

Lisbon Valley Mining District (B818)

ERRS Operations Plan and Work Order

Operational Period: 01 October 10-16, 2022

Open and honest team discussions that involve EVERYONE are critical to understanding hazards, mitigating risks, preventing accidents and insuring a successful response.

Site Safety and Security is the Top Priority

- Always watch out for yourself and the coworkers/public around you.
- Always protect yourself, coworkers and public from exposure to radiation and dust.
- Prevent contamination from spreading beyond footprints of waste piles.
- Conduct daily safety checks on equipment and general site conditions.
- Remove, mark or remedy hazards when you see them. Notify crew of all hazards.

Emergency Contacts:

- San Juan County Sheriff Dispatch - 435-587-2237 (911 if it is an emergency).
- San Juan County Fire Department - 435-587-3225 (911 if it is an emergency).
- **Moab Regional Hospital** - 435-719-3500 (450 Williams Way, Moab, Utah 84532)

Deliverables

Operations Periods are Mondays-Sundays.

OSC will issue weekly Work Orders before the beginning of each Operations Period. Work Orders shall include activities and resources authorized by the OSC.

ER shall provide a Draft 1900-55 RCMS Report and a Draft Progress Report by the end of each Operations Period. Progress Reports shall include

- a) a summary of activities accomplished;
- b) deviations from the authorized activities and resources;
- c) and a summary of equipment/personnel utilized. The equipment utilization summary should include equipment that is working/available for use on each day.

Site Objectives

Radon Mine

1. **Develop Equipment Access:** A temporary access road for heavy equipment will be constructed across the face of the waste pile and down to the ephemeral drainage.
2. **Secure the Toe of the Waste Pile:** The toe of the waste pile will be pulled back from the ephemeral drainage and secured with rip rap to the extent practical.
3. **Manage Excavated Mine Waste:** Mine waste excavated to develop equipment access and to secure the toe of the pile will be deposited along several benches that were constructed at the abandoned facility.
4. **Secure Abandoned Metal and Debris:** Metal and other debris from the former facility dumped down the face of the waste pile will be pulled back from the ephemeral drainage, secured with rip rap and covered with mine waste to the extent practical.
5. **Install Erosion Control Features:** Construct erosion control structures on unvegetated waste deposits and revegetate as practical to break up the velocity of runoff and limit off-site migration of contaminated material.

6. **Restrict Vehicle Access:** The historic mine access trail to the waste pile will be closed at the County Road with large boulders, ditches and/or berms.

Authorized Activities

- The crew will mobilize on October 10, 2022 and receive radiation awareness training on October 11, 2022 prior to commencing work. This training shall be provided by ER's regional safety manager/radiation safety officer.
- The crew will initiate Site set-up activities on October 12, 2022:
 - The brush along the access road will be cut back to allow better access to the site.
 - The exclusion zone will be set-up using safety fence to delineate the zone along the upper area. The drainage acts as a natural barrier on the downhill side of the zone and will not require safety fence.
 - The decon trailer will be established as the contamination reduction zone. Water from the decon trailer will be disposed of inside the exclusion zone. The existing concrete pad will be used to decon equipment. The resulting debris will be washed back into the disposal area on the north side of the pad that should be part of the waste staging area/respository.
 - EPA will provide a comms trailer. It will be set-up upwind of the site (SE through NW) and with a view of the site.
 - Water buffalo will be set-up inside the exclusion zone.
 - Dust trackers (provided by EPA) will be set-up near the comms trailer and potentially another location (near decon, a look-out spot along the top of the crest, or other).
- The culvert was tested by pouring water through it and observing the outfall. The culvert is functional. The disturbed parts of the site will be graded to drain surface water toward the culvert.
- The toe of the waste pile will be pulled back from the ephemeral drainage and fortified with rip rap. The face of the waste pile may be regraded in areas to support this task.
 - ERRS will utilize a large excavator and an off-road haul truck for this task. Truck loads will be counted to establish a production rate.
 - The top layer of soil will be removed and stockpiled in the area where the waste rock will be staged.
 - Waste rock removed from the pile will be placed between the old foundations up the hill from the pile and on top of the pile itself. The material will be compacted and graded with a bulldozer away from the crest of the slope and back toward the culvert and access road.
 - ERRS will start the waste rock removal at the crest of the slope, removing as much material in the first 40-50 feet from the crest back as is efficient.
 - ERRS will then construct a road across the face of the waste rock pile, starting on the far west end and traversing the face to the drainage bottom. The road should intercept the drainage 30-40 feet down drainage from where the metal and debris are located.
 - The metal and debris in the drainage will be consolidated and buried in place. The disturbed area will be regraded and protected from future erosion.
 - A turnaround area for the haul truck will be constructed in the ephemeral drainage.
 - The toe of the slope will be removed by the excavator without undermining the slope. The material will be loaded into the haul truck and relocated. ERRS will re-construct the toe of the slope as far out of the drainage as is feasible. Ideally more than 10 feet of native material will be exposed between the drainage and the toe of the slope.
 - The toe of the slope will be armored with riprap/rock gathered from the site.
 - As the ERRS crews move up the slope, the slope will be re-graded and the road removed.
 - The stockpiled topsoil will be spread over the disturbed area. Other revegetation efforts may be considered.

- Rock needed to rip-rap the waste pile toe and create the rocked drainage channel will be collected from along the historic access road leading to the mine site and other nearby areas.
- The culvert that drains the basin above the site will be left in place and the outfall will be armored.
- The historic access road to the mine will be permanently closed with large boulders, ditches, and berms. Boulders and non-contaminated soil for this activity will be obtained from nearby sources.
- All waste with low levels of radiation will be disposed of at an approved Subtitle D landfill.

Authorized Resources

Personnel

Resource	Waste	Notes
Response Manager	1	
Field Cost Admin	1	
Forman	0-1	Foreman is authorized as Operator as needed.
Equipment Operator	3-5	
Clean-Up Technician	0-1	Technician is authorized as Operator as needed.

Equipment

Resource	Waste	Notes
Large Excavator	1	
Small Excavator	1	
30-Ton Haul Truck	1	
Bulldozer	1	
Water Truck	1	
Water Buffalo	1	
Decon Trailer	1	
Generator	1	
2" Pump	1	
Fuel Tank	1	
Field Toilet	3	
Pick-Up	3	
Rental cars	2	For the FCA and HSM

Data Collection

- ERRS will deliver the before, during, and after photo-documentation photos to the OSC.
- ERRS will conduct multiple UAV flights for site aerial photographs and topography, as coordinated with the OSC.
- Respirator cartridges will be tested with the Ludlum device to determine level of radioactive dust in the breathing zone.
- Decontamination activities will be tested with the Ludlum device to determine level of radioactive dust in coveralls, boots, street clothes, etc.
- Dust levels in the air will be monitored with Dust Trackers provided by EPA. Locations will be determined on-site, but will likely include the area around the comms trailer and potentially a look-out spot.

Signatures:

Handwritten signature in black ink, consisting of stylized, cursive letters.

10/10/22

EPA On Scene Coordinator

ERRS Response Manager