



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

JAN 11 2018

Ms. Susan B. Fulmer, P. G., Manager
Federal Facility Agreement 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 K-Area Burning/Rubble Pit and Rubble Pile (131-K and 631-20G) (KBRP), L-Area Burning/Rubble Pit and Rubble Pile (131-L, 131-3L, and 131-2L) (LBRP), and P-Area Burning/Rubble Pit (131-P) (PBRP) Operable Units (OUs) Detailed Combined Groundwater Monitoring Report (SRNS-RP-2017-00356, Revision 0, June 2017) and Request to Designate LBRP OU as a No Action OU, CERCLIS Numbers: 40, 56, and 59

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. The U. S. Environmental Protection Agency (EPA) and South Carolina Department of Health and Environmental Control (SCDHEC) provided comments on this report on October 3, 2017 and October 25, 2017, respectively. This report will not be revised; however, all comment responses will be included in the next report, as applicable.

The *K-Area Burning/Rubble Pit and Rubble Pile (131-K and 631-20G) (KBRP)*, *L-Area Burning/Rubble Pit and Rubble Pile (131-L, 131-3L, and 131-2L) (LBRP)*, and *P-Area Burning/Rubble Pit (131-P) (PBRP) Operable Units (OUs) Detailed Combined Groundwater Monitoring Report (SRNS-RP-2017-00356, Revision 0, June 2017)* included data and a recommendation to discontinue monitoring and reporting at the LBRP OU. As stated in the report, the LBRP OU Record of Decision (WSRC-RP-98-4195, Revision 1.1, July 2002) selected Groundwater Mixing Zone with institutional controls (i.e., land use controls [LUCs]) as the remedial action until the maximum contaminant level for carbon tetrachloride is attained for groundwater. The EPA and SCDHEC agreed with the recommendation to discontinue monitoring and reporting at the LBRP OU in letters dated October 3, 2017 and October 25, 2017, respectively. Since monitoring and reporting have been discontinued at the LBRP OU, the institutional controls (i.e., LUCs) are no longer required. Therefore, the DOE is requesting that the LBRP OU be designated as a No Action OU.

In addition, future report submittals, whether sampling summaries or detailed groundwater reports, will no longer include the L-Area Burning/Rubble Pit and Rubble Pile (131-L, 131-3L, and 131-2L) (LBRP) in the title.

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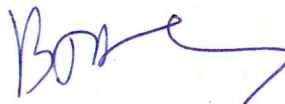
Ms. Susan Fulmer
Mr. Jon Richards

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Please review the enclosures and the information contained in this letter and provide your approval thirty (30) days from receipt. The effort and time that the SCDHEC and the EPA have given on the subject operable units are greatly appreciated.

Questions from you or your staff may be directed to me at (803) 952-8365, or DOE Program Manager, Mr. Philip Prater, at (803) 952-9333.

Sincerely,



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

IACD-18-122

Enclosures:

1. SRS Responses to U.S. Environmental Protection Agency (EPA) Comments on: K-Area Burning/Rubble Pit and Rubble Pile (131-K and 631-20G) (KBRP), L-Area Burning/Rubble Pit and Rubble Pile (131-L, 131-3L, and 131-2L) (LBRP), and P-Area Burning/Rubble Pit (131-P) (PBRP) Operable Units (OUs) Detailed Combined Groundwater Monitoring Report (SRNS-RP-2017-00356, Revision 0, June 2017), CERCLIS Numbers: 40, 56, and 59
2. SRS Responses to South Carolina Department of Health & Environmental Control Comments on: K-Area Burning/Rubble Pit and Rubble Pile (131-K and 631-20G) (KBRP), L-Area Burning/Rubble Pit and Rubble Pile (131-L, 131-3L, and 131-2L) (LBRP), and P-Area Burning/Rubble Pit (131-P) (PBRP) Operable Units (OUs) Detailed Combined Groundwater Monitoring Report (SRNS-RP-2017-00356, Revision 0, June 2017), CERCLIS Numbers: 40, 56, and 59

cc w/o encl:

