SRNS-J2000-2021-00278
Revision 0
May 04, 2021

EC&ACP Sampling Platform Proposal

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Proposal

EC&ACP is recommending that eleven (11) Sampling Platforms, Attachment 1 located within the SRS Site Boundary are to be abandoned in place with no further Surveillance and Maintenance (S&M) inspections to be performed or future Decommissioning and/or Dismantling (D&D).

EC&ACP (Engineering, Environmental Compliance, Safety) has concurred with the stated proposal. EC&ACP is seeking DOE-SR concurrence.

Scope

Performing continued Surveillance and Maintenance (S&M) inspections of the eleven (11) Sampling Platforms presents Personnel Safety concerns and is not Cost Effective. Access to the Sampling Platforms exposes personnel to trips, slips, and falls due to the steep grade of the terrain, and exposure to wildlife.

D&D is not recommended due to the Safety concerns and Costs to decommission/dismantle the platforms. Additional hazards would be introduced if decommissioning/dismantling were to be performed. Heavy equipment use during the D&D process on steep terrains would be an additional hazard. Designating the Sampling Platforms as abandoned in place indicates there is no need for continued operations, the platforms are safely isolated, and hazards eliminated. The Sampling Platforms will be clearly identified with "Abandoned in Place" signage. The entrances will be tube-blocked if safety/hazard reviews permit. S&M inspections shall cease.

The Sampling Platforms will not be decommissioned/demolished or removed from their existing location. Location of platforms are difficult to access due to slope/grade of the terrain. The Sampling Platforms will be allowed to deteriorate by nature's elements. The Sampling Platforms were constructed with $\frac{3}{16}$" galvanized steel. Based on the corrosion rate of ⅜" carbon steel (120 years) the platforms are estimated to deteriorate in 70-75 years. The galvanic coating is composed of approximately 90% zinc and 10% iron. Galvalume coatings are 55% aluminum, 43.5% zinc, and 1.5% silicon. Carbon steel or plain-carbon steel is a metal alloy. It is a combination of two elements - iron, and carbon. Other elements are present in small quantities. The only other elements allowed in plain-carbon steel are: manganese (1.65% max), silicon (0.60% max), and copper (0.60% max).The deteriorated platforms have the potential to reach the nearby streams since some of the platforms are already in contact with the stream dependent on rainfall/drought conditions. The platform material composition would have been evaluated prior to platform installation so EC&ACP anticipate leaving them in place poses negligible impact to the water stream and/or ground water.

The Sampling Platforms are recorded in the Facilities Information Management System (FIMS) in the record nomenclature file "Water-Monitoring-SR" (WMSR). The sampling platforms will be updated in FIMS and the status will be "In-Situ Closed". EC&ACP is responsible for the management of these assets and will communicate with the Savannah River Nuclear Solutions Real Property Management organization to ensure the operation status has been updated/revised in the Shared Site Structure Database.

Cost Savings

Substantial savings can be achieved by not performing the D&D, S&M Inspections, and required periodic deforesting that would be required to safely gain access to conduct S&M and D&D. Significant budgets will be required for Engineering, Operations, Project, Radiological Controls, Environmental Compliance Authorities and Constructions/Sub-Contractor support. Site Estimating of the decommissioning of the sampling platforms will be completed by May 30, 2021 to provide an accurate cost savings to be considered for a Continuous Improvement.

Safety Risk/Concerns

Personnel safety exposure will be reduced by not performing the decommissioning and/or S&M requirements. Hazards at each location include but are not limited to slip, trips, and falls due to severe terrain, overgrown vegetation, and wildlife exposure. Access to demolish the platforms utilizing standard D&D machinery has substantial risk due to the terrain and machinery instability. If machinery is not used, man-hours required to disassemble, remove, and mobilize/operate portable equipment would escalate exposure to personnel to the afore mentioned hazards as well as add to the overall cost.

Personnel safety exposure to hazards are None to Very Low if the Sampling Platforms are left to deteriorate over time as exposed to the elements.

Environmental Compliance

Environmental Compliance has reviewed the Sampling Platform purpose and concluded the platforms can be abandoned in place. Reference Inter-office Memorandum SRNS-J2200-2021-00105.

