

Joseph Burch

From: Pope, Robert <Pope.Robert@epa.gov>
Sent: Thursday, April 19, 2018 5:06 PM
To: Joseph Burch; Richards, Jon M.; Cathcahe (dhec.sc.gov)
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Subject: RE: Revised Lower Three Runs Integrator Operable Unit Feasibility Study Scoping Summary (DRAFT)

EPA is of the opinion that the threat of release of contaminated sediments is potentially a problem warranting action and could warrant a separate RAO. However, the solution SRS has proposed of including the language in the alternative for the remedy of maintaining the dam has the same impact for the remedy and is acceptable to EPA. Further, EPA agrees with SRS' general opinion that the presence of PAR Pond dam is a major impediment to any sediment migrating further downstream into the "tail". The major reason is that potential ongoing sediment input locations into PAR Pond (e.g., Joyce Branch to Pond C to PAR Pond; canal from Pond B to north branch of PAR Pond) are found away from the dam itself, which allows the sediment load carried into PAR Pond by the incoming surface water to settle out to the bottom before that water flows over the weir.

EPA finds the Scoping Summary acceptable.

The following comments are generated not to revise the Scoping Summary, but to ensure that SRS considers these issues and addresses them fully in the FS.

1. The Scoping Summary for the Lower Three Runs Integrator Operable Unit (LTR IOU) includes the remedial alternative of broadcasting amendments as one option for addressing risk posed to the recreational fisherman due to ingestion of Cs-137 (and mercury) contaminated fish tissue. However, data/information demonstrating the effectiveness of such an alternative has not been provided in the Scoping Summary. Please ensure the forthcoming Feasibility Study Report contains information that demonstrates the effectiveness of such an action so that a robust effectiveness/cost efficiency evaluation can be conducted in order to select the best remediation strategy in accordance with the nine evaluation criteria requirements for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedial action selection. Please ensure information is provided about the efficacy of broadcasting amendments is provided for mitigating both Cs-137 and also for mercury.
2. During the 2018 scoping meetings, the core team discussed the possible remedial alternatives for addressing risk to the on-site worker posed by high concentrations of Cesium-137 (Cs-137) in sediments in the upper LTR and agreed that removal of, or capping of sediments containing concentrations Cs-137 above the Principal Threat Source Material (PTSM) threshold levels would be appropriate alternatives to consider. However, for exposure areas where PTSM levels of Cs-137 in sediments is identified, and the recreational fisherman scenario is also determined to present an unacceptable risk due to Cs-137 contaminated fish tissue ingestion, the removal of, or capping of sediments containing PTSM levels of Cs-137 is not considered for addressing contaminated fish tissue/risk to a recreational fisherman. It does not

seem logical to not evaluate all of the same potential remedial actions as for the on-site worker exposure to Cs-137 in sediments (i.e., removal of sediment containing PTSM levels of Cs-137, in-situ capping/hybrid cap), in the remedial alternatives for fish tissue ingestion since the main source of Cs-137 to fish is ultimately due to the presence of concentrated Cs-137 in the sediments. Further, for Exposure Areas where PTSM levels of Cs-137 is identified, if the selected remedial alternative for exposure to Cs-137 in sediments to the onsite worker is removal of the sediment containing the PTSM levels, then it becomes unclear if the remedial alternatives for addressing the fish tissue ingestion risk are appropriate to address this risk because theoretically, the levels of Cs-137 in fish tissue will decrease as a result of removing the PTSM hot spots of Cs-137. In other words, if PTSM levels of Cs-137 are removed from the water column, is additional remedial action still warranted (based on cost/benefit analysis). The same may be true if the remedial alternative selected for addressing risk to the on-site worker is in situ capping/hybrid cap of areas containing PTSM levels of Cs-137. It may be most efficient and cost-effective to select one remedial alternative that addresses risk to both receptors.

For example, Section 4.2.3, Exposure Area 3: Pond B – Including Canal to Pond C (Figure 5), on pages 11 and 12 of 42; Section 4.2.6 Exposure Area 6 – PAR Pond on pages 15 and 16 of 42; and Section 4.2.9 Exposure Area 9 – Pond C on page 19 contain locations where Cs-137 levels are identified in sediment above the PTSM threshold. The likely response actions listed for addressing risk to the on-site worker include the alternative to excavate the PTSM levels of Cs-137 or cap these areas; however unacceptable risk to the hypothetical recreational fisherman resulting from high concentrations of Cs-137 (and mercury) in fish, does not include the alternative to remove Principal Threat levels of Cs-137 in the sediments, rather it includes the alternative to add amendments to limit the bioavailability of the Cs-137 to fish. If the amendments are proposed because it has been determined this would possibly also reduce mercury in fish tissue, then the Scoping Summary and/or forthcoming RI/FS should explain this as the reason why broadcasting amendments is considered for the recreational fisherman and not the on-site worker. Please ensure a full explanation of how remedial alternatives were determined to be appropriate for both the on-site worker and recreational fisherman is included in the LTR RI/FS.

