Minor
OPERATION AND MAINTENANCE
Activity Plan 22-020

K-Area Soil Disturbance for Electrical Installations to/from the New Entry Control Facility (ECF-3) Diesel Generator E-House, Etc. via Pole Installations and Duct Banks in Site Evaluation Area 476

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1. INTRODUCTION

This Operation and Maintenance (O&M) Plan is for the K-Area soil disturbance associated with the placement of power poles and duct banks needed to tie electrical power to the new Entry Control Facility (ECF-3) diesel/generator set and electrical house (E-House), as designed, to/from the 717-16K Craft Building and 105-K Building in order to serve its role as a back-up power supply. A soil sampling plan (Ref. 2) dictates the specific details with regard to disturbance locations sampling, with additional information provided in the O & M Activity Description section. This O & M Plan will provide a means by which soil/media disturbance can commence within Site Evaluation Area (SEA) 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 Area will be excavated/disturbed.

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 system. This O & M Plan will direct sampling and O & M managed SEA disturbance activities within the K-Area Complex (KAC) Protected Area in the general southern side of 105-K. This soil disturbance is for the installation of power poles, duct banks, etc. for power connection to/from Buildings 717-16K and 105-K, and the ECF-3 diesel/generator pad with E-House.

These discrete excavation locations will be identified and targeted for sampling by Radiological Protection (RP) in order to ensure that the potential contaminants of concern (radionuclides from fission products and tritium from heavy water/D2O moderated reactor operations) are assessed. 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, have not yielded any evidence of radionuclide presence in the environment. Radiological sampling reports

will serve as the documents of record for allowance of subject soil disturbances to proceed.

3. O&M ACTIVITY

A. O&M Activity Description

The planned soil disturbing activity in SEA 476 primarily involves minor excavation in support of installations for electrical power generation and transfer between Buildings 717-16K, 105-K, and the ECF-3 diesel/generator and E-House ….. via power poles needed for overhead lines, and duct banks needed for below grade lines. Excavations will be routed primarily from west of the ECF-3 Pad (717-K) and entering both north and south sides of the ECF-3 Pad.

Generally, poles placement for overhead lines will run westward from the ECF-3 Pad, with a duct bank section closest to 717-16K (to nearest pole). A duct bank from an electrical support pad will run to the Green Fuel Storage Pad from the south. From another electrical support pad, a duct bank will be routed to the southside of the ECF-3 Pad. Finally, duct bank will run from the southside of the ECF-3 Pad to a pole location, and down to an existing duct bank at the NW side of the ECF-3 Pad. Additionally, there will be grounding rod installations, fencing, sidewalk preps, etc. installed.

This activity is expected to begin in June of 2022 and complete by end of calendar year 2024. If this work scope requires significant 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

Radiological Protection (RP) will perform sampling to support the subject soil disturbing activities that are described in this O & M Plan. There should be no waste associated with this activity in terms of soil, as it is anticipated that it be returned to the local area. However, if soils contaminated by radionuclides are discovered, waste disposition will be performed typical for SRS waste protocol. Given that the soil from

SEA 476 is found to be at or below background for radiological constituents, RP will allow for the excavation as described in Section D to proceed.

The work area will be barricaded to ensure that access is controlled.

Worker health and safety will be described and controlled, as required, in the Assisted 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 SEA 476, RP shall be available for any questions or oversight requested during the process of electrical installations associated with this O & M activity.

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 Plan for Work Order #1941164-01 – Perform Site Preparation Activities for the Installation of the K-Area Protected Area Perimeter Entry Control Facility (ECF-3) S & S Standby Diesel Generator to Support Project Y826"* (Ref. 2).

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 construction preparatory activities, and other aspects discussed. 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 waste materials generated during this activity will be contingent upon sample results. If SEA 476 soil/media are determined to be "clean," normal waste disposal practices may be applied, as determined by KAC Waste ECA. If contaminated, however, RP will advise soils/media/equipment disposition, in coordination with Waste Certification Engineering 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.

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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,

- quantity of contaminated materials generated, and

- treatment, storage, and disposal location of contaminated material.

References

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

2. *"Soil Sampling Plan for Work Order #1941164-01 – Perform Site Preparation Activities for the Installation of the K-Area Protected Area Perimeter Entry Control Facility (ECF-3) S & S Standby Diesel Generator to Support Project Y826"*