Floodplain and Wetland Assessment of the P-Area Trail Extension for a CERCLA Action on the Savannah River Site

Prepared for

U.S. Department of Energy
Savannah River Operations Office
Aiken, South Carolina

September 2022

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1.0 Introduction

Executive Order 11988-Floodplain Management (May 24, 1977) and Executive Order 11990-Protection of Wetlands (May 24, 1977) require federal agencies to evaluate, and to the extent possible minimize, the impacts of their projects on floodplains and wetlands. The U.S. Department of Energy (DOE) established policy and procedures to consider impacts on floodplains and wetlands as part of its decision-making process in 10 CFR 1022 – *Compliance with Floodplain and Wetland Environmental Review Requirements*. Under this DOE regulation, a floodplain or wetland assessment is required for any activity involving floodplains or wetlands, per 10 CFR 1022 (d) (1) – (2). Furthermore, 10 CFR 1022.11 (a) requires DOE to determine the applicability of the floodplain management and wetlands protection requirements in 10 CFR 1022, Subpart B, concurrent with its review of a proposed action to determine appropriate National Environmental Policy Act (NEPA) or Comprehensive Environmental Response, Liability, and Compensation Act (CERCLA) process requirements. Determination of the appropriate NEPA process is discussed in Section 3.0, Project Description.

This assessment has been prepared by DOE-Savannah River (DOE-SR) in accordance with the requirements of 10 CFR 1022.13 to evaluate potential impacts to floodplains and wetlands from the construction of the P-Area trail extension at the Savannah River Site (SRS). The provisions of 10 CFR 1022.13 (c) permit an assessment to be prepared separately for those floodplain and wetland actions for which neither an Environmental Assessment (EA) nor Environmental Impact Statement (EIS) is required. DOE-SR has determined the need for this floodplain and wetland assessment per 10 CFR 1022.5 (e) since the proposed action will require the discharge of fill material into wetlands. This assessment also addresses requirements of Executive Order 13690[1] restoring the Federal Flood Risk Management Standard (FFRMS) that expanded flood elevation determination (refer to Section 3.2 for details).

[1] Executive Order 14030, "Climate-Related Financial Risk" (May 2021) reinstated Executive Order 13690.

2.0 Background

DOE-SR is engaged in numerous environmental contaminant remediation activities across the SRS under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). *Sampling and Analysis Plan Addendum for the P-Area Groundwater Operable Unit (U)* (SRNS-RP-2018-00261, Rev. 1, August 2018) describes ongoing CERCLA activities in P-Area, including surface water sampling requirements. The proposed action will provide safe access to surface water sampling locations.

3.0 Project Description

DOE-SR proposes the construction of a trail extension to provide safe passage for off-road utility vehicles accessing surface water sampling locations in headwater wetlands associated with Steel Creek. Steep slopes in this area create significant hazards for pedestrian access (Figure 1). Avoiding wetland impacts would require substantial cutting of steep slopes and removal of mature overstory trees that provide bank stabilization in an area of radiological contamination. The proposed activity will require the placement of gabions into 0.037 acre (1,594 square feet) of jurisdictional wetlands; mitigation will be used to compensate for unavoidable wetland impacts.

DOE-SR plans to conduct the proposed action under its provisions for application of a categorical exclusion pursuant to 10 CFR 1021.410. DOE-SR has deemed that the proposed action is categorically excluded as it satisfies all the requirements under 10 CFR 1021.410 (b) (1) - (3):

- The proposed action fits within the class of actions listed in 10 CFR 1021, Subpart D, Appendix B, specifically Categorical Exclusion B6.1, Cleanup Actions. An SRS Environmental Evaluation Checklist (EEC) for the proposed action is provided in Appendix A.
- No extraordinary circumstances exist that may affect the significance of the environmental effects of the proposed action, and;
- The proposed action is not being segmented (i.e., is not connected to or otherwise related to other proposed actions with potentially significant or cumulatively significant impacts) to meet the definition of a categorical exclusion. The proposed action is a stand-alone activity and not part of a larger project being evaluated with an EA or EIS.

Furthermore, none of the conditions that are integral elements for Class B actions listed at 10 CFR 1021, Subpart D, Appendix B (1) - (5) exist for the proposed action that would otherwise negate qualification

for categorical exclusion. While the proposed action will take place in wetlands which are considered an environmentally sensitive resource per 10 CFR 1021, Subpart D, Appendix B (4) (iii), it is not anticipated that the proposed action has the potential to cause significant impacts on these resources. The loss of wetland services resulting from the proposed action will be offset with compensatory mitigation in accordance with accepted regulatory protocols.

3.1 Description of Wetlands

The subject site is located in headwater wetlands associated with Steel Creek (Figure 1) (Photograph 1). Wetland vegetation observed at the project site included mosquito fern (*Azolla caroliniana*), sedge (*Carex* sp.), floating pennywort (*Hydrocotyle ranunculoides*), jewel-weed (*Impatiens capensis*), riceleaf cutgrass (*Leersia oryzoides*), water lily (*Nymphaea odorata*), mermaidweed (*Proserpinaca palustris*), lizard's tail (*Saururus cernuus*), and bur-reed (*Sparganium americanum*). The wetland ranking for jewel-weed is Facultative Wetland (FACW); the remainder of the species are ranked as Obligate (OBL). FACW plants are defined as those that nearly always occur in areas of prolonged flooding or require standing water or saturated soils but may, on rare occasions, occur in non-wetlands. OBL wetland plants are defined as those that always occur in standing water or in saturated soils.