3. The Core Team Agreement # 6 for the February 14, 2018 and March 5, 2018 Scoping meetings states “Core Team agreed that remedial actions for the Recreational Fisherman scenario are only applicable to the credible fishing areas of Pond B, Pond C, and PAR Pond.” However, Section 3.0 – Land Use in the Scoping Summary does not discuss the evaluation of the recreational fisherman. The FS should include a discussion of how this scenario was developed and determined to be applicable to certain Ponds/Exposure Areas. Please also ensure the forthcoming RI/FS for the Upper portion of the LTR IOU explains how and why these areas were determined to be the only viable surface water bodies for maintaining fish populations that could be accessed by a recreational fisherman. This will ensure clarity in the report as to why the recreational fisherman scenario was evaluated and identified as presenting an unacceptable risk from some Exposure Areas (EAs) and not others.
4. Likewise, ensure the forthcoming LTR RI/FS provides information about which surface water bodies remain wet such that sediment is covered at all times, and which water bodies do not. This information will provide support for the evaluation/selection of remedial alternatives considered for each EA with respect to which water bodies are considered viable fish habitat, and which water bodies contain water levels can be maintained to shield workers from external radiation from Cs-137 in sediments.
5. The alternative to maintain water level as a way to protect the on-site worker from unacceptable risk posed by Cs-137 contaminated sediments is only included for Pond B (EA 3), Pond C (EA 9), and PAR Pond (EA 3). This is because of the infrastructure in place to control water levels at PAR pond, and Ponds B and C have historically maintained consistent water levels. Please ensure the forthcoming RI/FS provides this context so that the reader understands why the option to maintain water levels is only considered for three of the exposure areas.

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From: joseph.burch@srs.gov [mailto:joseph.burch@srs.gov]
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Subject: Revised Lower Three Runs Integrator Operable Unit Feasibility Study Scoping Summary (DRAFT)

As agreed at the April 9th Lower Three Runs IOU Scoping Web Cast Meeting for the Feasibility Study, the attached Scoping Summary has been updated based upon the discussions and agreements resulting from the meeting. Two files are included, the redline Word version of all the changes incorporated into the scoping summary from the April 9th meeting and a clean pdf version with all changes accepted.

Please note the following changes in the revised scoping summary:

- 1.) All agreements from the three scoping meetings (February 14th, March 5th, and April 9th) are included in Section 6.
- 2.) The Likely Response Actions matrix, which was updated during the meeting, is the basis for updates throughout the scoping summary.
- 3.) The RAO column for EA6 (PAR Pond) does NOT include the "Limit sediment from migration off SRS" as suggested by EPA. This statement was discussed extensively by the project team and DOE following the webcast. In accordance with the Core Team process for decision making, in order for there to be an RAO, there must be a corresponding Problem Warranting Action. SRS understands EPA's concern and recommends that the discussion of limiting sediment migration be addressed under the long-term effectiveness evaluation for the Maintain Water in Ponds alternative. As reflected in the revised scoping summary, a description of the "limit contaminated sediment from migrating off SRS" is included in the general description of the Maintain Water in Ponds likely response action and in Section 4.2, "Likely Response Actions" and the Likely Response Action Matrix. Since the Maintain Water in Ponds alternative (that includes dam inspections and repair) is the only alternative that can limit contaminated sediment migration, the 9-criteria analysis will show a significant advantage for this alternative.

Please review and provide any comments or corrections to SRS by April 19, 2018.

Please contact me if you have any questions, comments, or concerns.

Thank you.

Joseph Burch
Environmental Compliance Authority – Area Completion Projects
Building 730-4B, RM 3118, Phone: (803) 952-6660

From: Shelia Mcfalls

Sent: Wednesday, March 07, 2018 10:05 AM

To: Jon Richards (richards.jon@epa.gov) <richards.jon@epa.gov>; Cathcahe (dhec.sc.gov) <Cathcahe@dhec.sc.gov>
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Subject: Meeting Confirmation: Lower Three Runs Integrator Operable Unit Feasibility Study Scoping Continuation Adobe Webcast Meeting

Jon and Heather,

All Parties have confirmed. The subject Adobe Webcast scoping meeting will be held on **Monday, April 9, 2018, starting at 1:00 p.m.** Additional information to support the Adobe Webcast will be submitted to you prior to the meeting.

The SRS participants will meet in Building 730-4B, Conference Room 332.

The Adobe Webcast meeting address is <http://doesavriver.adobeconnect.com/srsmeeting/>. The link provides on-line viewing of the presentation only. In order to hear the meeting, you must participate in the conference call. The conference call phone number is **800-832-0736**. The conference room number (aka access code) is **4971238**.

Please contact me if you have any questions, comments, or concerns.

Thanks

Shelia L. McFalls | Savannah River Nuclear Solutions, LLC | Environmental Compliance & Area Completion Projects | shelia.mcfalls@srs.gov | 1.803.952.6819 office | 1.803.725.7243, #19367 pager | 1.803.952.6403 fax | Savannah River Site | Building 730-4B, 3134 | Aiken, SC 29808



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