utah/Green River, Utah

Proposed Action Description:

The Moab UMTRA Project contains three freshwater ponds, two that are in the scope of this Categorical Exclusion, that are used for dust suppression, irrigation, compaction, freshwater injection in the well field, and surface water diversion. The Moab freshwater pond is supplied through a pump inlet on the Colorado River. The Green River freshwater pond is filled from a pump inlet on the Green River.

The purposed action of this Categorical Exclusion is to remove sediment from the Moab and Green River Freshwater Ponds to reestablish the storage capacity through either a long reach excavator or HydroVac operations and the placement of the associated sediment.

Work will be conducted in compliance with the Remedial Action Contractor (RAC) Integrated Work Plan/Job Safety Analysis (IWP/JSA)-003 Facility and Ground Maintenance, RAC IWP/JSA-032 HydroVac Truck/Trailer Operations, DOE Order (O) 420.1C, "Facility Safety," the *Northwind/Portage, Inc. Pond Sediment Removal Plan and Technical and Operation Approach* Document, and the *Moab UMTRA Project Health and Safety Plan* (DOE-EM/GJ1038).

Background:

The Moab freshwater pond (approximately 240 x 150 ft) is located on the eastern edge of the site and is filled by two pumps from a river inlet. It is used to supply the Project with freshwater for dust suppression both inside and outside of the contamination area, groundwater injection/surface water diversion operations in the well field, and for irrigation of native vegetation in remediated areas of the site. It was installed in 2006 and the bottom of the pond (3,962 ft mean seal level (msl)) contains a 15-inch layer of riprap, 12-inches of common clean

fill, and a geocomposite clay liner. A silt screen/sediment barrier was installed to help decrease turbidity into the pump system, which is located on the northern end of the pond. An access road goes around the perimeter of the pond. The water in the pond is classified as construction water through the Utah Division of Water Rights

The Green River freshwater pond (approximately 160 x 100 ft) is located in Green River, UT, 22 miles west of the Crescent Junction Site. The pond is located 109 ft east of the Green River and the water is supplied to the pond via a pump from a privately owned (leased) river inlet. It is used to supply water to the Crescent Junction Site for dust suppression and compaction of placed tailings. The pond was installed in 2008 and the bottom contains a high density polyethylene (HDPE) geomembrane liner at 4,066 ft msl. A silt screen/sediment barrier was installed to help decrease turbidity into the pump system. An access road is located around the perimeter of the pond. The water in the pond is classified as construction water through the Utah Division of Water Rights.

Both freshwater ponds accumulate sediment over time through natural river turbidity and wind-blown dust. In order to maintain sufficient capacity and minimize the risk of damaging pumps and water-lines, the sediment is occasionally removed by either a HydroVac truck/trailer or by a long reach excavator.

Procedure:

Sediment removal operations are often scheduled to take place over a weekend or during the fall/winter months when site activities requiring water for dust suppression, irrigation, or compaction are minimal. During sediment removal at the Moab pond, irrigation and freshwater injection cannot occur, so it is imperative to have prior communication with the Technical Assistance Contractor (TAC) Field Manager to address any potential conflicts.

The water-level in the pond must be drawn down sufficiently so that the sediment can effectively be removed. The water level is decreased by irrigation, injection, compaction, surface water diversion, and/or dust suppression activities.

Access/egress points will be identified for personnel to utilize when entering and exiting the pond, when necessary. This will be performed after the water levels have been drained down to an acceptable working level.

The sediment removal will be completed by either using a HydroVac truck/trailer or a long reach excavator.

<u>HydroVac Truck/Trailer</u>

1) The HydroVac truck/trailer will be mobilized to the site for the sediment removal operations. A safety inspection will be performed on all equipment. A HydroVac is typically used at the Green River Freshwater Pond since there is a HDPE liner and there is often less sediment accumulation. A long reach excavator or HydroVac truck/trailer may be utilized at the Moab Freshwater Pond. Refer to the Infrastructure and Human Health Sections for more specific information regarding potential hazards.

2) The HydroVac will utilize the high pressure sprayer and vacuum hose to effectively remove sediment and clean the edges of the pond or silt curtain. Personnel may assist with pushing the sediment or slurry material towards the suction hose in order to effectively remove the material. This is accomplished utilizing blunt hand tools that will not damage the liner.
3) Disposal of the contents of the HydroVac truck/trailer will be coordinated with the Environmental Manager to ensure a proper location for dumping. In Moab this location is the TAC revegetation areas. For the Green River pond, in a location approved by the private adjacent land-owner and agreed to by the Supervisor and the Environmental Manager.