Wetlands are defined under Section 404 of the Clean Water Act as requiring positive evidence of three criteria: 1) hydrophytic vegetation, 2) hydric soils, and 3) wetland hydrology. Hydrophytic vegetation is considered to be present when all species are ranked as FACW or OBL. The subject site meets the hydrophytic vegetation criterion. Soils were not sampled because of potential radiological contamination but are conservatively assumed to meet hydric soil criteria because of long-term or permanent inundation. Likewise, the presence of long-term or permanent inundation satisfies the wetland hydrology criterion. The site is considered to be a jurisdiction wetland based on the presence of positive evidence of the three wetland criteria. Wetlands were identified using criteria specified in the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation manual and current USACE supplemental guidance.

3.2 Description of Floodplains

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) are the most authoritative information available for floodplains on SRS. Where floodplains of SRS streams are mapped by FEMA, they are classified as a Special Flood Hazard Area (SFHA) subject to inundation by

the one percent annual chance flood (100-year flood). The SFHAs are further defined as Zone A (no base flood elevation determined) and Zone AE (base flood elevation determined). The SFHAs meet the definitions of base floodplain and critical action floodplain defined by 10 CFR 1022.4.

The Federal Flood Risk Management Standard (FFRMS) identifies three approaches for establishing the FFRMS elevation and flood hazard area:

1. Utilizing the best-available, actionable hydrologic and hydraulic data and methods that integrate current and future changes in flooding based on climate science (heretofore referred to as the "climate-informed science approach);
2. Freeboard (Base Flood Elevation (BFE) + X feet); and
3. 500-year flood elevation.

The closest mapped floodplain is further downstream on Steel Creek, beginning at the downstream side of the L-Lake dam and extending downstream until merging with the Savannah River floodplain. The elevation of the project site is approximately 100 feet higher than the end of the Steel Creek floodplain at the L-Lake dam. The proposed action does not occur in a FEMA-mapped floodplain (100-year BFE). Furthermore, the subject site does not occur in a flood hazard area identified with any of the three FFRMS approaches.

4.0 Effects of the Proposed Action on Wetlands and Floodplains

The proposed action is the construction of the P-Area trail extension that will require the placement of gabions in 0.037 acre (1,594 square feet) of Steel Creek headwater wetlands, which constitutes a negative and direct effect on wetland vegetation, soils, and hydrology that also is both a short-term and long-term effect. The overall effect on wetlands is insignificant because the magnitude of impact is only 0.037 acre. Furthermore, the loss of wetland services associated with the 0.037-acre impact will be compensated for with wetland mitigation. The proposed action will not occur in a floodplain or flood hazard area defined in the FFRMS. Lastly, by extension of this determination and pursuant to 10 CFR 1022.11, the proposed action is taking place in neither a base or critical action floodplain, nor meets criteria as a critical per 10 CFR 1022.4.

The effects of the proposed P-Area trail extension construction on floodplain and wetland values was considered for conservation of existing flora and fauna, cultural resources, cultivated resources, aesthetic values, and public interest. The proposed action is considered to have an insignificant effect on conservation of existing flora and fauna because the magnitude of wetland impact is only 0.037 acre. Trail extension construction will not impact cultural resources because the subject site was substantially impacted by previous P Reactor operations. The proposed action will not impact cultivated resources because they do not exist on SRS. Construction of the P-Area trail extension is not considered to negatively impact aesthetic values because the project will occur at a location with minimal aesthetic value. The proposed action will not affect existing public interest associated with the location of the project site. The proposed action will result in a permanent wetland loss of 0.037 acre and the affected areas as a result will not survive, function, or maintain quality as a wetland. Although the wetland impact is insignificant (0.037 acre), losses will be compensated with mitigation.

5.0 Alternatives Evaluated

The purpose of the P-Area trail extension is to provide safe worker access to surface water sampling locations required for CERCLA regulatory compliance. The preferred alternative is to construct the P-Area trail extension that requires 0.037 acre of wetland impact and does not necessitate soil disturbance in an area of radiological contamination. The no-action alternative is to not construct the trail extension, which would expose workers to substantial safety risks, particularly slips, trips, and falls, when accessing the surface water sampling locations. An alternative that avoids direct wetland impacts and provides safe worker access would require substantial cutting of steep slopes in an area of radiological contamination, as well as removal of large overstory trees that could cause soil destabilization and sedimentation of adjacent wetlands (Photograph 2).

The preferred alternative has an insignificant effect on wetlands because the magnitude of impact is only 0.037 acre which will be compensated for with wetland mitigation. The no-action alternative of not constructing the trail extension does not address worker safety and is considered infeasible. The wetland impact avoidance alternative is orders of magnitude more expensive because of the need to remove soil from a steep slope in an area of radiological contamination. Furthermore, soil disturbance and tree removal could result in wetland sedimentation exceeding the impacts of the preferred alternative. For these reasons, the wetland avoidance alternative is considered infeasible.

