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

March 07, 2018

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Brian Hennessey, 730-B
SRS Remedial Project Manager
Savannah River Operations Office
Area Completion Projects
Post Office Box A
Aiken, South Carolina 29802

Dear Mr. Hennessey:

The U.S. Environmental Protection Agency (EPA) has received the Department of Energy, Savannah River Site White Paper on Remediation of the Acidic Groundwater Impacting the Discharge Canal in D Area.

EPA agrees that this treatability study shows promise and would like to discuss the issue further with DOE-SRS personnel. EPA understands that a work plan for the proposed treatability study will be provided prior to any action and supports DOE-SRS's initiative and proposed treatability study. EPA would also like to ensure there is a clear path forward and that all parties understand the proposed actions for the D Area. With this in mind, EPA requests additional information as outlined in the below comments.

Should you have any questions or concerns, please feel free to call me at on my cell number 404-229-9500.

Sincerely,

Diedre Lloyd
Remedial Project Manager
Federal Facilities Branch
Superfund Division

cc: Angelia Holmes, DOE-SRS, Brian Hennessey, DOE-SRS, Phil Prater, DOE-SRS, Karen Adams, DOE-SRS, C.L. Bergren, SRNS-ACP (Signed Original), Susan Fulmer, SCDHEC

EPA COMMENTS

DOE-SRS WHITE PAPER

REMEDIATION of the ACIDIC GROUNDWATER IMPACTING the DISCHARGE CANAL IN D AREA

March 7, 2018

EPA Comments:

1) The White Paper provides a rough conceptual presentation of a treatability study intended to effectively flush an area impacted by low pH and metals contamination. While the general concept (i.e., flushing/dilution) may be reasonable to address the low pH conditions, it may not adequately address other contaminants (e.g., metals).
    - Since the noted conditions are quite similar to those associated with acid mine drainage (AMD) sites; options such as treatment wetlands, or conventional backfilling of the canal (including the possible addition of carbonate materials) to increase groundwater residence time/buffering prior to surface water discharge may also be reasonable.
    - It may also be beneficial to evaluate other potentially viable options (e.g., treatment wetland) either through the implementation of a study-scaled option (bench scale) or collection of data that may support evaluation of such options prior to remedy selection.
    - Has a bench scale treatability study been considered prior to a large scales TS for the proposed actions?

2) Metals impacts in groundwater are noted to be of concern; however, the White Paper focused on low pH issues and provides no discussion on mitigation of metals. Given the proposed study framework, it is anticipated that metals in solution will precipitate in the carbonate reaction structure though it is unclear if this structure will contain these contaminants and prevent release to sediment and surface water, which may worsen environmental conditions in the canal.
    - Please provide additional information to address this issue.

3) The White Paper notes that following the completion of activities at basin 488-1D, the current dilution of low pH and metals impacted groundwater at the point of discharge to the canal will cease.
    - The White Paper also indicates that the study should achieve "significant acid reduction" in approximately 1,000 days (3 years) of operation, though it is unclear how long the study would occur. Please provide an anticipated timeframe for activities
    - It is unclear from the email message transmitting the White Paper if SRS intends to perform any different action for this portion of the plume until after the Remedial Investigation/Feasibility Study has been completed and a DAGW remedy is in place in 2023. Please provide additional detail to clarify this issue.
    - Given that pH conditions in the canal may presumably worsen and may impact compliance with surface water standards following the completion of activities at 488-1D, the study may require years to demonstrate success.

- Does DOE-SRS anticipate another remedy before 2023? Please provide additional detail as to the path forward with respect to D Area surface and groundwater actions.

4) Finally, the White Paper does not address chlorinated volatile organic compound (cVOC) and tritium groundwater plume(s) associated with/overlapping the low pH and metals plume(s). As a result, it is unclear what impacts the treatability study will have on the cVOC and tritium plumes.
    - Please address the potential for the treatability study and implementation of proposed activities to impact the cVOC and/or tritium plume(s) by expansion due to groundwater mounding.