Minor OPERATION AND MAINTENANCE
Activity Plan

Excavate, Install Footers, Bollards and Other Equipment Near 105-K Handball Court, Site Evaluation Area 476

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1. INTRODUCTION

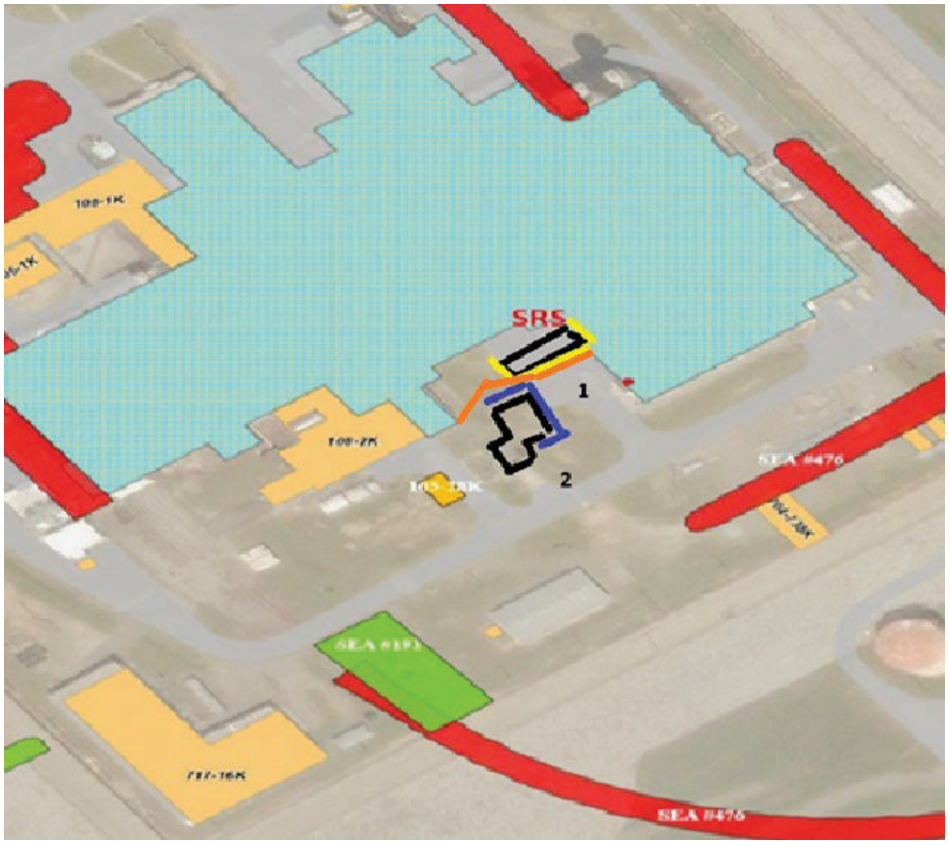
Revision 1 is being written to add in grounding cables and a lightning rod (see orange line in Figure 1 for the approximate disturbances area).

This Operation and Maintenance (O&M) Plan is for the excavation of soil south and southwest of the 105-K handball court (backside of the facility). It will provide a means by which soil/media disturbance can commence within a 200' buffer area of Site Evaluation Area (476) while protecting human health and the environment and minimizing impacts to long term characterization and remediation efforts.

This O&M Plan is characterized as "minor intrusive" because less than 10 percent of the Site Evaluation Areas will be excavated/disturbed.

Figure 1: Location of Project Work

Note: Planned excavation for areas 1 and 2. The yellow lines are footers and the blue lines represent bollards. Revision 1: The orange line represents installation of a grounding cable and lightning rod.



2. AREA DESCRIPTION AND CONDITIONS

The Site Evaluation Area 476 is identified as requiring radiological evaluation due to the presence of moderator/radioactive impurities from spills associated with rail transport of cask cars containing filters, deionizers, etc. (from Purification Area) along the K-Area railroad (RR) system and sewer lines. This SEA disturbance exists within the Protected Area of the K-Area Complex (KAC) in the vicinity of the handball court.

Evaluation Area 476 is identified within the Federal Facility Agreement (Ref. 1) with the Environmental Protection Agency because of the potential release/migration of radiological materials from the RR tracks.

As noted, the potential contaminants of concern are radionuclides, chiefly as fission products and tritium from heavy water/D20 moderated reactor operations. Safety and health concerns are primarily from personnel exposure to radionuclides. Previous work associated with this Site Evaluation Area, and for those similar within K-Area, has not yielded any evidence of radionuclide presence in the environment.

3. O&M ACTIVITY

A. O&M Activity Description

The planned soil disturbing activity within 200’ buffer of SEA 476 involves minor excavation/soil disturbance to install various equipment, pads and curbing along with bollards and footers near the handball court on the back side of 105-K. The covered equipment is listed in the referenced documents (Ref. 2, 3, 4).

For revision 1, a grounding cable and lightning rod are being added around the area (Ref. 3) to dissipate lightning strike energy (see orange line of Figure 1).

The depth of excavation varies depending on what equipment is being installed. For revision 1 the depth of the grounding cable is 2’6”, therefore 3’ of excavation is assumed for conservatism (Ref. 9). The lightning rod is 10 feet long (Ref. 9). It will be driven into the ground, but excavation will not need to occur for the rod’s

installation.