D. Scaturo, SCDHEC-Columbia
S. French, SCDHEC-Columbia
M. D. Wilson, SCDHEC-Columbia
G. K. Taylor, SCDHEC-Columbia
T. Fuss, SCDHEC-Aiken Environmental Affairs Office
R. H. Pope, EPA-Atlanta

cc: w/encl:

J. Tufts, EPA-Atlanta
M. McRae, TechLaw, Inc.

SRS Responses to SCDHEC Comments on:
 K-Area Burning/Rubble Pit and Rubble Pile (131-K and 631-20G) (KBRP), L-Area
 Burning/Rubble Pit and Rubble Pile (131-L, 131-3L, and 131-2L) (LBRP), and P-Area
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General Comment

1. Based on the information presented in Section 3.2.6, LBRP OU Summary and Conclusions and supporting data in Appendices C and D, the Department finds the proposal to discontinue monitoring and reporting at the LBRP OU to be acceptable.

Response: Agree.

Groundwater monitoring and reporting for the LBRP OU will be discontinued. The LBRP OU will be removed from the K-Area Burning/Rubble Pit and Rubble Pile (131-K and 631-20G) (KBRP), L-Area Burning/Rubble Pit and Rubble Pile (131-L, 131-3L, and 131-2L) (LBRP), and P-Area Burning/Rubble Pit (131-P) (PBRP) Operable Units (OUs) Combined Groundwater Monitoring Reports starting in 2018. Future groundwater monitoring reports, whether sampling summaries or detailed reports, will only include the KBRP and PBRP OUs.

Contact: Justin Steadman, (803)952-7346, justin.steadman@srs.gov

Specific Comments

1. Section 3.1.2, KBRP OU Groundwater Mixing Zone Application Elements, page 6. The third sentence of the second paragraph of this section states: "Groundwater flow and transport modeling of KBRP (WSRC 1999b) was used to establish MZCLs at the location of the compliance boundary." MZCLs are established for the plume definition and intermediate wells; MCLs are used for compliance boundary wells. Perhaps the word "at" should be "and" instead, as presented on page 12 in Section 3.2.2 for LBRP OU. Please correct.

Response: Agree.

The referenced sentence in Section 3.1.2 will be revised as follows:

"Groundwater flow and transport modeling of KBRP (WSRC 1999b) was used to establish MZCLs ~~at~~ and the location of the compliance boundary."

The correction will be reflected in the next groundwater letter report.

Contact: Justin Steadman, (803)952-7346, justin.steadman@srs.gov

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2. Table 1, KBRP GWMZ Monitoring Network and Sampling Conditions, page 31. Well KRP 7 is listed as an intermediate well. According to the second paragraph of Section 3.1.2.3, this well has been changed to a compliance boundary well. Table 1 should be updated accordingly.

Response: Agree.

The corrected Table 1, which lists KRP 7 as a compliance boundary well, is provided with the comment responses and will be included in the next groundwater sampling summary letter report.

Contact: Justin Steadman, (803)952-7346, justin.steadman@srs.gov

3. Table 3, LBRP GWMZ Monitoring Network and Sampling Conditions, page 33. Please modify Table 3 to include separate columns for both Well Use and Data Collected, similar to Table 1, so that the purpose for all wells can be better understood.

Response: Agree.

Table 3, LBRP GWMZ Monitoring Network and Sampling Conditions, was modified as suggested to be consistent with Table 1. Please note that the revised Table 3 is provided with the comment responses but will not be included in the next groundwater sampling summary letter report since monitoring and reporting for LBRP is complete.

