Minor
OPERATION AND MAINTENANCE
Activity Plan

Replacement of Two Post Indicator Valves (PIVs) East of 281-2H - Site Indices 295, 549, 581 and 591

Prepared by: Miran F. Tyrrell — 11/1/17
Miran F. Tyrrell
Environmental Compliance Authority
Outside Facilities – H Area
Date

Approved by: W T. Stillinger — 11/2/17
William T. Stillinger, III
Site Services Planner
Utilities and Operating Services
Date

Approved by: Neil McIntosh — 11/1/17
Neil McIntosh
OF-H Operations Manager
H Canyon
Date

Approved by: Jewel Lenderman — 11-1-17
Jewel Lenderman
OF-H Radiological Protection
H Canyon
Date

Approved by: Jeff Ward for — 11-1-17
Jeff Ward
ECA Manager
EC&ACP
Date

1. INTRODUCTION

This Operations and Maintenance (O&M) Plan is for the excavation, isolation, and replacement of two Post Indicator Valves (PIVs) on the fire water system – FP-V-2070 and FP-V-2072. The work will isolate the PIVs and replace them while protecting human health and the environment and minimizing the impact to long term characterization and remediation efforts. This activity is within Site Index (SI) 549 (General Separations Area Eastern Groundwater Operable Unit, No Building Number (NBN)) of the Federal Facility Agreement (FFA, Reference 1). It is also within 200 feet of SIs 294 (H-Area Retention Basin, 281-1H, Process Cooling Water Delaying Basin), 295 (H-Area Retention Basin, 281-2H, Process Cooling Water Pumping Basin), and 591 (H Area Process Sewer Lines as Abandoned, NBN). SIs are also called RCRA/CERCLA Units.

This plan is characterized as "minor intrusive activity" based on the soil excavation meeting the definition of both "minor" and "intrusive" as defined in Reference 2.

2. AREA DESCRIPTION AND CONDITIONS

The area in which the activity will be conducted is in the northern portion of the drainage basin of Site Infrastructure Storm Water Outfall H-08. The location of the PIVs to be replaced is shown as a green dot on Attachments 1 and 2. Attachment 1 shows approximate locations for SIs 294, 295, and 591 as red areas. The following large structures are located in this portion of the drainage basin:

- 704-H Administrative Building
- 281-1H, 281-2H and 281-5H H-Canyon Process Cooling Water Basins
- 724-H Office, Shop and Storage Building
- 284-H Powerhouse
- 282-H Reservoir and Pump House

For a discussion of the SIs, see "Revision 0 for Appendix C for Fiscal Year 2017" of Reference 1. SI 549 is located in the drainage basin of Upper Three Runs Creek. SIs 294, 295, and 591 are located in the drainage basin of Four Mile Branch. The location of the work is shown as a green dot on the aerial image in Attachment 2. These SIs are in the FFA because of possible radiological contamination from past releases from H-Area operations. To date, there has been no remediation of these units; the current status of the units is inactive. Per Appendix E of Reference 1, Remedial Actions are scheduled to begin in April 2043 for SIs 294, 295, and 591 and May 2047 for SI 549. A photo of the actual location is provided in Attachment 3.

3. O & M ACTIVITY

A. <u>O&M Activity Description</u>

The scope of the activity is to excavate, isolate, and replace two PIVs located on the east side of the 281-2H Process Cooling Water Pumping Basin. A third PIV (FP-V-2071) located

between the two will be abandoned in place in the open position. The PIV will be painted black, but no excavation will be required. Excavations for the two PIVs to be replaced are expected to be 6 to 8 feet. SRNS Site Utilities forces will perform the work in accordance with the provisions of Asset Suite Work Order #1607807-01 (Reference 3) and AHA #SUD-13021 Rev. 2 (Reference 4). The activity occurs within a general SI and adjacent to several identified specific SIs. Work is expected to take no more than 5 days.

