Minor
OPERATION AND MAINTENANCE
Activity Plan

Sanitary Sewer Connection from K-Area to C-Area

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Approved by: 01-24-2024
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1. INTRODUCITON

The Operation and Maintenance (O&M) Plan for the Sanitary Sewer Connection from K-Area to C-Area will provide a means by which soil/media disturbance can commence within Site Evaluation Areas (SEA) 572 & 514, while protecting human health and the environment, and minimizing the impact to long term characterization and remediation efforts.
This O&M Activity Plan is defined as a "minor intrusive activity" based on the soil excavation meeting the definition of both "minor" and "intrusive" as defined in the SRS Operations and Maintenance Plan (RCRA/CERCLA), WSRC-RP-93-904.

2. AREA DESCRIPTION AND CONDITIONS

The Site Evaluation Area 572 is identified as requiring evaluation due to the presence of process lines leading from the process areas to the K-Area Retention Basin and associated purge field, 904-88G. This SEA exists within the Restricted and Protected Areas of the K-Area Complex (KAC). The minor excavation required to establish a sanitary sewer connection from K-Area to C-Area is located within the K-Area Protected Area.

Site Evaluation Area 572 is identified within the Federal Facility Agreement with the Environmental Protection Agency because of the potential release/migration of radiological materials from the process lines. Should an unknown or unidentified line breach have occurred within the process piping and in proximity to the soil disturbance area, precautions required per this O & M Plan would protect the involved workers (and the public, as necessary).

Site Evaluation Area 514 requires evaluation due to the following contaminants of concern : Combined spills from 105-K, 106-K, and 109-K. The potential contaminants of concern are primarily radionuclides, chiefly as fission products and tritium from heavy water/D2O moderated reactor operations.

As noted, the potential contaminants of concern are radionuclides, chiefly as fission products and tritium from heavy water/D2O moderated reactor operations. Safety and health concerns are primarily from personnel exposure to radionuclides. Previous work associated with this SEA, 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

Sanitary wastewater will be routed from lift station 607-1K from inside the Entry Control Facility 2 (ECF) fence, north through the outer area fence then along the K-Area entrance road. Lift station(s) will be added outside K-Area as needed to pressurize the load. The force main piping is proposed to be routed along Road 6, along Road 5, along the out of service railroad bed toward C-Area, finally tying in at the 607-85G lift station.

Scope will include purchase & installation of force and gravity piping, air release valves, lift station(s) with wet well(s), and manholes with covers. If the old railroad bed is selected as the best routing, removal of vegetation, rails, and ties will be required. Electrical power for the lift station will be obtained from the 13.8kV line within K-Area and will require new power poles, lines, and a transformer. KAC Engineering is requesting an additional penetration be added at the location of the security fencing for future campaigns.

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

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

RP will sample the excavation for radionuclide presence per their standard protocol and procedures.

C. Health and Safety Plan

The health and safety concerns involve worker exposure to contaminants of interest listed in Section 2 above. The work will be completed in accordance with the requirements stated in the AHA. The safety requirements and personal protective equipment described in the AHA are appropriate for the potential hazards of the waste units

D. Characterization and Sampling Plan for the Affected Area within SEA 572 & 514

Soil sampling will be required for any type soil disturbance in these Site Evaluation Areas. 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 a plan by which to carry out sanitary sewer connection (options may consider the complete removal of the contamination, and provide for a clean buffer, etc.). 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 572/514 soil/media is determined to be "clean," normal waste disposal practices may be appropriate, as determined by KAC Waste Engineering. 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, beyond those required for erosion control practices.

The Site Use/Site Clearance Permit process will be addressed and approved prior to soil disturbance initiation.

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 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 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.