Long Reach Excavator

1) The long reach excavator will be mobilized on-site for sediment removal operations. A safety inspection will be performed on all equipment. Refer to the Infrastructure and Human Health Sections for more specific information regarding potential hazards.
2) The continuous curve for the bucket inhibits the ability to puncture the geocomposite clay liner. With the pond drained, the operator can see the pond bottom visually to ensure that the excavation does not extend beyond the entrained sediments. After the loose sediments are removed, spot checks on the grade using a GPS rover or level can be made to help guide the final sediment removal.
3) The excavation will commence on the east side of the pond, working south to north. Haul trucks will pull in on the road at the north end of the pond and then back down the east berm to the excavator. Candlesticks will be placed along the sides of the road for the driver to use for edge demarcation during backing. A spotter will be used to aid the backing truck and a radio will be used for communication. The operator honks to properly space the truck from the excavator and then starts to fill the haul truck.
4) The excavator will remove sediment from the pond, placing the material in the back of the haul truck. Once full, the operator honks the horn on the excavator which alerts the driver to pull forward and exit the berm, driving the prescribed route over to the placement area.

Sediment Placement

1) Green River Freshwater Pond: Placement of the sediments will be on a location approved by the private adjacent land-owner and agreed to by the Supervisor and the Environmental Management. Each load will be dumped out abutting the previous load to minimally disturb the haul area.
2) Moab Freshwater Pond: The RAC will transport each load of sediment to the TACs revegetation area. Each load will be dumped out abutting the previous load for easy spreading by the TAC and allowing for the trucks to minimally disturb the haul area. See the “Soils Section” of this document for more information.

When the sediment removal is complete, the pond will be refilled and normal operations will commence.

Resource Areas Evaluated:

Soils

Sediment removed from the Moab freshwater pond, will be placed in a revegetation area in the Project Well Field and utilized as a soil amendment. The soils in the vicinity are highly saline. The addition of sediment from the freshwater pond will help to dilute salt concentrations as well as integrate nitrogen, phosphorus, and other organic material into the soil. These amendments will add nutrients to the soils and allow native plants to grow in areas that are now bare.

A large composite sample was tested for Radium-226 on July 14, 2020 from the Moab Freshwater Pond. The results were 1.09 pCi/g and it was determined by the Radiological SME that Radium-226 concentrations are at or below background radiation levels. The sediment collected from the pond will not pose a risk of radiological contamination.

Sediment collected from the freshwater pond in Green River is placed on an adjacent privately owned property. This area is more than 50 ft from the Green River and poses no risk of possible radiological contamination.

Heavy equipment operations are kept to designated roads as much as possible to minimize soil compaction, and minimize disturbance of existing vegetation.

Air Quality

Impacts on air quality include emissions from the long reach excavator, HydroVac, and pick-up/dump trucks. A water truck will be used for on Project roads (as needed) to suppress fugitive dust emissions in compliance with the *Moab UMTRA Project Moab Site Fugitive Dust Control Plan* (DOE-EM/GJ2072) and the *Moab UMTRA Project Crescent Junction Site Fugitive Dust Control Plan* (DOE-EM/GJ1235).

Surface Water

The Moab freshwater pond is located approximately 217 ft from the Colorado River and the Green River freshwater pond is located approximately 109 ft from the Green River. According to the Construction General Permit and the *Moab Storm Water Pollution Prevention Plan* (DOE-EM-GJ1475), a 50 foot buffer must be present between any potential non-approved storm water discharge or earth-disturbing activities and waters of the United States. Before beginning earth-disturbing activities on the Moab and Green River freshwater ponds, operations personnel will delineate and clearly mark off the buffer areas with flags, tape, or a similar marking device.

A permit for Section 404 of the Clean Water Act is not needed for this work. The freshwater ponds are not considered waters of the United States and fit the exemption for artificial lakes and ponds.

Floodplains

Sediment removed from the pond will be placed in areas of under-performing soil in revegetation areas of the well field. This location is over 750 ft from the Colorado River and 1,800 ft from Moab Wash. Moab Wash has erosion and sediment controls in place to prevent flood waters

from impacting the area. A native vegetative buffer area, more than 50 ft wide, is located south of Moab Wash and extends southward along the eastern property boundary. Earthen diversion berms are located along the outflow area of Moab Wash. These berms help to control flood waters and sediment dispersion. River conditions will be assessed before any work is performed.

A 50 ft vegetative buffer is located between the pond and Green River. The freshwater pond is located 109 ft from Green River. These controls provide adequate distance in case of potential flooding. River conditions will be assessed before any work is performed.