ALL EXCAVATED SOILS WILL BE RETURNED TO THE ORIGINAL LOCATION OF SOIL DISTURBANCE. THE DISPOSAL OF ANY SOIL WILL BE PER THE ENVIRONMENTAL COMPLIANCE AUTHORITY (ECA) AND RADIOLOGICAL PROTECTION (RP) DIRECTION.

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

The identified units are in the FFA because of possible radiological contamination from past releases from H-Area operations.

Radiological surveys will be required at the excavation site. If radiological contamination is encountered, RP will determine if protective equipment and personnel access restrictions are required.

Worker health and safety will be directed and controlled as required in the Assisted Hazard Analysis (AHA).

C. Health and Safety Plan

The health and safety concerns involve worker exposure to potential radiological contamination. RP shall provide for radiological monitoring during the excavation activities.

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 related to the RCRA/CERCLA units.

D. Characterization and Sampling Plan for the Affected Area within the Unit

RP has prepared a sampling plan for work in this area and will conduct sampling of the soil excavated during this activity. If unexpected contamination is found, the SRNS On-Scene Coordinator (OSC) may request additional work scope and sampling from soil disturbed by the activity. Material removed as part of the excavation will be returned as backfill when the activity is completed.

E. Contaminated Materials Management and/or Disposal

Based on previous excavations in the vicinity, radiological contamination is not expected in the excavated soil. All waste will be disposed in accordance with guidance from RP, the Generation Certification Official (GCO), and the ECA. Clean soil will be returned to the excavation once the work is complete.

F. Environmental Plans and Permit Modification Requests

This activity is not expected to involve other environmental plans / permits, required maintenance and inspections, or erosion control practices.

4. CONTINGENCY PLAN

During implementation of the activity, if the conditions change at any time such that the activity is no longer considered "minor" (as defined in Reference 2) or any other unanticipated event occurs, the Project Manager, the Project Construction Manager, or the ECA shall:

- Immediately notify the SRNS-OSC. If necessary, the SRNS-OSC will notify the DOE-OSC.
- Stop work, secure the area, contain and stabilize the area, and determine any necessary change to the activity plan.
- Notify the SRNS-OSC of the findings and proposed path forward. The SRNS-OSC will communicate the information to the DOE-OSC and obtain concurrence on the path forward.

5. DOCUMENTATION & REPORTING

H Canyon will transmit the following documentation to the SRNS-OSC within twenty days of the completion of the activity:

- The signed O&M plan
- Any sampling and characterization data collected

The following information is not expected to be generated by this activity, but, if generated, will be forwarded to the SRNS-OSC:

- The quantity (if any) of any contaminated materials generated, and
- The disposal location of any contaminated material, if generated.

Attachments

Attachment 1. Drawing Showing Approximate Locations of PIVs (Green Dots) and Specific Site Indices (Red Areas)
Attachment 2. Aerial Image Showing Location of PIVs to be Replaced (Green Dot)
Attachment 3. Photo Showing Physical Location