6.0 Mitigation

The proposed action is the construction of the P-Area trail extension that will require the placement of gabions in 0.037 acre (1,594 square feet) of Steel Creek headwater wetlands. Although this impact is insignificant, compensatory mitigation will be provided by debiting 0.41 credit from the Savannah River Site Wetland Mitigation Bank (SRSWMB). The *Required Wetland Mitigation Credit Table and Worksheet* is provided in Appendix B. The proposed action will not occur in a floodplain, thus negating the need for floodplain mitigation.

7.0 Summary and Conclusions

DOE-SR is proposing the construction of the P-Area trail extension to provide safe worker access to surface water sampling locations. Trail construction would result in 0.037 acre of permanent wetland impact. The subject site is not located in a floodplain. Effects on wetlands were determined to be insignificant because the magnitude of impact is only 0.037 acre and the impacts will be compensated for with wetland mitigation. The no-action alternative of not constructing the trail extension does not address the project purpose of providing safe worker access to surface water sampling locations and is considered infeasible. The wetland impact avoidance alternative is substantially more expensive and could have greater wetland impact. The project site is not located in a floodplain. There are no cumulative impacts not addressed with mitigation.

DOE-SR will publish, in accordance with 10 CFR Part 1022.12, a Notice of Proposed Wetland Action based on the information in this document; the Notice of Proposed Wetland Action also will be sent to the FEMA regional office, appropriate Native American tribes, the South Carolina Department of Health and Environmental Control, as well as persons or groups known to be interested in or potentially affected by the Proposed Action and offered an opportunity to review and comment for 15 days, pursuant to 10 CFR 1022.12(b). The Notice will include a brief description of the proposed action and project location. The Notice will be published so that it provides an opportunity for a 15-day public review and comment period. DOE-SR will consider substantive comments for reevaluating the practicability of alternatives and mitigation.

8.0 References

10 CFR 1021, U.S. Department of Energy, *National Environmental Policy Act Implementing Procedures*, Subpart D, Appendix B.

10 CFR 1022, U.S. Department of Energy, *Compliance With Floodplain and Wetland Environmental Review Requirements.*

33 CFR 328, U.S. Army Corps of Engineers, *Definition of Waters of the United States.*

Environmental Evaluation Checklist CBU-P-2020-0022, "Construction of ATV/UTV Trail and Stairs for Access to Steel Creek to Support Routine Sampling Events, rev. 2", July 2022.

Executive Order 11988, *Floodplain Management.*

Executive Order 11990, *Protection of Wetlands.*

Executive Order 13690, *Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input of Wetlands.*

Executive Order 140.0, *Climate-Related Financial Risk*.

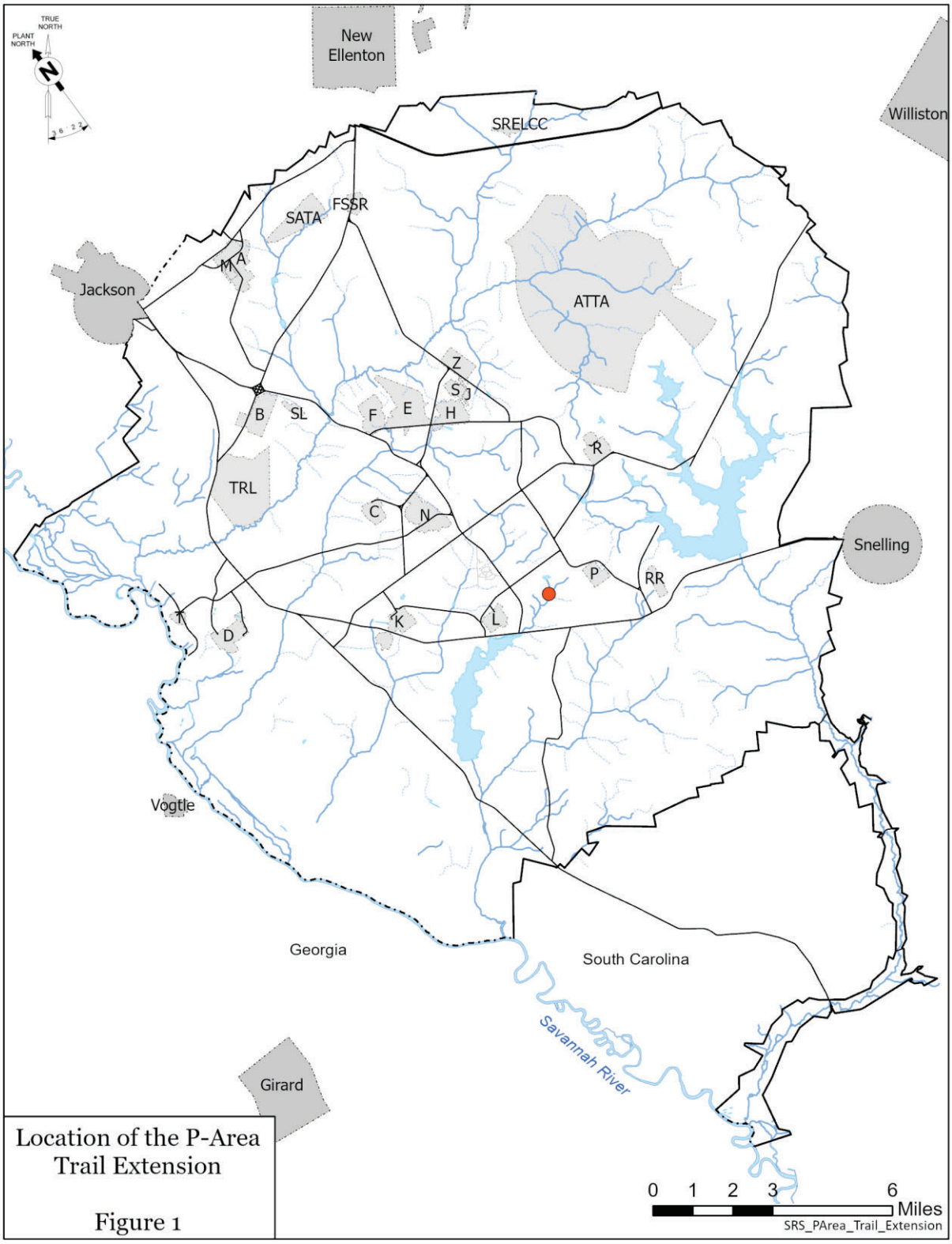
FEMA 2010. FIRM, Barnwell County, SC. Panel 275 of 500, Map Number 45011C0275D.

