

**Salmon River Uranium Development  
Removal Action Work Plan  
Contract No. EP-R7-07-02, ERRS 3 R10  
Task Order No. 0002.010  
EQ Project No. 030261.0002.010**

**1.0 Task Order Goals**

The primary goal of the removal action is to remove and dispose of hazardous chemical and radiological contaminants at the site that may pose an imminent and substantial endangerment to public health or welfare, or the environment. Cleanup actions are planned as a means to reach this goal. In order to remove and dispose of hazardous chemical and radiological contaminants at the site, a combination of the tasks outlined in Section 2.0 may be required:

**2.0 EPA Directed Tasks to Accomplish and the Anticipated Schedule**

See attached Project Approach for full detail.

EQ shall....

1. Mobilize to site
2. Work schedule is planned to be from 7 am to 5:30 pm, 6 days per week
3. Cut brush and grass to improve access to site.
4. Grade and set trailer
5. Set up generator
6. Locate underground utilities
7. Mobilize and stage roll off boxes for waste disposal
8. Build access road into pond to remove arsenic contaminated soil
9. Excavate arsenic soil from pond and place into roll off boxes for disposal
10. Characterize contents of tanks for disposal and cleaning
11. Cut open tanks and remove sludge into proper containers for disposal
12. Excavate soil from under tanks and place into proper containers for disposal
13. Excavate chromium/arsenic contaminated soil in building and place into containers for disposal
14. Excavate lead contaminated soil in Northeast corner inside building and place into containers for disposal
15. Excavate thorium soil from Southeast corner of building and place into proper containers for disposal
16. Excavate uranium soil from East side of building under trailer and place into proper containers for disposal



17. Excavate processed thorium ore on North side of building and place into proper containers for disposal
18. Characterize waste in bucket on North side of building and place into proper container for disposal
19. Excavate thorium ore located approximately 200' West of building at toe of slope and place into proper container for disposal
20. Create manifests and ship waste off site for disposal
21. Demolish pump house on salmon river
22. Demobilize crew and equipment from site.

### **3.0 Cost Estimate**

Reference Attachment A, "Cost Estimate".

### **4.0 Project Approach**

Reference Attachment B, "Project Approach".

The OSC or CO may request EQ to provide additional cost estimates for specific Tasks. These cost estimates may be used to evaluate different options to determine the feasibility of amending and / or adding tasks. Any additional cost estimates requested by the OSC or CO will be included as addendums to this document.



# **Attachment B**

## **Project Approach**



*Solving Problems...Creating Cost-Effective Solutions!*

# DRAFT PROJECT APPROACH

## BACKGROUND

In March 1958, Salmon River Uranium Development, Inc. (SRUD) purchased the Site property. By letter dated October 6, 1958, SRUD applied for a U.S Atomic Energy Commission (AEC) license to chemically process source material from the Sunnyside Claims at North Fork, Idaho. During the period of October 1958 to October 1959, SRUD operated under two licenses issued by the AEC. The first license entitled SRUD to transfer, deliver, possess and have title to raw source material from the Sunnyside Claims at North Fork, Idaho. The second license authorized SRUD to process raw source material from the Agency Creek Thorium Corporation of Salmon, Idaho. All of the activities were to take place at the SRUD facility. The licenses expired in 1959 and SRUD ceased activities at the Site.

The Site property was owned by James V. Joyce from 1969 until 1978, when it was sold to the National Nuclear Reserves Corporation, of which Mr. Joyce was president.

In 1992, the property was sold to Antonia Baird, and later transferred to Antonia and Orval Baird. Mr. Baird had previously worked for the Joyce Corporation. In 1998 or 1999, Mr. Baird conducted processing of several batches of thorium ore at the Site. The Bairds are the current property owners

## PERSONNEL

- 1 - Response Manager
- 1 - Field Cost Administrator
- 2 - Equipment Operators
- 2 - Clean-up Technicians

## EQUIPMENT

- 1 - Wheel loader with bucket and forks (Volvo L25 or equivalent) (2 weeks)
- 1 - 18,000 lb excavator (2 weeks)
- 1 - 25 KW generator (2 weeks)
- 1 - 500 gallon water trailer (2 weeks)
- 1 - 2" trash pump (2 weeks)
- 2 - Pickup Trucks (2 weeks)
- 1 - Crew cab Box Truck (2 weeks)
- 2 - 30' Office Trailers (2 weeks)
- 1 - Cutting torch (2 weeks)
- 1 - LEL meter (2 weeks)

## SCHEDULE

EQ is planning on working 7 days per week and 10 hours per day. The project is anticipated to take 2 weeks on-site.