Reference 3 shows the required excavation depths of the other items. The footers shown in item 1 of Figure 1 are to be dug to 3'4". For conservatism 3'10" depth should be assumed. Approximately 12 bollards are planned for item 2 of Figure 1. The bollards are planned at a depth of 3'. For conservatism, 3'6" has been noted as the potential depth. Item 2 also includes other equipment that will be excavated to a planned depth of 2'. 2'6" depth should be used for conservatism. Items 1 and 2 in Figure 1 will be excavated as a whole to accommodate for what is planned in the cited work packages.

If this work scope requires change for any reason, the SRNS On-Scene Coordinator (OSC) will be contacted to determine if modifications to this O & M Plan are required.

B. O&M Activity Sampling and Monitoring for Health and Safety

It is anticipated that Surplus Plutonium Disposition Construction personnel will be performing the excavation work. The excavated local soils will be used again in the area after excavation. The soil should not be contaminated by radionuclides, nor should any special waste disposition beyond those typical for SRS be required. If the soil/media from SEA 476 is at or below background for radiological constituents, Radiological Protection (RP) will allow for the excavation as described in Section D.

The work area will be barricaded to ensure that access is controlled. This is a personnel safety issue.

Worker health and safety will be described and controlled, as required, in the Assisted Hazards Analysis or Job Hazards Analysis.

C. Health and Safety Plan

The health and safety concern for this O & M Plan primarily involves worker exposure to potential radiological contamination. While there has been no detectible radiological contamination (above background) found in recent soil disturbances in K-Area, Radiological Protection shall be available for any questions or

oversight required during the soil excavations around the handball court, as described in this O & M Plan.

D. Characterization and Sampling Plan for the Affected Area within SEA 476

Soil sampling is required for any soil disturbance in this Site Evaluation Area. The soil sampling scope is defined in the Soil Sampling Plans associated with the excavation of the soil South and Southwest of the 105-K handball court (Ref. 5). Soil sampling has already occurred for figure 2 under a previous project in the area (Ref. 6). Results show there were no radiological contamination concerns (Ref. 7, 8). For revision 1, the soil sampling plan is included in Reference 10. The characterization and sampling record for this minor intrusive O&M activity will be the RP sample data for the presence of radiological contamination in the soil/media.

If any radioactive contamination is found from sampling, the Environmental Compliance Authority (ECA), along with RP and K-Area Complex (KAC) Operations management, will devise an alternative plan by which to carry out excavation. As indicated above, evidence of soil contamination would likely require revision to this O & M Plan, or a possible addendum.

Additionally, the SRNS-OSC shall be notified by the Area ECA, and any additional work scope and sampling from the soil disturbance areas will be completed per SRNS-OSC guidance.

E. Contaminated Materials Management and/or Disposal

The disposition of any tools generated during this activity will be contingent upon sample results. The soil itself is to be spread back into the area. If SEA 476 soil/media is determined to be "clean," the soil can be returned to the area and the tools can be dispositioned or reused per GCO/Radiological Protection Guidance. If contaminated, however, RP will advise about further disposition requirements, in coordination with the GCO and the ECA. These options would be explored and fully described in a revised O & M Plan (or addendum).

Contaminated waste should be characterized and disposed of as "Radioactive Waste" under current SRNS/KAC Waste Management procedures, or deconned, if deemed appropriate by RP and the SRNS- OSC.

F. Environmental Plans and Permit Modification Requests

The soil disturbing aspect of this task is not expected to involve environmental plans/permits or other required maintenance and inspections, except for potential erosion control practices.

The Site Use/Site Clearance Permit process will be addressed prior to soil disturbance initiation, as needed.

4. CONTINGENCY PLAN

If at any time during the implementation of the activity, the conditions change, such that the activity is no longer considered "minor" (is greater than 10% of a waste unit area impacted or disturbed) or any other unanticipated event occurs, the Facility Operations Manager or the ECA shall:

- Immediately notify the SRNS-OSC. The SRNS-OSC will notify the DOE-OSC.

- Contain and stabilize the area, investigate as necessary to determine the necessary change in the activity plan, secure the area and stop work.

- Update the SRNS-OSC as to the findings and the requested path forward. The SRNS-OSC will communicate the information to the DOE-OSC and obtain concurrence on the path forward.

5. DOCUMENTATION & REPORTING

The Facility Operations Manager or the ECA will transmit the following close-out documentation to the SRNS-OSC by the 20th day of the month following the month that the land disturbing activity was completed:

- the signed O&M Plan,

- any sampling and characterization data collected (if Radiological Protection) determines the soil to be contaminated,

- quantity of contaminated materials generated (if present)

6. REFERENCES

1. WSRC-RP-96-45, Savannah River Site Plan for Performing Maintenancein Federal Facility Agreement Area (O&M) Plan (U), December 15, 1996

2. Work Order # 02169308-01

3. Work Order # 02122097-01

4. Drawing P-PG-K-02156, Rev. 0, 11/08/23

5. Soil Sampling Plan for Work Order # 2169308

6. Soil Sampling Plan for D & R Existing Diesel Generator Pad and the Diesel Oil Tank Pad 107-2K/107-B

7. NUCM-M-20230111-3, *K-Area Soil Survey to Support Construction*, 01/11/23

8. NUCM-M-20230110-11, *K-Area Soil Sample Survey to Support Construction*, 01/10/23

9. Drawing E EG K 019993, Rev. 0, 09/13/2023

10. Soil Sampling Plan for Work Order # 2122097