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

November 22, 2024

Ms. Avery Hammett, SRS Remedial Project Manager
Remediation and Deactivation & Decommissioning Division
U.S. Department of Energy Savannah
River Operations Office
P.O. Box A
Aiken, South Carolina 29802

Dear Ms. Hammett:

EPA has reviewed the Decommissioning Project Final Report 236-H, By-Product Purification Facility,V-PCOR-H-00016, Rev. 0, September 9, 2024. Several Comments are included are a result of this review.

If you have any questions or require additional information, please contact me at (404) 562-8329.

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Date: 2024.11.22 16:16:32 -05'00'

Jana Dawson
Superfund & Emergency Management Division

ec: C.L. Bergren, SRNS-ACP
Susan Fulmer, SCDHEC
J. Richards, EPA

GENERAL COMMENTS

1. The human health risk assessment (HHRA) presented for the DPFR is wholly deficient and does not support the decommissioning of the facility. For example:
    a. The date that the preliminary HHRA was performed is not mentioned, so it is not possible to determine if the appropriate Regional Screening Levels (RSLs) were used. The text cites May 2021 as the date of the RSLs, but if this assessment was performed in 2024 (as noted on the tables in Appendix A of Appendix B), then these criteria are several iterations out of date. Additionally, neither the text nor tables mention which RSLs were used with respect to target hazard quotient (THQ) (i.e., THQ = 0.1 or 1);
    b. The guidance document(s) and the HHRA approach/methodology used are not cited;
    c. The relevant exposure routes for the receptor populations of interest are not discussed;
    d. Risks were calculated based on maximum detections of constituents of potential concern (COPCs) in soil; however, there are no soil data presented, and there is no indication of the number of soil samples collected, or the frequency of detections so that an understanding of the statistical representativeness of the data may be understood; and
    e. The results of the HHRA are above EPA's target acceptable carcinogenic risk range of 1E-06 to 1E-04 for both individual constituents (Potassium-40; Thorium-232; Uranium-238) and on a cumulative basis; however, the results are deemed acceptable and dismissed as being naturally occurring and consistent with uncontaminated concrete media, without adequate support.

    As a result, comprehensive edits are required, which should include: 1) additional details on the risk assessment approach taken, including relevant guidance documents, identification of specific RSLs used for comparative purposes (and use of the most recent RSLs), and a discussion of the current/future land use which dictates the evaluation of the receptors of interest; 2) presentation of the soil dataset, including the number and quality of samples; and 3) a thorough evaluation of background concentrations of COPCs and uncontaminated concrete data so that the HHRA may be placed in the proper context and constituents can be confidently eliminated from further consideration. Please revise the DPFR accordingly.

2. Section 4.0, Characterization Summary states "Samples were primarily collected at locations where the radiological survey identified tritium contamination areas (CAs), or areas of elevated activity." The text also states the 2023 radiological survey was similar to the 2017 survey and bounded the findings of the 2017 survey. While this section provides figures of where the elevated tritium was located, it does not appear figures showing where the areas of elevated activity from other radionuclides (naturally occurring or site-related) remain currently, or which radionuclides listed in the data summary tables contributed to the areas of elevated activity. It is also requested that this section provide a narrative explanation of whether the areas of elevated radioactivity were determined to strictly be as a result of the concrete material itself (naturally occurring) or if any radioactivity was thought to be due to contamination. Please revise the DPFR to provide this information.

3. The DPFR does not appear to contain a figure showing the area of coverage of the radiological survey, therefore it is unclear if the slab received 100% gamma walkover survey or whether a smaller percentage was surveyed. Please revise the DPFR to include a figure that depicts the area that received the gamma walkover survey.

SPECIFIC COMMENTS

1. **Section 6.0.2.01, Human Health Risk Assessment, Page 12 of 152:** It is inappropriate to state that there is no human health risk when the presented calculated risks are greater than the EPA's target carcinogenic risk range of 1E-06 to 1E-04 for both residential and industrial populations. This section should discuss whether calculated risks are acceptable or unacceptable ("no risks" is incorrect); and in this case, whether risks are considered acceptable as the result of comparison to background or uncontaminated media. Please revise this section to present a more detailed argument for the acceptability of the risk assessment results.
2. **Appendix B, Pre-Decommissioning Characterization, Appendix A, Preliminary Risk Assessment Results, Section A.1, Building 236-H, Human Health Risk Evaluation Summary, Page 49 of 152:** This section states that the USEPA Preliminary Remediation Goals for Radionuclides on Outdoor Surfaces (SPRGs) website was used to obtain the SPRGs for the risk estimates (USEPA March 2020); however, the calculators linked to this website have been updated since 2020. Please revise this section to cite the most recent iteration of the website and calculators.