## PROJECT APPROACH



*Solving Problems...Creating Cost-Effective Solutions!*

- Mobilize to site
- Work schedule is planned to be from 7 am to 5:30 pm, 6 days per week
- Cut brush and grass to improve access to site
- Grade and set trailers
- Set up generator
- Locate underground utilities
- Grade access road into pond
- Mobilize and stage roll off boxes to be filled with waste
- Excavate contaminated soil at different locations and place it into the proper containers for disposal
- Cut into tanks and scoop waste into the proper containers for disposal
- Decontaminate equipment and tools
- Create manifests and ship waste off site for disposal
- Demobilize equipment and crew from site

## **EXCAVATION OF CONTAMINATED SOILS**

### **Arsenic soil in pond:**

Roll off boxes will be staged on the road to the East of the pond. An access road from the pond will be graded so that the loader can tram the soil to the boxes. The wheel loader will tow the water trailer down into the pond to wet down the area prior to excavation to minimize dust. This water trailer will remain in the excavation area during operations to keep the soil moist enough to prevent dust. The excavator will utilize a smooth cleanout bucket to scrape the thin layer of contamination from the pond bottom into a stockpile. The wheel loader will tram the soil from the stockpile to the roll off boxes. The START contractor will utilize a portable meter to measure the contaminant levels as the excavation is proceeding.

### **Corrosive tanks:**

Samples of the tank contents will be collected in order to characterize the waste for disposal. The tanks will be checked with an LEL meter to make sure that there is not an explosive atmosphere. A cutting torch will be utilized to remove the top of the tanks leaving approximately 6" of wall above the sludge level. The sludge will be scooped out with shovels into the proper containers for disposal. The walls and floor of the tanks will be scraped clean. EQM will attempt to decontaminate the steel by scraping it clean without using water. Water would create another waste stream of a liquid corrosive. After the tanks are emptied and cleaned they will be moved to another location on site so that the soil under them can be characterized and excavated as needed.

### **Chromium/Arsenic Soil in Building:**

The wheel loader will be utilized to scoop this soil up and load it into a roll off box for disposal. Shovels and brooms will be utilized to clean up what the wheel loader is unable to pick up from the concrete floor. A water hose will be utilized to control dust with a fine mist.

### **Lead Soil in Building:**

Since there is no access for heavy equipment to get to this corner of the building, the soil will be excavated by hand using shovels and carted out in wheel barrows. The soil will be placed into the



appropriate container for disposal. Assuming that there is concrete under this soil the area will be swept clean. Should there be soil under it the START contractor will be utilized to screen the soil with a portable meter in order to determine the extent of the contamination. A water hose will be utilized to control dust with a fine mist.

### **Thorium/Uranium Soil**

There are at least five locations around the building, under the tanks and about 200' west of the building that have Thorium and or Uranium contamination. These stockpiles will be excavated with the excavator using a smooth edge cleanout bucket wherever possible and transported with the loader to the appropriate container for disposal. The water trailer will be utilized to wet the soil enough to keep the dust down. Where the excavator can not access the soil, hand labor will be utilized to shovel the soil into wheel barrows. The START contractor will utilize a portable meter to monitor the soil excavations and make sure that all of the contamination is removed.

### **Demolish Pump House**

The pump house for the mine located on the Salmon River just below the mine is to be demolished to prevent it from falling into the river. The excavator will be utilized to tear down the building and stockpile the debris away from the rivers edge.

## **SECURITY**

A local, qualified Security company will be hired to do security during all hours EQ will not be working onsite. The company will be furnished with a security plan and will furnish unarmed security personnel. The guard will be stationed at the gated entrance to the site away from contaminated materials. Since this is the only access to the site it will not be necessary to have a guard at the work area.

## **DECON**

All equipment utilized on the project site will be deconned before leaving the site. A dry decon is preferred but if washing has to be done to clean the equipment, a decon pit will be constructed on site. The equipment will set on clean plywood or timbers while the piece is cleaned and will move off of the decon pad on clean material. The decon pad will be cleaned by hand and the contaminated material will be placed into the appropriate container for disposal.