FEMA 2010. FIRM, Barnwell County, SC. Panel 300 of 500, Map Number 45011C0300D.

Savannah River Nuclear Solutions, *Sampling and Analysis Plan Addendum for the P-Area Groundwater Operable Unit (OU)* (SRNS-RP-2018-00261, Rev. 1, August 2018).

U.S. Army Corps of Engineers, Wetlands Research Program Technical Report Y-87-1, *Corps of Engineers Wetland Delineation Manual.*

U.S. Army Corps of Engineers, *Regional Supplemental to the Corps of Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region.*



Location of the P-Area Trail Extension

Figure 1

Photograph 1. Area of proposed wetland impacts.

Photograph 2. Steep slope and large overstory trees left and center of photograph, area of wetland impact at right edge of photograph.

Appendix A

Environmental Evaluation Checklist No. CBU-P-2020-0022, Revision 2

1

OSR 14-347 Rev. 11-01-2010 Proc. Ref 3Q, 5.1 Entered by Mark Amidon Entered on 07/05/2022	**Savannah River Site** **Environmental Evaluation Checklist (EEC)** **NEPA Review / Environmental Permits** **Status** Approved	EEC No. CBU-P-2020-0022 Rev No. 2

Instructions

- Fill in both the NEPA and Permits portion of the checklist
- Submit one copy of the completed Checklist with supplemental information to the Department NEPA Coordinator(DNC). The DNC will distribute to the Site NEPA Coordinator for NEPA level approval by DOE
- Submit one copy of the completed Checklist with supplemental information to the Environmental Compliance Authority(ECA).
- Additional Guidance/points-of-contact may be viewed at the Environmental Knowledge Portal

Activity Title		Project No.	Date
Construction of ATV/UTV Trail and Stairs for Access to Steel Creek to Support Routine Sampling Events		N/A	05/01/2020 06:56 AM
Project Contact (Name) Mark Amidon	**Phone No.** () -	**ECA Name** Joseph Burch	**Phone No.** (803) 952-6660

06/30/2020 Activity Start	09/30/2023 Activity End	300,000 Est. Cost	Steel Creek near P Area Activity Location

Activity Description : **This should be a brief but thorough description of the proposed activity . Be very specific in explaining the purpose and location (a developed/non-developed area , outside/inside/adjacent to existing building no .,etc.). Description should include details on regulatory /permitting needs and /or potential environmental impacts of the proposed activity . Attach a copy of Functional Performance Requirements , conceptual scope of work , maps, charts, or other equivalent supporting documentation .**

Summary

Access to Steel Creek to perform routine long-term sampling of surface water and shallow monitoring wells is not easily accessible Samplers are required to carry all necessary equipment to each sample location which can result in numerous trips and increased potential for injury while accessing the sampling location. Many of the locations are not near existing secondary roads and must be traversed on foot for some distances. Steel Creek is defined by a ravine with steep cliffs, which was scoured by discharge of cooling water during reactor operations Extreme care is required to enter the creek areas once a suitable enter point is found. To aid in providing a safe point of entry into the creek area and allow for unimpeded access to the sampling locations, three (3) areas have been identified where various types of construction will be performed with the completion of an ATV/UTV trail. This revision extends the UTV trail eliminates the need for construction of the two sets of stair to Steel Creek previously proposed.

Area Completion Projects (ACP) proposes the construction of a trail extension to provide safe passage for off-road utility vehicles accessing surface water sampling locations in headwater wetlands associated with Steel Creek Steep slopes in this area create significant hazards for pedestrian access. Avoiding wetland impacts would require substantial cutting of steep slopes and removal of mature overstory trees that provide bank stabilization in an area of radiological contamination The proposed activity will require the discharge of fill material into1,594 square feet (0.037 acre) of jurisdictional wetlands which will be compensated by debiting0.41 credit from the Savannah River Site Wetland Mitigation Bank (SRSWMB).

Reference Documents (e.g., CDR, FDR, Task Plans, etc.)	Enter reference information here: Attach PDF files below: Proposed Steel Creek UTV Trail Extension Layout.pdf UTV Trail extension-ADDITIONAL TRAIL.pdf

2

P-AREA UTV TRAIL FULL SET - 04232020_signed.pdf

CBU-P-2020-0022-R1 Grading Permit Info - Updated 033022.pdf

Detailed Description:

Steel Creek is currently being impacted from contaminated groudwater discharges resulting in exceedance of maximum contaminant levels for trichloroethylene (TCE) and tritium. To aid in long-term monitoring of surface water and groundwater near Steel Creek, surface water and shallow groundwater wells have been established in and near the creek. However, access to these areas is not easily accessible, not near any established road, and requires samplers to carry all necessary equipment needed to perform sampling to each location.