References

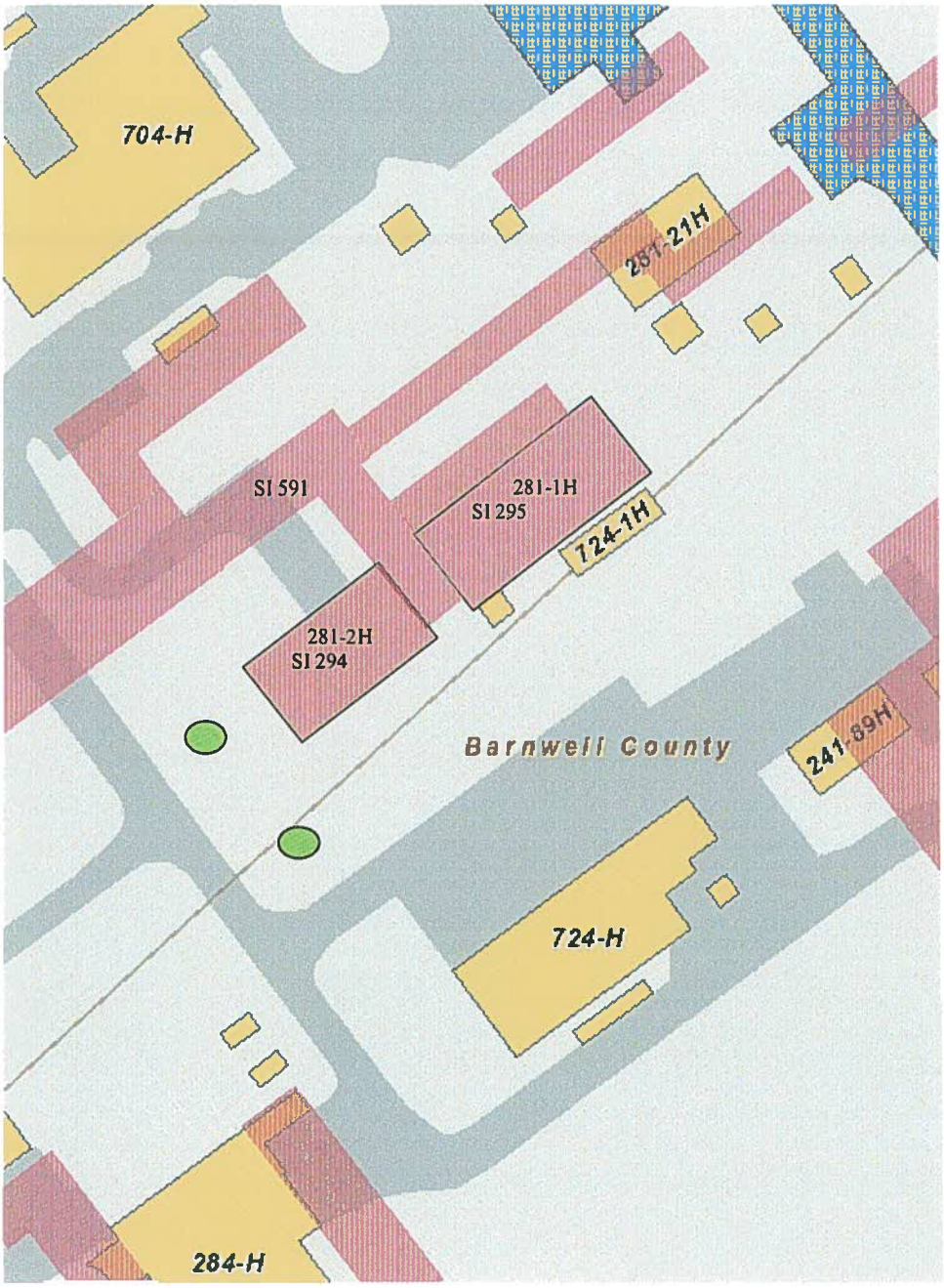
1. SRNS-OS-94-42, Federal Facility Agreement for the Savannah River Site, Administrative Document Number 89-05-FF, effective August 16, 1993, Revision 0 of Appendix C for Fiscal Year 2017.

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

3. Assisted Hazard Analysis (AHA) #SUD-13021 Rev. 2, entitled "*Correct Underground Water Leaks, Underground Commodities, Perform Core Sampling, Etc. in Areas with and without Radiological Concerns,"* initiated by William Stillinger, III, on 5/10/17.

4. Asset Suite Work Order #01607807-01, created by William Stillinger, III.

Attachment 1. Drawing Showing Approximate Locations of PIVs (Green Dots) and Specific Site Indices (Red Areas)



Note: The entire drawing is within SI 549.

Attachment 2. Aerial Image Showing Location of PIVs to be Replaced (Green Dotz)



Attachment 3. Photo Showing Physical Location



PIVs identified by red arrows will be replaced. PIV identified by the black arrow will be abandoned in place.