



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

April 3, 2019

Mr. Brian T. Hennessey
SRS Remedial Project Manager
Infrastructure and Area Completion Division
U.S. Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802



EPA Comments for the Feasibility Study for the Lower Three Runs Integrator Operable Unit (IOU) (U), SEMS Number 35, [SRNS-RP-2018-00199], Revision 1 Redline, Jan 2019, Savannah River Site, Aiken, South Carolina

Dear Mr. Hennessey,

The U.S. Environmental Protection Agency, Region 4 (EPA), has reviewed the FS for Lower Three Runs OU, SRNS-RP-2018-00199, Revision 1 Redline, Jan 2019.

EPA accepts all responses to the response to our comments on the Revision 0 FS. Included below are further comments, along with the attached ARAR edited table.

If you have any questions or require additional information, please contact me at (404) 562-8648.

Sincerely,

A handwritten signature in cursive script that reads "Jon Richards".

Jon Richards
Acting FFA Remedial Project
Manager
Superfund Division

cc: C.L. Bergren, SRNS-ACP
Susan Fulmer, SCDHEC

General Comments

1. Per the SCDHEC's verbal communication to EPA Region 4, DHEC considers the Lower Three Runs Pond Systems and Tributaries as "waters of the state." In addition, DHEC has communicated to EPA that discharges of water from Par Pond into Lower Three Runs should be monitored to ensure compliance with CWA requirements and state AWQC (or AWQC equivalent for radionuclides) for contaminants of concern from any remedial action. SCDHEC has further communicated to EPA that the Point Of Compliance is the discharge point from Par Pond to Lower Three Runs Creek. Thus, *the CWA NDPEs ARARs should be included in the FS ARAR tables and are "applicable" to discharges of "pollutants," and are "relevant and appropriate" for discharges of radionuclides.* There are not promulgated SCDHEC numeric AWQC for cesium-137 and cobalt-60; thus, EPA needs to assess the concentrations in the discharge water against AWQC equivalent, which can be calculated by the EPA water protection division based upon the surface water class designation. If above those levels after the completion of remedial action, requires treatment before discharge. If below the AWQC equivalent, then treatment is not necessary. Monitoring details should be developed in the Remedial Design.
2. In addition to the ARARs already provided in FS Table 4-10, please also add the attached ARARs prepared by EPA R4 ORC which includes the chemical-specific ARARs for protection of surface water; and the action-specific ARARs for application of AWQC, development of discharge limits, and discharge monitoring requirements.
3. Include a statement in the FS providing SCHEC's determination that the ponds and tributary systems are waters of the state and identify the class designation (fresh water, "FW"). If SCDHEC considers the ponds and their tributaries between them as waters of the state, they are likely classified as "FW" because the Savannah River is classed FW. All South Carolina waters are classified even if they are not specifically named or listed in R. 61-69. For those waters not listed, the classification of the waterbody that they are tributary to is the assigned class for those waters pursuant to the rules in both R.61-68 and R.61-69.
4. Include a statement in the FS clarifying that any water that comes up with the sediments during excavation will be gravity drained back to the water body where the sediments were removed. The activity is subject to CWA 404 requirements and the relevant and appropriate ARARs have been previously provided in the location-specific ARARs tables prepared by DOE and submitted with the Rev.1 draft FS. Gravity drainage of water may be considered 'incidental fallback' under 404; however, some courts have held that movement of pollutants already in the water is nonetheless considered an "addition" of pollutants. *United States v. Deaton*, 209 F.3d 331 (4th Cir. 2000) (deposit of dredged material from wetland back into that same wetland constitutes discharge of a pollutant); *Rybachek v. U.S. EPA*, 904 F.2d 1276, 1285 (9th Cir. 1990) (decided in Section 402 context; even if "material discharged originally comes from the streambed itself, such resuspension may be interpreted to be an addition of a pollutant under the Act."). Discharge water should be characterized to determine if pollutants are present which may trigger 402 requirements and should be managed appropriately. It is EPA's expectation that Best Management Practices should also be used (silt fence, sediment curtains, floating booms, etc.) to stop any migration of the resultant water that could possibly have Cs-137 entrained. These BMPs would ensure the sediments re-settle to the bottom of the water body allowing for shielding by the water itself and keeping the sediments from moving down stream. EPA requests statements regarding the use of BMPs be added to the FS, where appropriate.