Contact: Justin Steadman, (803)952-7346, justin.steadman@srs.gov

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Table 1. KBRP GWMZ Monitoring Network and Sampling Conditions

Station ID	Aquifer	Well Use	Data Collected	Sampling Frequency	Conditions
KRP 4	AA	Plume Well	Samples and Water Levels	Annual	
KRP 5	AA	Plume Well	Samples and Water Levels	Annual	
KRP 6	AA	Plume Well	Samples and Water Levels	Annual	
KRP 7	AA	Boundary Compliance	Samples and Water Levels	Annual	
KRP 8	AA	Plume Well	Samples and Water Levels	Annual	
KRP 9	AA	Auxiliary Plume Well	Samples and Water Levels	Annual	
KRP 10C	LAZ	Intermediate	All Suspended	Suspended	This well will restart annual sampling during the next sampling event if concentrations in wells KRP 10D or KRP 11D exceed an MCL.
KRP 10D	TZ	Intermediate	Samples and Water Levels	Annual	Detections above MCLs will restart annual sampling during the next sampling event at wells KRP 10C, KRP 11C, KRP 12C, and KRP 12D. A one time sample at wells KRP 13D, KRP 15C, and KRP 15D will be collected during the next sampling event to confirm contamination has not spread further.
KRP 11C	LAZ	Intermediate	All Suspended	Suspended	This well will restart annual sampling during the next sampling event if concentrations in wells KRP 10D or KRP 11D exceed an MCL.

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Table 1. KBRP GWMZ Monitoring Network and Sampling Conditions (continued; end)

Station ID	Aquifer	Well Use	Data Collected	Sampling Frequency	Conditions
KRP 11D	TZ	Intermediate	Samples and Water Levels	Annual	Detections above MCLs will restart annual sampling during the next sampling event at wells KRP 10C, KRP 11C, KRP 12C, and KRP 12D. A one time sample at wells KRP 13D, KRP 15C, and KRP 15D will be collected during the next sampling event to confirm contamination has not spread further.
KRP 12C	LAZ	Boundary Compliance	All Suspended	Suspended	This well will restart annual sampling during the next sampling event if concentrations in wells KRP 10D or KRP 11D exceed an MCL.
KRP 12D	TZ	Boundary Compliance	Water Levels Only	Annual	This well will restart annual sampling during the next sampling event if concentrations in wells KRP 10D or KRP 11D exceed an MCL.
KRP 13D	TZ	Boundary Compliance	Water Levels Only	Annual	This well will be sampled once during the next sampling event if wells KRP 10D or KRP 11 D exceed an MCL. If concentrations are detected at non-estimated values, sampling will continue annually.
KRP 15C	LAZ	Boundary Compliance	All Suspended	Suspended	This well will be sampled once during the next sampling event if wells KRP 10D or KRP 11 D exceed an MCL. If concentrations are detected at non-estimated values, sampling will continue annually.
KRP 15D	TZ	Boundary Compliance	Water Levels Only	Annual	This well will be sampled once during the next sampling event if wells KRP 10D or KRP 11 D exceed an MCL. If concentrations are detected at non-estimated values, sampling will continue annually.
KRP 14C*	LAZ	Former Boundary Compliance	All Suspended	Suspended	
KRP 14D*	TZ	Former Boundary Compliance	All Suspended	Suspended	

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Table 3. LBRP GWMZ Monitoring Network and Sampling Conditions

Station ID	Aquifer	Well Use	Data Collected	Trigger Level (µg/L)	Sampling Frequency	Conditions
LRP 5	AA	Water Elevation Only	Water Elevation Only	N/A	Annual	
LRP 6R	AA	Plume Well	Sample and Water Level	13	Annual	Revert back to semi-annual sampling if there is a significant increasing trend
LRP 7D	AA	Boundary Compliance	Sample and Water Level	5	Annual	Revert back to semi-annual sampling if the trigger level is exceeded.
LRP 8D	TZ	Boundary Compliance	All Suspended	N/A	Suspended	If LRP 7D exceeds the trigger level, revert back to a compliance boundary well with annual sampling.
LRP 9D	AA	Boundary Compliance	All Suspended	N/A	Suspended	If LRP 7D exceeds the trigger level, revert back to a compliance boundary well with annual sampling.
LRP 10D	AA	Boundary Compliance	All Suspended	N/A	Suspended	If LRP 7D exceeds the trigger level, revert back to a compliance boundary well with annual sampling.
LBRP-SP-01	N/A	Seepage Surface Water	Sample and Water Level	N/A	Annual	