Steel Creek is unique and unlike many streams at SRS. It is defined by a ravine feature where there are cliffs on each side where the vertical drop is up to 40 feet at some places. Access to the creek area from the cliffs or bluffs is limited and in some cases far from sampling locations. Because long-term monitoring is required for Steel Creek, safe and suitable access to the Steel Creek is needed. Numerous meetings and field walkdowns with RCO, Wetlands POC, management, safety, project team, and USFS have been conducted to discuss proposed areas for access and expected work to be performed to provide access.

Steel Creek is a radiological soil contamination area and all work in the creek area will be performed with RCO onsite for equipment and personnel monitoring.

Three (3) areas have been identified where access is proposed. The first area, located closest to P Area, will utilize an old, overgrown, existing roadway to enter into the upper sections of Steel Creek. Access to this area will be via an ATV/UTV due to the distance required to travel and amount of equipment/supplies needed to take to support sampling. An ATV/ UTV trail is planned for construction. Approximately 400 ft of trail will be constructed. Work will entail, but not limited to, clearing and grubbing a trail approx10 ft wide, reshaping land for erosion control, installation of storm drain pipe and guard rails, and placement of soil and rock for the trail. No material is planned to be removed from the site.

Areas 2 & 3 propose the installation of stairs. Four geotechnical borings, two at each area, are needed to evaluate soil material properties for engineering evaluation in determining adequate anchoring and footing requirements. Minor grubbing and site prep will be needed in preparation of the site for placement of stairs. Concrete or metal stairs are being considered for long-term placement because little to no maintenance is required and each set of stairs can be pre-fabricated for each area making it easier for installation.

Silt fencing will be used to mitigate any impact of erosion from the construction site to Steel Creek.

An O&M Plan is not required for this activity.

----REVISION 1 Update----
This update reflects the current proposed changes made to creating safe access to Steel Creek to support routine sampling. In lieu of the two (2) stairs originally proposed, it is proposed that the original UTV trail be extended further downstream along Steel Creek approximately340 ft. This will allow access to more sampling locations along the same trail. As with the original UTV trail, construction work will entail clearing, grubbing, reshaping land for erosion, installation of storm drain and guard rails, and geosynthetic membrane and placement of rock. With this extension, the need for the two (2) stairs are eliminated which reduces project cost and schedule.

----REVISION 2 Update-----
Area Completion Projects (ACP) proposes the construction of a trail extension to provide safe passage for off-road utility vehicles accessing surface water sampling locations in headwater wetlands associated with Steel Creek. Steep slopes in this area create significant hazards for pedestrian access. Avoiding wetland impacts would require substantial cutting of steep slopes and removal of mature overstory trees that provide bank stabilization in an area of radiological contamination. The proposed activity will require the discharge of fill material into1,594 square feet (0.037 acre) of jurisdictional wetlands which will be compensated by debiting0.41 credit from the Savannah River Site Wetland Mitigation Bank (SRSWMB).

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) CHECKLIST

Questions to Answer: * An EEC is required to be submitted, evaluated, and approved for all proposed site actions and projects that have the potential to:

1. Result in a change in emissions, generation rates, or new discharge of hazardous, mixed, radioactive, asbestos, PCB, sanitary/industrial solid or liquid waste, petroleum substance, wastewater, or any other pollutants from a facility or process. ○ Yes ● No

2. Be located outside of a previously developed area. ● Yes ○ No

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3. Involve siting, construction, modification, renovation, closure, relocation, or D&D of facilities or processes. ● Yes ○ No
☐ Siting ☐ Modification ☐ Closure ☐ D&D of facilities or processes
☒ Construction ☐ Renovation ☐ Relocation

4. Affect environmentally sensitive areas/resources such as floodplain/wetlands, archaeologically or historically significant areas, threatened or endangered species, and / or their habitat, special water sources (e.g, aquifers) ● Yes ○ No

☒ Floodplain/wetlands ☐ Threatened or endangered species' habitat
☐ Archeologically or historically significant areas ☐ Special water sources (e.g. aquifers)
☐ Threatened or endangered species

5. Involve site characterization, environmental monitoring, or R&D programs ● Yes ○ No

6. Involve any type of land disturbance, underground storage tank (UST), or subsurface injection/extraction ● Yes ○ No

☒ Land disturbance ☐ Underground storage tank (UST) ☐ Subsurface injection/extraction

7. Involve a Site Evaluation (SE) area, RCRA/CERCLA area/facility, or associated 200 ft. Buffer Zone ● Yes ○ No

ECA Approval: ○ Approved ● Not Approved

***Note:** - If any are unknown , call Department NEPA Coordinator (DNC) or ECA for consultation .
- Consult with DNC to verify ; file with project & complete PERMITS CHECKLIST .
- If any are "Yes", complete remainder of NEPA CHECKLIST & the PERMITS CHECKLIST

Environmental Impacts Evaluation : (Note: If any are "Yes", provide specifics/supplemental information.)