5. It is EPA's expectation that the drained sediments would be placed in containers for shipping and that no staging piles will be needed. In addition, EPA expects the containers will have a drying agent that will stabilize the sediments and that the drying agent will serve as a form of treatment by reducing mobility. Please include statements to cover these issues. Please include the attached ARAR requirements for containerized RCRA waste.
6. Include statement in FS clarifying that the containers will be shipped to the low level waste disposal trenches (E Area) and that E Area has CERCLA Off Site Rule Acceptability issued by the Region 4 RCRA division.
7. The FS should include a summary of the Ecological Risk Assessment findings, e.g., identifying pathways and receptors evaluated, and risks presented. The Risk Assessment findings need to be more fully summarized in the FS in the Introduction Section of Background Information.

to be added to FS Table 4-10 in Rev.1 (prepared by EPA R4 ORC)

Potential ARARs

Savannah River Site, Aiken, South Carolina, Feasibility Study for Lower Three Runs IOU

Chemical-specific ARARs			
Action/Media	Requirements	Prerequisite	Citation(s)
Protection of surface water	Freshwaters (FW) are freshwaters suitable for primary and secondary contact recreation and as a source for drinking water supply after conventional treatment in accordance with the requirements of the Department. Suitable for fishing and the survival and propagation of a balanced indigenous aquatic community of fauna and flora. Suitable also for industrial and agricultural uses.	Surface waters classified as Class FW (fresh waters) – applicable	SC R. 61-68.G.10
	<p>Quality Standards for FW:</p> <p>b. No treated wastes, toxic wastes, deleterious substances, colored or other wastes, alone or in combination with other substances or wastes, in sufficient amounts to make the waters unsafe or unsuitable for primary contact recreation or to impair the waters for any other best usage as determined for the specific waters which are assigned to this class.</p> <p>c. Toxic pollutants listed in the <i>Appendix</i> [in SC R. 61-68] must meet the standards as prescribed in Section E of this regulation.</p>	<p>Discharge of pollutants as defined in 40 CFR 122.2 into surface water – Applicable</p> <p>Discharge of radionuclides into surface water – Relevant and appropriate</p>	SC R. 61-68.G.10.b and c
	<p>All ground waters and surface waters of the State shall at all times, regardless of flow, be free from:</p> <p>(d) High temperature, toxic, corrosive, or deleterious substances attributable to sewage, industrial waste, or other waste in concentrations or combinations which interfere with classified water uses, existing water uses, or which are harmful to human, animal, plant or aquatic life.</p>	<p>Discharge of pollutants as defined in 40 CFR 122.2 into surface water – Applicable</p> <p>Discharge of radionuclides into surface water – Relevant and appropriate</p>	SC R. 61-68.E.5(d)
	<p>Numeric criteria for the protection and maintenance of all classes of surface waters are adopted and are listed in Sections E, G, and the <i>Appendix</i>.</p> <p>b. Application of numeric criteria to protect human health. (1) If separate numeric criteria are given for organism consumption, water and organism consumption (W/O), and drinking water Maximum Contaminant Levels (MCLs), they shall be applied as appropriate. The <i>most stringent</i> of the criteria <i>shall be applied</i> to protect the existing and classified uses of the waters of the State.</p>	Discharge of pollutants as defined in 40 CFR 122.2 into surface water – Applicable	<p>SC R. 61-68.E.14.b.</p> <p>SC R. 61-68. <i>Appendix</i>: Water Quality Criteria for Protection of Aquatic Life and Human Health</p>

to be added to FS Table 4-10 in Rev.1 (prepared by EPA R4 ORC)

Potential ARARs

Savannah River Site, Aiken, South Carolina, Feasibility Study for Lower Three Runs IOU

Chemical-specific ARARs			
Action/Media	Requirements	Prerequisite	Citation(s)
Protection of Surface Water <i>(discharges of water from Par Pond to LTR)</i>	Any discharge into waters of the State must be permitted by the Department and receive a degree of treatment and/or control which shall produce an effluent which is consistent with the Act, the Clean Water Act (P.L. 92-500, 95-217, 97-117, 100-4), this regulation, and related regulations. <i>Note:</i> Under CERCLA Section 121(e) permits are not required for on-site response actions. Instead discharges must meet any applicable effluent limits or other substantive requirements to protect the water quality of the receiving water.	Discharge of pollutants (including toxic substances) into waters of the State— applicable Discharge of radionuclides into surface water – Relevant and appropriate	SCDHEC R. 61-68E.4.a
Establishing limitations, standards, and other permit conditions	(vi) Where the Department has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits using one or more the following options: (A) Establish effluent limits using calculated numeric water quality criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and will fully protect the designated use. Such a criterion may be derived using a proposed State criterion, or an explicit State policy or regulation interpreting its narrative water quality criterion, supplemented with other relevant information which may include: EPA’s Water Quality Standards Handbook, October 1983, risk assessment data, exposure data, information about the pollutant from the Food and Drug Administration, and current EPA criteria documents; or (B) Establish effluent limits on a case-by-case basis, using EPA’s water quality criteria, published under section 307(a) of the CWA, supplemented where necessary by other relevant information	Discharge of pollutants (including toxic substances) into waters of the State— applicable Discharge of radionuclides into surface water – Relevant and appropriate	SCDHEC 61-9.122.44(d)(1)
Application of water quality criteria	c. Application of criteria for the derivation of permit effluent limitations. (1) Numeric criteria for substances listed in Sections E, G, and the appendix shall be used by the Department to derive NPDES permit effluent limitations at the applicable critical flow conditions as determined by the Department unless an exception is provided in this section.	Discharge of pollutants (including toxic substances) into waters of the State— applicable	SCDHEC R. 61-68E.14.c

to be added to FS Table 4-10 in Rev.1 (prepared by EPA R4 ORC)