Attachments:

Attachment 1 – Sampling Platform Photos

Attachment 2 - Inter-office Memorandum SRNS-J2200-2021-00105, J. Fudge, 04/13/2021

Attachment 1 Sampling Platform Photos

606-2G (Metal and Wood Platforms)

606-8G

606-11G

606-15G

606-16G

606-19G

606-20G (No Platform)

606-10G

606-9G

606-23G (Metal and Wood Platforms)

904-105G

Sampling Platform at 604-11G – 02-26-2013

Sampling Platform at 604-11G – 10-02-2014

SRNS-J2200-2021-00105
RSM Track No.: 10854

Subject: **Nationwide Permit 5 Compliance for Certain Outfall Sampling Platforms**

Project: **Abandon in Place Certain Outfall Sampling Platforms**

Location: **606-2G, -8G, -9G, -10G, -11G, -15G, -16G, -19G, -20G, -23G, and 904-105G**

Personnel: **W. Griffin, T. Wilson, J. Fudge**

Date: **April 13, 2021**

J. Fudge 4/13/2021

Background and Project Description

Area Completion Projects (ACP) proposes to abandon in place 11 outfall sampling platforms, 606-2G, -8G, -9G, -10G, -11G, -15G, -16G, -19G, -20G, -23G, and 904-105G. Abandonment is preferred over removal because most of the platforms are located at the bottom of manmade canals or ditches. Access for dismantlement would require traversing steep slopes with a substantial risk for slips, trips, and falls. The steep terrain also would require use of a crane for platform removal at a substantial cost to the project.

A walkdown was conducted on April 6, 2021 to determine if any of the sampling platforms proposed to be abandoned in place were located in jurisdictional waters and thus subject to the terms and conditions of the U.S. Army Corps of Engineers (USACE) Nationwide Permit (NWP) 5, Scientific Measurement Devices. Based on the walkdown, the jurisdictional waters statuses of the sampling platforms are:

- 606-2G – located in McQueen Branch, jurisdictional waters present.
- 606-8G – located in a C Area discharge canal, no jurisdictional waters.
- 606-9G – located in a C Area discharge canal, jurisdictional waters present.
- 606-10G – located in P Area manmade ditch, jurisdictional waters present.
- 606-11G – located in a P Area discharge canal, jurisdictional waters present.
- 606-15G – located in a K Area manmade ditch, no jurisdictional waters.
- 606-16G – located in Indian Grave Branch, jurisdictional waters present.
- 606-19G – located in a B Area manmade ditch, no jurisdictional waters.
- 606-20G – no walkdown, only viewed photographs provided by others. Photographs clearly indicate the presence of various sampling apparatuses in jurisdictional waters at an unknown wetland location, but no sampling platform evident.

- 606-23G – no walkdown, only viewed photographs provided by others. Photographs indicate the elevated walkway may be located in jurisdictional waters at an unknown wetland location.
- 904-105G – located in the D Area Discharge Canal, no jurisdictional waters.

Regulatory Compliance

The jurisdictional waters mentioned above are considered to be jurisdictional waters of the U.S. and are protected by Section 404 of the Clean Water Act, which is administered and enforced by the U.S. Army Corps of Engineers (USACE), Charleston District. Any activity occurring within jurisdictional waters is presumed to require authorization under a USACE permit.

Placing sampling platforms in jurisdictional waters of the U.S. typically is permitted by rule under NWP 5 and does not require preparation of a permit application and formal approval by the USACE. However, compliance is required with NWP 5 language, NWP General Conditions, and Charleston District Regional Conditions.

The following language is written in to NWP 5 regarding removal of scientific measurement devices in jurisdictional waters of the U.S.:

> *"Upon completion of the use of the device to measure and record scientific data, the measuring device and any other structures or fills associated with that device (e.g., foundations, anchors, buoys, lines, etc.) must be removed to the maximum extent practicable and the site restored to pre-construction elevations."*

The NWP regulations define practicable as:

> *"available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes."*

Removal of sampling structures and apparatuses located in jurisdictional waters is deemed not practicable because of the safety risks and high costs associated with removal. In-place abandonment is considered to be in compliance with the terms and conditions of NWP 5 for the structures listed above.

In-place abandonment is consistent with South Carolina Department of Health and Environmental Control (SCDHEC) Section 401 Water Quality Certification because NWP 5 was certified without conditions. The subject structures are not located in streams considered state navigable waters; therefore, in-place abandonment is not subject to SCDHEC Regulation 19-450, Permits For Construction in Navigable Waters.

In-place abandonment of the listed structures will not require preparation of a floodplain/wetland assessment as described in 10 CFR 1022, *Compliance With Floodplain and Wetland Environmental Review Requirements* because the subject structures were built prior to 10 CFR 1022.5 being published in the Federal Register (Vol. 68, No. 166) on August 27, 2003.

Conclusion

The listed structures located in jurisdictional waters can be abandoned in place. NWP 5 makes allowances for such actions when removal is not practicable. Removal is considered not practicable because of the safety hazards and high cost associated with removal. In-place abandonment is exempt from, or otherwise not applicable to, SC R. 19-450 and 10 CFR 1022.

The 606-2G sampling platform on McQueen Branch was previously evaluated for removal under NWP 5 as documented in a memorandum (SRNS-J2210-2019-00061) dated May 8, 2019. The information presented in that memorandum is superseded by this document dated April 13, 2021.