Air
• Will there be a new air emission or a change in the quantity or quality of an existing air emissions? ○ Yes ● No

Surface Water
• Will there be a liquid release to streams, swamps, wetlands, seepage basins, storm drains, process sewers, ponds, or lakes? ○ Yes ● No
• Will river or stream water be utilized? ○ Yes ● No

Groundwater
• Will there be a discharge to subsurface/groundwater? ○ Yes ● No
• Will groundwater be utilized? ○ Yes ● No

Safety
• Is there a potential exposure to hazardous substances (e.g., radiological/toxic/chemical materials)? ● Yes ○ No
• Is there a potential for explosion or criticality? ○ Yes ● No
• Does action involve transportation of hazardous materials? ○ Yes ● No

Natural/Cultural Resources
• Is there a potential for impacts on wetlands, swamps, streams, river beds, ponds, set aside areas? ● Yes ○ No
• Is there a potential impact on fish/wildlife resources or habitats? ○ Yes ● No
• Is there a potential impact on protected species (e.g., sensitive, rare, threatened, endangered)? ○ Yes ● No
• Is there a potential for impacting archaeological and historical sites? ○ Yes ● No
• Does this action require a site use/site clearance permit? ● Yes ○ No

For Department NEPA Coordinator and Site NEPA Coordinator Use Only (NEPA Recommendation)
• Are there potential cumulative effects when combined with other actions? ○ Yes ● No
• Is the proposed activity a component of a larger line item project? ○ Yes ● No

If yes, include doc. title/number.

☒ CX applied for by DNC (Must meet all requirements of 10 CFR 1021.410(b)):B6.1

☐ Covered by previous NEPA Documentation (CX, EA, EIS): _____ _____
EA - State specific EA. (Document Title) (Document Number)

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EIS - State specific section of EIS and ROD

☐ Additional NEPA Documentation Required: ○ EA ○ EIS ○ SA ○ Revised_ROD ○ Revised_FONSI ○ EE/CA

DNC Name	Phone No.	SNC Name	Phone No.
Casey Feldt	(803) 952-9321	Katie Davis	(803) 952-5713

For DOE NEPA Compliance Officer Use Only (NEPA Determination)
For Categorical Exclusions:
Regulatory Requirements in 10 CFR 1021.410 (b):
The proposed action fits within a class of actions that is listed in 10 CFR 1021, Subpart D Appendix A or B.
1. For classes of actions listed in Appendix B, the following conditions are integral elements; i.e., to fit within a class, the proposal must not:
   A. Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including DOE and/or Executive Orders;
   B. Require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities, but may include such categorically excluded facilities;
   C. Disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; or
   D. Adversely affect environmentally sensitive resources (including but not limited to those listed in 10 CFR 1021.410 Appendix.B.(4)).
2. There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal; and
3. The proposal is not "connected" to other actions with potentially significant impacts, is not related to other proposed actions with cumulatively significant impacts, and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211.

Determination:
Based on my review of information conveyed to me and in my possession (or attached) concerning the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1A), I have determined that the proposed action fits within the specified class of actions, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

☐ Approved
☒ Approved with Comments

As noted in the SNC comments to Rev. 2 of this EEC, the wetlands assessment and wetland mitigation documentation must be completed prior to start of work. Coordinate appropriately with the Wetlands SME.

☐ Not Approved - Alternate NEPA Action Required

CX applied for by DNC (Must meet all requirements of 10 CFR 1021.410(b)): B6.1

NCO Name	Phone No.
Tracy Williams	(803) 952-8278

ENVIRONMENTAL PERMITS CHECKLIST

General

Does this activity involve any land disturbance which may potentially result in erosion or sedimentation? (If yes, what is the approximate disturbance?) ● Less than 1/2 acre ○ 1/2 acre to 1 acre ○ 1 to 2 acres ○ Greater than 2 acres	● Yes ○ No
Will the proposed activity install, modify(including tie-in to), or remove an Underground Storage Tank?	○ Yes ● No
Will the proposed activity consist of a Renovation or Demolition to an existing building/structure? (If yes, please Specify): ○ Renovation ○ Demolition Explanation:	○ Yes ● No
Are potential asbestos containing materials present? ○ Yes ○ No *If No, Inspector signature and license number required: Inspector Signature: License Number: Select Asbestos Inspector Date:	

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Will you import or manufacture a new chemical substance?	○ Yes ● No
Will the proposed activity impact a Site Evaluation Area or RCRA/CERCLA Area or an associated 200 ft. Buffer Zone?	● Yes ○ No
Will the proposed activity involve construction or modification to a facility or process where the potential exists for a radioactive emission?	○ Yes ● No
Will pesticides/herbicides be applied?	○ Yes ● No
Environmental Management System (EMS): Is the proposed activity an addition to/revision of the aspects contained in the Environmental Aspects List? (Link to EMS Webpage, "Useful EMS Links". Select "SRS Environmental Aspects List" on this webpage.)	○ Yes ● No

Air:

Explanation:

RAD Will the proposed activity impact / create a radionuclide air emission source?	○ Yes ● No
NON-RAD Will the proposed activity impact a non-radionuclide air emission source? (answer "yes" if any of the following apply) • Will the project install or modify a piece of equipment which will emit or have the potential to emit, an air emission? • Will the project modify (including demolition) an existing permitted facility or process, which emits an air emission? • Will the project modify (including demolition) an existing facility or process, not already permitted by SCDHEC, which emits, or has the potential to emit an air emmission? • Will the project be a demonstration (short term or long term) of a new technology which will emit an air emission? • Will the project install or modify a piece of equipment that is used to sample or monitor air emission? Air emissions include regulated criteria pollutants(i.e. particulate matter, lead, nitrogen oxides, carbon monoxide, sulfur dioxide, volatile organic compounds (VOC's) etc.) and hazardous and toxic pollutants identified in SCDHEC R.61-62.5 Standard 8 and Section 112(b) of the Clean Air Act. Examples of typical permitted equipment or process air emission sources include, but are not limited to the following: • coal or fuel oil fired boilers • diesel generators • diesel powered equipment • process feed chemical storage tanks • fuel oil storage tanks • waste combustion incinerators • paint booths • lead melters • air strippers, etc. • degreasing operations • HVAC and chiller equipment	○ Yes ● No

Groundwater:

Explanation:

Will the proposed activity:	
Install or abandon a monitoring well or piezometer(s)?	○ Yes ● No
Involve subsurface penetration for a hydrogeological investigation, geotechnical data collection, or characterization?	○ Yes ● No
Involve the injection of a fluid, gas, or air mixture into the subsurface?	○ Yes ● No
Involve the extraction of a fluid or air mixture from the subsurface?	○ Yes ● No

Wastewater:

Explanation:

Will the proposed activity install, construct, modify, demolish, or impact:	
A sanitary/industrial process wastewater treatment system?	○ Yes ● No
A sanitary/industrial process wastewater collection system?	○ Yes ● No
A pump station(s) to transfer sanitary/industrial waste?	○ Yes ● No
A septic tank/tile field system?	○ Yes ● No
A storm water management system?	○ Yes ● No

Domestic Water

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Explanation:	
Will the proposed activity install, construct, modify, or demolish:	
A domestic water distribution/treatment system?	○ Yes ● No
A domestic or process water well?	○ Yes ● No

ENVIRONMENTAL PERMITS CHECKLIST

Wastes

Explanation:	
Will the proposed activity install, construct, modify, demolish, close, or otherwise impact a RCRA permitted facility?	○ Yes ● No
Will the proposed activity generate a mixed waste? If yes, does a wastestream with similar characteristics currently exist at SRS? ○ Yes ○ No (Consult the facility Environmental Coordinator if assistance is needed)	○ Yes ● No
Will the proposed activity generate a hazardous waste?	○ Yes ● No
Will you be sending hazardous/mixed waste to other on-site Treatment/Storage/Disposal (TSD) facilities? Is the TSD permitted to accept this waste? ○ Yes ○ No If yes, provide the following: Name of Receiving Facility: Source used to confirm facility can accept waste:	○ Yes ● No
Is this activity to take place at an existing TSD (including groundwater unit, vadose zone, process sewer, Carolina Bay, secondary containment system, etc.)	○ Yes ● No
Would this activity impact an existing TSD (including changing or improving storm water run off/run on drainage, security, communications, electrical, etc)?	○ Yes ● No
Does this activity Involve Research and Development (R&D)? If yes, answer the following questions: • Does it involve hazardous / mixed waste? ○ Yes ○ No • Does it treat more than 1,000 kg of hazardous waste? ○ Yes ○ No • Does it involve polychlorinated biphenyls (PCBs)? ○ Yes ○ No • Will the activity continue for more than 30 days? ○ Yes ○ No • Will more than 250 kg of hazardous waste be introduced into treatment in a single day? ○ Yes ○ No • Does it treat more than 1 kg of acute hazardous waste or more than 500 kg of soil, water, or debris contaminated with acute hazardous? ○ Yes ○ No • Does it involve the placement of hazardous waste on the land or open burning of hazardous waste? ○ Yes ○ No	○ Yes ● No

Waste Identification , Generation and Management :

Explanation: Since work is to be performed in a radiological SCA, low-level rad or green is clean waste will be generated and managed in appropriate low-level rad waste or green is clean containers	
Will the proposed activity include the purchase of lead or lead components? If yes, complete OSR 29-6 for each item and submit with checklist.	○ Yes ● No
Will the proposed activity disturb soil, sludge or water at or near a RCRA/CERCLA Unit or Site Evaluation Area? If yes, were any listed wastes disposed of at this facility (Consult with Facility ECA if assistance is needed) ○ Yes ● No If yes, please contact ESS for guidance regarding the Investigation-Derived Waste Management Plan.	● Yes ○ No
Does this activity result in a new liquid and/or solid waste generation (one-time or continuous), or a change in the quantity or the characteristic of an existing waste stream? If yes, check all that apply: ☐ TRU ☐ Hazardous ☐ TSCA (PCB) ☐ Mixed - Covered by LDR FFCA ☐ Suspect Hazardous ☐ Wastewater ☒ Low-Level ☒ Sanitary/Industrial ☐ Acute Hazardous ☐ High-Level ☐ Used/Waste Oil ☒ Other	● Yes ○ No