Terrestrial Ecology

The Moab and Green River sites are home to an abundance of wildlife. Mule deer, blue heron, deer mice, and even an occasional mountain lion. The freshwater ponds are not an ecologically sensitive area. Any type of freshwater dependent animals utilize the Colorado or Green River for water. Sediment taken from the freshwater pond will be placed in an under-performing area in revegetation areas of the well field. Currently, no native plants are growing in this area. Wildlife does not use this area for food or shelter. The Green River freshwater pond is located on private property. Sediment removed from the pond will be placed on the adjacent agricultural field and will not impact native flora or fauna.

Cultural Resources

Cultural resources have not been previously identified in either the freshwater pond or the staging areas for the sediment. A walk-down to identify a possible cultural resources will be conducted before work takes place.

Infrastructure

All equipment is subject to a safety inspection prior to use.

Electrical power poles/electrical panels (0.48 kV) are located within 45-83 ft of the Moab Freshwater Pond and within 13 ft of south end of the road adjacent to the pond. Spotters will be used to assist trucks and the power poles/panels will have additional markings/flagging. Equipment must remain at least 10 ft from the power poles. The pre-job briefing will include a walk down of the work areas to identify the nearby utilities.

The silt/sediment curtain ties will also be marked with flagging if they are deemed to be in the way of operations and traffic.

In Green River a (12.5 kV) power pole is 36 ft to the southwest of the pond and the power lines cross the access road. Equipment must remain at least 10 ft from the lines. No material may be stored beneath the power lines.

A trash pump may be used to assist in dewatering the pond and secondary containment will be placed around it. The location of the pump discharge line shall be agreed upon by the Supervisor and Environmental Management to ensure it does not reach within 50 ft of the river.

A spill kit will be present during operations in accordance with the *Moab UMTRA Project Spill Prevention, Control, and Countermeasure Plan* (DOE-EM/GJ1477)

At least one 20-pound dry chemical ABC portable fire extinguisher will be available for use during any on-site fueling operations.

Noise and Vibration

Heavy equipment such as a long reach excavator, HydroVac, and trash pump may be used to remove water/sediment from the pond. This equipment will generate noise during the operation. All workers will comply with OSHA Occupational Noise Exposure (1910.95) and the *Moab UMTRA Project Health and Safety Plan* (DOE-EM/GJ1038) requirements.

Transportation

All of the vehicles associated with the Moab and Green River freshwater pond sediment removal will remain on project only roads during the operations. A safety inspection is performed on vehicles/heavy equipment prior to use at the start of each day.

Human Health

All work will be conducted within the protocols of the Department of Energy Integrated Safety Management System (ISM) (DOE P450.4, Safety Management System Policy). The guiding principles and core functions include, 1) define the scope of work, 2) analyze the hazards, 3) develop and implement hazard controls, 4) perform work within the controls, 5) provide feedback and improvements.

Work will be conducted in compliance with the Remedial Action Contractor (RAC) Integrated Work Plan/Job Safety Analysis (IWP/JSA)-003 Facility and Ground Maintenance, RAC IWP/JSA-032 HydroVac Truck/Trailer Operations, DOE Order (O) 420.1C, "Facility Safety," the *Northwind/Portage, Inc. Pond Sediment Removal Plan and Technical and Operation Approach* Document, and the *Moab UMTRA Project Health and Safety Plan* (DOE-EM/GJ1038).

The sediment removal operation will not include any interaction with the public and is located on Project and privately owned property.

All individuals shall be trained to the *Moab UMTRA Project Health and Safety Plan* (DOE-EM/GJ1038) and the following documentation and training:

- *General Employee Radiological Training*
- *MB-IWP/JSA-001, General Site Hazards*
- *MB-IWP/JSA-003, Facility and Ground Maintenance*
- *MB-IWP/JSA-032, HydroVac Truck/Trailer Operations*
- Only trained and qualified personnel will operated the heavy equipment.

A pre and post-job briefing will be conducted with all involved employees and sub-contractors and morning tailgate meetings will discuss the work plan and any additional hazards that may be encountered.

Categorical Exclusion(s) Applied:

B1.3 Routine Maintenance

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 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.

7/20/2020

X Pete Yerace

Pete Yerace
DOE EMCBC NCO
Signed by: Department of Energy

EMCBC/SLA

Environmental Checklist

Project/Activity Title:	NEPA ID Number:
Moab UMTRA Project: Freshwater Pond Sediment R	Date:
Contractor Project Manager:	Phone:
Joe Ritchey	970-257-2120
Contractor NEPA Coordinator:	Phone:
Liz Moran	435-719-2809
DOE EMCBC NEPA Compliance Officer:	Phone:
Pete Yerace	513-246-0598

A: BRIEF PROJECT/ACTIVITY DESCRIPTION: (Attach detailed description or Statement of Work, if necessary)

See attached summary of the work to be performed.