Potential ARARs

Savannah River Site, Aiken, South Carolina, Feasibility Study for Lower Three Runs IOU

Chemical-specific ARARs			
Action/Media	Requirements	Prerequisite	Citation(s)
Action-Specific ARARs			
<p>Conditions applicable to 402 discharges</p>	<p>Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.</p> <p><i>NOTE: DOE is not required to obtain a permit for any part of a remedial action conducted entirely onsite, per CERCLA §121(e). Use of the terms "permit" and "permittee" reflect regulatory language; in this remedial action, "permit" can generally be taken to mean the Record of Decision, and "permittee" to mean DOE.</i></p>	<p>Point source discharge of pollutants as defined in 40 CFR 122.2 into surface water – Applicable</p> <p>Point source discharge of radionuclides into surface water – Relevant and appropriate</p>	<p>SCDHEC R. 61-9.122.41(d)</p>
<p>Operation and maintenance of treatment and control systems</p>	<p>Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the condition of this permit.</p>	<p>Point source discharge of pollutants as defined in 40 CFR 122.2 into surface water – Applicable</p> <p>Point source discharge of radionuclides into surface water – Relevant and appropriate</p>	<p>SCDHEC R. 61-9.122 (e)(1)</p>
<p>Monitoring of effluent</p>	<p>Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.</p>	<p>Point source discharge of pollutants as defined in 40 CFR 122.2 into surface water – Applicable</p> <p>Point source discharge of radionuclides into surface water – Relevant and appropriate</p>	<p>SCDHEC R. 61-9.122(j)(1)(A)</p>

to be added to FS Table 4-10 in Rev.1 (prepared by EPA R4 ORC)

Potential ARARs

Savannah River Site, Aiken, South Carolina, Feasibility Study for Lower Three Runs IOU

Chemical-specific ARARs			
Action/Media	Requirements	Prerequisite	Citation(s)
Temporary storage of hazardous waste in containers	<p>A generator may accumulate hazardous waste at the facility provided that:</p> <ul style="list-style-type: none"> • waste is placed in containers that comply with 40 CFR 265.171-173; and • the date upon which accumulation begins is clearly marked and visible for inspection on each container • container is marked with the words "hazardous waste"; or 	Accumulation of RCRA hazardous waste on site as defined in 40 CFR 260.10 – applicable	40 CFR 262.34(a)(1) and (2) SCDHEC R. 61-79 262.34(a) (1) and (2) 40 CFR 264.34(a)(3) SCDHEC R. 61-79 262.34(a) (3)
	container may be marked with other words that identify the contents.	Accumulation of 55 gal. or less of RCRA hazardous waste or 1 quart of acutely hazardous waste listed in 261.33(e) at or near any point of generation – applicable	40 CFR 262.34(c)(1) SCDHEC R. 61-79 262.34(c) (1)
Use and management of hazardous waste in containers	If container holding waste is not in good condition (e.g. severe rusting, structural defects), or if it begins to leak, must transfer waste into container in good condition.	Storage of RCRA hazardous waste in containers – applicable	40 CFR 265.171 SCDHEC R. 61-79 265.171
	Must use a container made or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.		40 CFR 265.172 SCDHEC R. 61-79 265.172

to be added to FS Table 4-10 in Rev.1 (prepared by EPA R4 ORC)

Potential ARARs

Savannah River Site, Aiken, South Carolina, Feasibility Study for Lower Three Runs IOU

Chemical-specific ARARs			
Action/Media	Requirements	Prerequisite	Citation(s)
	<p>A container holding hazardous waste must always be closed during storage, except when necessary to add or remove waste.</p> <p>A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.</p>		<p>40 CFR 265.173(a) and (b)</p> <p>SCDHEC R. 61-79 265.173(a) and (b)</p>
Storage of hazardous waste in container area	Area must have a containment system designed and operated in accordance with 40 CFR 265.175(b).	Storage of RCRA hazardous waste in containers with free liquids – applicable	<p>40 CFR 264.175(a)</p> <p>SCDHEC R. 61-79 264.175(a)</p>
	<p>Area must be sloped or otherwise designed and operated to drain liquid from precipitation, or</p> <p>Containers must be elevated or otherwise protected from contact with accumulated liquid.</p>	Storage of RCRA-hazardous waste in containers that do not contain free liquids (other than F020, F021, F022, F023, F026 and F027) – applicable	<p>40 CFR 265.175(c)(1) and (2)</p> <p>SCDHEC R. 61-79 265.175(c) (1) and (2)</p>
Closure of RCRA container storage unit	At closure, all hazardous waste and hazardous waste residues must be removed from the containment system. Remaining containers, liners, bases, and soils containing or contaminated with hazardous waste and hazardous waste residues must be decontaminated or removed.	Storage of RCRA hazardous waste in containers in a unit with a containment system – applicable	40 CFR 264.178