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TECHNICAL REVIEW COMMENT

1. Based on the monitoring results for the L-Area Burning/Rubble Pit and Rubble Pit (131-L, 131-3L, and 131-2L) (LBRP) the text in Section 5.0 Recommendations, Page 19 of 36, states SRS is proposing to discontinue monitoring and reporting for the LBRP OU due to carbon tetrachloride (CCL₄) concentrations remaining below MCLs for four sampling periods (four years). Although LBRP OU has met a condition to discontinue monitoring as specified in the ROD (2002), recent EPA groundwater monitoring guidance (Recommended Approach for Evaluating Completion of Groundwater Restoration Remedial Actions at a Groundwater Monitoring Well OSWER 9283.1-44, August 2014) recommends a minimum number of data points required to evaluate each phase of groundwater monitoring as follows:
 - The remediation monitoring phase is completed when monitoring well data demonstrate that the groundwater has reached the cleanup levels for all contaminants of concern (COCs) set forth in the record of decision (ROD). Since the remediation monitoring phase is not the final decision point for completing the restoration of groundwater, the EPA Guidance recommends a minimum of four data points be used for analysis during this phase.
 - The attainment monitoring phase is intended to provide data that help support a defensible determination that: a) the groundwater in the well has met the cleanup level for each COC; and b) provides assurance that the groundwater will continue to meet the COC cleanup level in the future. Since the EPA Guidance recommends that completion of the attainment monitoring phase be based on two lines of evidence, in general, a more robust data set using a visual or statistical (trend test and mean test) evaluation is typically used to make the final attainment determination.

Therefore, consistent with EPA Guidance, it is recommended that a minimum of eight data points be used for the attainment monitoring phase analysis. SRS proposes to discontinue groundwater monitoring with four sampling periods remaining below MCLs for monitoring well LRP 6R. However, historical groundwater data discussed on Page 15 indicate groundwater concentrations from several wells did not exceed MCLs for the past 10 to 14 years. For example, monitoring of compliance boundary wells LRP 8D, LRP 9D, and LRP 10D was discontinued in 2013 due to groundwater concentrations remaining below MCLs since 2003 (10 years of data according to the Time Series Plots, Appendix C, Page C25-C-29). CCL₄ concentrations in LRP 6R fell below MCLs in 2013, and LRP 7D has not had detections of above MCLs since 2003 (14 years of data). Given that four out of the five monitoring wells have 10 years or more of concentration

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data below MCLs, and one well with concentration data below MCLs since 2013, sufficient monitoring data has been collected and presented to indicate that the site has met the intent of EPA's 2014 Groundwater Monitoring Guidance. Therefore, EPA concurs with SRS's proposal to discontinue monitoring and reporting at the LBRP OU.

Response: Agree.

Groundwater monitoring and reporting for the LBRP OU will be discontinued. The LBRP OU will be removed from the K-Area Burning/Rubble Pit and Rubble Pile (131-K and 631-20G) (KBRP), L-Area Burning/Rubble Pit and Rubble Pile (131-L, 131-3L, and 131-2L) (LBRP), and P-Area Burning/Rubble Pit (131-P) (PBRP) Operable Units (OUs) Combined Groundwater Monitoring Reports starting in 2018. Future groundwater monitoring reports, whether sampling summaries or detailed reports, will only include the KBRP and PBRP OUs.

Contact: Justin Steadman, (803)952-7346, justin.steadman@srs.gov