B. SOURCES OF IMPACTS: Would the proposed action involve, generate, or result in changes to any of the following?

	YES	NO		YES	NO
1. Air emissions	☑	☐	12. Water Use/Diversion	☐	☐
2. Liquid effluents	☐	☐	13. Water Treatment	☐	☐
3. Solid waste	☐	☐	14. Waterway modification	☐	☐
4. Radioactive waste/soil	☐	☐	15. Radiation/toxic chemical exposures	☐	☐
5. Hazardous waste	☐	☐	16. Pesticide/herbicide use	☐	☐
6. Mixed waste	☐	☐	17. High energy source/explosives	☐	☐
7. Chemical storage/use	☐	☐	18. Transportation	☑	☐
8. Petroleum storage/use	☑	☐	19. Noise levels	☑	☐
9. Asbestos	☐	☐	20. Workforce adjustment	☐	☐
10. Utilities	☑	☐	21. OTHER: _____	☐	☐
11. Clearing or excavation	☑	☐	22. OTHER: _____	☐	☐

Explanation and Qualification of specific "YES" responses:

Number	*Explanation*
All	See narrative.

C. EVALUATION CRITERIA:

	YES	NO
1. **(10 CFR 1021.410 [b] [1])** Does the proposed action **fit within a class of actions** listed in Appendix A or B to Subpart D of 10 CFR 1021?	☑	☐
2. **(10 CFR 1021.410 [b] [2])** Are there any **extraordinary circumstances** related to the proposal that may affect the significance of the environmental effects of the proposal? Extraordinary circumstances are unique situations presented by specific proposals, such as scientific controversy about the environmental effects of the proposal; uncertain effects or effects involving unique or unknown risks; or unresolved conflicts concerning alternative uses of available resources within the meaning of Section 102 (2) (E) of NEPA.	☐	☐

3.	**(10 CFR 1021.410 [b] [3])** Is the proposal **"connected"** (40 CFR 1508.25 [a] [1]) to other actions with potentially significant impacts; or is it **related** to other proposed actions with cumulatively significant impacts (40 CFR 1508.25 [a] [2)]; or is it precluded by 40 CFR 1506.1 or 10 CFR 1021.211?	☐	☐
4.	**(10 CFR 1021, Appendix B to Subpart D, B[1] through B [4][vii])** For a proposed action to be categorically excluded, certain **integral elements** must be included. For example, would the proposed action:		
	Threaten a violation of applicable statutory, regulatory or permit requirements for ES&H, including requirements of DOE Orders?	☐	☐
	Require siting, construction or major expansion of waste storage, disposal, recovery or treatment facilities? **NOTE:** proposed action may include categorically excluded facilities.	☐	☐
	Disturb hazardous substances, pollutants, contaminants or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment, such that there would be uncontrolled or unpermitted releases?	☐	☑
	Adversely affect environmentally sensitive resources including, but not limited to: structures of historic, archaeological or architectural significance; threatened or endangered species, or migratory birds, amphibians, floodplains or wetlands; wildlife refuges, prime agricultural lands or special sources of water (e.g., sole-source aquifer)? **NOTE:** A "No" response indicates that all reviews and discussions supporting the Agency's determination that the proposed action would not have an adverse effect on the resource will be completed before the proposed action is allowed to proceed.	☐	☐
5.	Additional impacts that should be considered during the NEPA evaluation of the proposed action include the following six items. Would the action:		
	a. Take place in an area of previous or ongoing disturbance?	☐	☑
	b. Require any federal, state or local permits, approvals, Etc.?	☐	☑
	c. Create hazardous, radioactive or mixed waste for which no disposal is available?	☐	☐
	d. Impact a RCRA-regulated unit or facility?	☐	☐
	e. Force a low-income or ethnic minority population to shoulder a disproportionate share of the negative environmental impacts of pollution or environmental hazards because of a lack of political or economic strength (i.e., an issue of "Environmental Justice")?	☐	☐
	f. [for those actions that would involve air emissions] be located within an air pollutant *non-attainment* or *maintenance area* for any of the Criteria pollutants? **NOTE:** If "Yes," then additional analysis may be required to determine if emissions would be above *de minimus* thresholds and/or if emissions would be regionally significant. Pending completion of this analysis, requirements stated in 40 CFR 93.158 may be imposed before the proposed action could proceed.	☐	☐

Explanation and Qualification of specific "YES" responses:

Number	***Explanation***

D. RECOMMENDATION AND DETERMINATION

EMCBC NEPA Compliance Officer's Recommendation:

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 (Facility Operations)B3.1 Routine Maintenance, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

Signature: Pete Gerace Date: 7-20-20

EMCBC NEPA Compliance Officer