Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

AUG 16 2018

Ms. Susan B. Fulmer, P.G., Manager
Federal Remediation Section
Division of Site Assessment, Remediation and Revitalization
Bureau of Land and Waste Management
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Mr. Jon Richards
Acting Savannah River Site Remedial Project Manager
Superfund Division
U. S. Environmental Protection Agency, Region 4
61 Forsyth Street, SW
Atlanta, Georgia 30303

Dear Ms. Fulmer and Mr. Richards:

SUBJECT: Savannah River Site's Responses to the Regulatory Comments on the Performance Evaluation Report of 2017 for the M-Area Inactive Process Sewer Lines (MIPSL) (081-M) Operable Unit (OU) (U), January through December 2017 (SRNS-RP-2018-00161, Revision 0, March 2018) CERCLIS Number: 19

In accordance with the terms of the Federal Facility Agreement, the U.S. Department of Energy (DOE) is submitting the subject comment responses for your review and approval. The South Carolina Department of Health and Environmental Control's (SCDHEC) approval and the U.S. Environmental Protection Agency's (EPA) comments on the Revision 0 document were received on July 23, 2018 and July 24, 2018, respectively. The performance evaluation report (PER) will not be revised; however, all comment responses will be incorporated in the next PER, as applicable. Please review these responses and provide your approval thirty (30) days from receipt. The time and effort that the SCDHEC and the EPA have given on the subject operable unit are greatly appreciated.

Questions from you or your staff may be directed to me at (803) 952-8365, or the DOE Federal Project Director, Ms. Karen Adams, at (803) 952-7871.

Sincerely,

Brian T. Hennessey
SRS Remedial Project Manager
Infrastructure and Area Completion Division

IACD-18-172

Enclosure:
SRS Responses to EPA Comments on the Performance Evaluation Report of 2017 for the M-Area Inactive Process Sewer Lines (MIPSL) (081-M) Operable Unit (OU) (U), January through December 2017 (SRNS-RP-2018-00161, Revision 0, March 2018) CERCLIS Number: 19

cc w/o encl:
D. Scaturo, SCDHEC-Columbia
S. French, SCDHEC-Columbia
M. D. Wilson, SCDHEC-Columbia
G. K. Taylor, SCDHEC-Columbia
G. N. O'Quinn, SCDHEC–Aiken Environmental Affairs Office
R. Pope, EPA-Atlanta

cc w/ encl:
D. Lloyd, EPA-Atlanta
M. McRae, TechLaw, Inc.

Comments received July 24, 2018

EPA GENERAL COMMENT:

EPA understands and appreciates that a larger Microblower™ was installed to address remaining MIPSL contamination and that the above mentioned report further notes additional information will be evaluated during the next reporting interval. EPA renews the request to address the issue noted below in italics from previous EPA comments made during the last MIPSL reporting effort in order to ensure that this concern is addressed during the next reporting interval in 2018.

EPA's comment on the 2016 Performance Evaluation Report for MIPSL comment is copied (in italics) and pasted below:

> *Based on the information presented in the 2016 MIPSL it appears the contaminant mass that exists below the Upland Unit is more significant than has been previously reported. For example, the text in Section 2.1 (System Overview) states the contamination is predominately within the fine-grained sediments (Upland Unit) in the zone below the sewer line to 35-feet below ground surface (bgs). However, the text in Section 1.2 (Nature and Extent of Contamination), Page 2 of 56 states the Upland Unit has limited contaminant mobility to a significant degree although volatile organic compounds (VOCs) have migrated downward, into the more permeable sediments below the Upland Unit. Furthermore, the text in Section 3.0 (Conclusions/Recommendations) on Page 10 of 56, states the vast majority of VOC production at MIPSL has been from MH-01, and approximately 94% of MH-01 production has been from the deeper extraction well screened in the Tobacco Road formation. As seen in Figure 3 Surface Well Configuration (Typical Cutaway View), Page 17 of 56 the SVE well is screened from 60 to 100 feet bgs and only a fraction of the total well screen length is located within the silty sand unit below the Upland Unit and above the clay unit. As such, it appears a majority of the mass removal is from below the Upland Unit and it is uncertain how this may impact the mass removal estimates and the overall remedial cleanup timeframes. Please revise the **next submittal** of the Performance Evaluation Report for the M-Area Inactive Process Sewer Lines (MIPSL) (081-M) Operable Unit (OU) (U), CERCLIS Number 19, (2017 MIPSL) to address this issue.*