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If Other Please Specify: Green is clean	
Where will waste be stored/disposed/treated. Waste to managed per waste plan and GCO direction	● Yes ○ No
Is the facility permitted to manage this waste? Complete the following items for each waste category applied above and submit with the checklist • Waste Category sanitary/industrial, radiological • Source utilized to confirm facility is permitted to accept the waste ECA, 3Q Manual, GCO • Description of generated waste Rad: PPE from working with soil in SCA; Green-As-Clean: Job control (gloves, paper towels, plastic, paper bags); Job Control (gloves, paper towels, paper, plastic, etc) • Dates generation is to begin and end Jun 2020 - Sep 2023 • Estimate of waste generation for each category RAD: <10 ft3; Green-As-Clean: <10 ft3; Job Control: <15 ft3 • Description of activity/process generating waste Hands on activities (e.g., cutting, shoveling, cutting, blading, etc.) involving exposure to contaminated soil • How the waste will be staged in the facility awaiting disposition and disposition route Waste generated will be managed in accordance with waste plan and GCO direction • Description of waste reduction principles (reducing the volume, mass, or toxicity) for this activity Review of pertinent data and Waste Management Briefing, applying P2 principles, 3Q Proc. 6.11	
Has the proposed activity been evaluated for waste minimization/pollution prevention?	● Yes ○ No

For Department ECA use only :

Conditions of Approval:
1) Prior to initiation of land disturbance for the road construction, a grading permit or waiver must be obtained from the Construction Stormwater SME, Josh Yon.
2) A NWP 5 Letter of Authorization must be obtained from the Wetlands SME, Jim Fudge.
3) Prior to geotechnical borings, a Program Plan must be prepared and approved by SCDHEC. Contact Shelia McFalls.

Documentation of above should be added to EEC when completed.

The following documentation was added 12/9/2020:
1) Email from Josh Yon (9/23/20) indicating that a grading permit is not required. ***Updated 03/30/22 for trail extension
2) NWP 5 Letter Issued 06/10/20 ***Removed - Not applicable to Rev. 1 due to removal of sampling stairs from scope.
3) Per ECA, Geotechnical Borings not required
-09Dec2020, K. Davis

Revision 1:
No Conditions of Approval
-28Mar2022, K. Davis

Revision 2:
Communicate project schedule with Wetland SME, Jim Fudge, to ensure completion of Wetland Assessment and proper wetland mitigation bank documentation. All wetland requirements must be completed prior to initation of proposed activity.
-13Jul2002, K. Davis

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Environmental Evaluation Checklist - NCO: Approved on 07/13/2022

Approvers	Assigned	Notified	Received	Status Changed	Status
Tracy Williams	07/13/2022 06:50:23 AM	07/13/2022 06:50:23 AM		07/13/2022 12:49:45 PM	Approved

Previous Process - **Environmental Evaluation Checklist - SNC: Approved on 07/13/2022**

Approvers	Assigned	Notified	Received	Status Changed	Status
Katie Davis	07/11/2022 09:46:47 AM	07/11/2022 09:46:47 AM	07/11/2022 01:44:04 PM	07/13/2022 06:50:17 AM	Approved

Previous Process - **Environmental Evaluation Checklist - DNC: Approved on 07/11/2022**

Approvers	Assigned	Notified	Received	Status Changed	Status
Casey Feldt	07/11/2022 07:58:16 AM	07/11/2022 07:58:16 AM	07/11/2022 09:29:42 AM	07/11/2022 09:46:40 AM	Approved

Previous Process - **Environmental Evaluation Checklist - ECA: Approved on 07/11/2022**

Approvers	Assigned	Notified	Received	Status Changed	Status
Joseph Burch	07/05/2022 10:31:44 AM	07/05/2022 10:31:44 AM	07/11/2022 07:55:56 AM	07/11/2022 07:58:15 AM	Approved

Approver Comments

Approval Cycle Settings

Appendix B

Required Wetland Mitigation Credit Table and Worksheet

Required Wetland Mitigation Credit Table and Worksheet

P-Area Trail Extension for CERCLA Action

TIP: Leave cursor over each factor or option below to pop-up helpful information or definitions.

Required Wetland Mitigation Credit Table

FACTORS	OPTIONS				
Lost Type	Type C 0.2	Type B 2.0	Type A 3.0		
Priority Category	Tertiary 0.5	Secondary 1.5	Primary 2.0		
Existing Condition	Very Impaired 0.1	Impaired 1.0	Partially Impaired 2.0	Fully Functional 2.5	
Duration	0 to 1 Year 0.2	1 to 3 Years 0.5	3 to 5 Years 1.0	5 to 10 Years 1.5	Over 10 Years 2.0
Dominant Impact	Shade 0.2	Clear 1.0	Drain 2.0	Dredge 2.5	Impound/Flood 2.5	Fill 3.0
Cumulative Impact	< 0.25 Acre 0.1	0.25 - 0.99 Acres 0.2	1.0 - 2.99 Acres 0.5	3.0 - 9.99 Acres 1.0	≥ 10.0 Acres 2.0

NOTE: The cumulative impact factor for the overall project should be included in the sum of factors for each impacted area on the Required Wetland Mitigation Credit Worksheet

Required Wetland Mitigation Credit Worksheet

FACTOR	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6
Lost Type	Type A					
Priority Category	Tertiary					
Existing Condition	Fully Functional					
Duration	Over 10 Years					
Dominant Impact	Fill					
Cumulative Impact	< 0.25 Acre					
Sum of Factors	11.1					
Impacted Area	0.037					
R x AA=	0.4107					

Required Wetland Mitigation Credits = Σ (R x A) = **0.4107**