Response: Clarification.

More detailed production information and a lithology description were added to the 2017 PER to provide a thorough description of the VOC removal at this waste site. EPA is correct in their evaluation that most of the mass removal is from below the Upland Unit. This observation is consistent with the remedial strategy agreed upon in the Record of Decision to place the active SVE through the center of the Upland Unit fractured zone and extended

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to just above the water table. Placement of the SVE system was designed to address the contamination migrating downward into the more permeable portion of the vadose zone. The fractures were layered downward, creating fissures across the entire Upland Unit's depth to increase the permeability of the Upland Unit contaminated zone.

SRS agrees that the VOC production from the SVE units does not accurately reflect the contaminant mass and subsurface geometry remaining in the vadose zone, especially in and below the Upland Unit. SRS is currently planning a sampling event of the vadose zone soil followed by an updated contaminant migration analysis in early 2019. The results from the 2019 investigation will be discussed in the 2019 PER (to be published in March 2020) with respect to the impact of remaining contaminant concentrations on the approved remedial goals.

No change to the 2017 PER is proposed.

Responsible Party: John Bradley, 803-952-2301, john02.bradley@srs.gov

EPA SPECIFIC COMMENTS:

1. **Section 3.0, Conclusions/Recommendations, Page 11 of 58:**

Section 3.0 states, "SRS recommends that the monitoring of the ASVE unit and the sampling frequency remain unchanged, but that a different approach to flow rate evaluation be implemented for the MicroBlower™ systems. SRS determined that the eleven fractured MicroBlower™ wells with the smaller blower (Wells F11-1, F11-2, F11-3, F11-4, F12-1, F12-2, F12-4, F13-1, F13-2, F13-3, and F13-4) have an average flow rate of 2 cubic feet per minute (cfm). This average was obtained by taking the average of the second, third, and fourth highest flow rates of the five most recent flow measurements at each well…" However, it is unclear why the average flow rate was not calculated using all of the data obtained from the most recent flow measurement events at each well location. Revise the 2017 PER to provide a calculated average flow measurement using all of the recent flow rates for a comparison.

Response: Agree with Clarification. The highest and lowest flow rates were excluded from the calculated flow rate to eliminate spurious, extreme measurements, thereby providing a more realistic, continuous flow estimate. No change to the 2017 PER is proposed.

Responsible Party: John Bradley, 803-952-2301, john02.bradley@srs.gov

Comments received July 24, 2018

2. **Figure 8, Illustration of Flow Volume and PCE Concentration Extracted by ASVEU and Figure 9, Graph Illustrating at MH-01 PCE Soil Gas Concentrations, Page 24 of 58:**

Figures 8 and 9 depict PCE (tetrachloroethylene) concentrations extracted by the active soil vapor extraction unit (ASVEU) and PCE soil gas concentrations, respectively. However, because the graph depicts this data over the system operational period (approximately 10 years), it is difficult to see the fluctuation of PCE concentrations over the 2017 operating period. For clarity and consistency, the 2017 PER should prepare graphs that depict PCE concentration data over both the operational term for the system and for the 2017 operational year.

Response: Agree. Future PERs will include additional graphs that chart PCE concentrations for the operational year and the operational term of the system. No change to the 2017 PER is proposed.

Responsible Party: John Bradley, 803-952-2301, john02.bradley@srs.gov