Savannah River
NUCLEAR SOLUTIONS℠

Remedial Investigation Report with Baseline Risk Assessment for the Automotive Repair Shop (716-A) Operable Unit (U)

SEMS Number: 62

SRNS-RP-2025-00719

Revision 1 Redline (corrected)

March 2026

DISCLAIMER

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and
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Aiken, South Carolina

ERRATA SHEET

Replacement of the following pages in the Revision 1 document is necessary to correct the Remedial Investigation Report with Baseline Risk Assessment for the Automotive Repair Shop (716-A) Operable Unit.

Change Pages	Reason for Change
Cover Page: Replace cover page with new cover page reflecting "Revision 1 (corrected)."	The revised cover page indicates a correction was made.
Table 1-1, page 1-13 of 1-14. Revised the list of threatened and endangered species by removing the Bald Eagle and Wood Stork.	The Bald Eagle and Wood Stork are no longer considered threatened or endangered.
Figure 2-8, page 2-14 of 2-16. Updated the figure to reflect the correct spelling of "Inhalation".	"Inhalation" is misspelled throughout Figure 2-8.
Figure 3-3, page 3-13 of 3-14. Updated the figure to reflect the correct spelling of "Inhalation".	"Inhalation" is misspelled throughout Figure 3-3.
Table A.2-2, *Appendix A*, Page A-8 of A-8. Revised the 95% UCL values for magnesium, sodium, and thallium.	The 95% UCL values for magnesium, sodium, and thallium in Table A.2-2 are not consistent with the correct values listed in Table A.2-1.
Table B-5, *Appendix B*, Page B-32 of B-34. Revised the 95% UCL values for magnesium, sodium, and thallium.	The 95% UCL values for magnesium, sodium, and thallium in Table B-5 are not consistent with the correct values listed in Table A.2-1.

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Table 1-1. Savannah River Site Natural Resource Trustees and Their Responsibilities

Governing Power	Responsibilities
USDOE, Savannah River Operations Office	All-natural resources located on, over, or under land administered by USDOE
South Carolina Office of the Governor	All-natural resources of the State of South Carolina
SCDES, Bureau of Land and Waste Management	Geologic resources including soil, groundwater resources (including drinking water sources), air resources, and surface water resources
U.S. Department of the Interior	Threatened and endangered species (includes Red-Cockaded Woodpecker, ~~Bald Eagle, Wood Stork,~~ Shortnose Sturgeon, and Smooth Coneflower), migratory birds, anadromous species, National Park Service land (Fort Pulaski National Monument), Fish and Wildlife Service land (Savannah River National Wildlife Refuge), Tybee Island National Wildlife Refuge, and Orangeburg National Fish Hatchery
South Carolina Department of Natural Resources	Commercial species, game and non-game species, and state sensitive species
Georgia Department of Natural Resources	Savannah River resources, groundwater resources, air resources, and surface water resources
U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA)	Living and non-living natural resources in coastal and marine areas including the following: • All life stages, wherever they occur, of fishery resources on the Exclusive Economic Zone and continental shelf • Anadromous and catadromous species throughout their ranges, rivers, and tributaries to rivers, which historically or presently support the above species • Federally endangered and threatened species, including designated critical habitat and marine mammals for which NOAA has assigned responsibility • Tidal wetlands, salt marshes, estuaries, and all other habitats supporting all fishery and marine resources listed above • Living and non-living resources of National Marine Sanctuaries and National Estuarine Reserves
United States Army Corps of Engineers, Charleston, South Carolina District, Savannah, Georgia District	Savannah River resources, navigable waters resources, and waters of the United States resources

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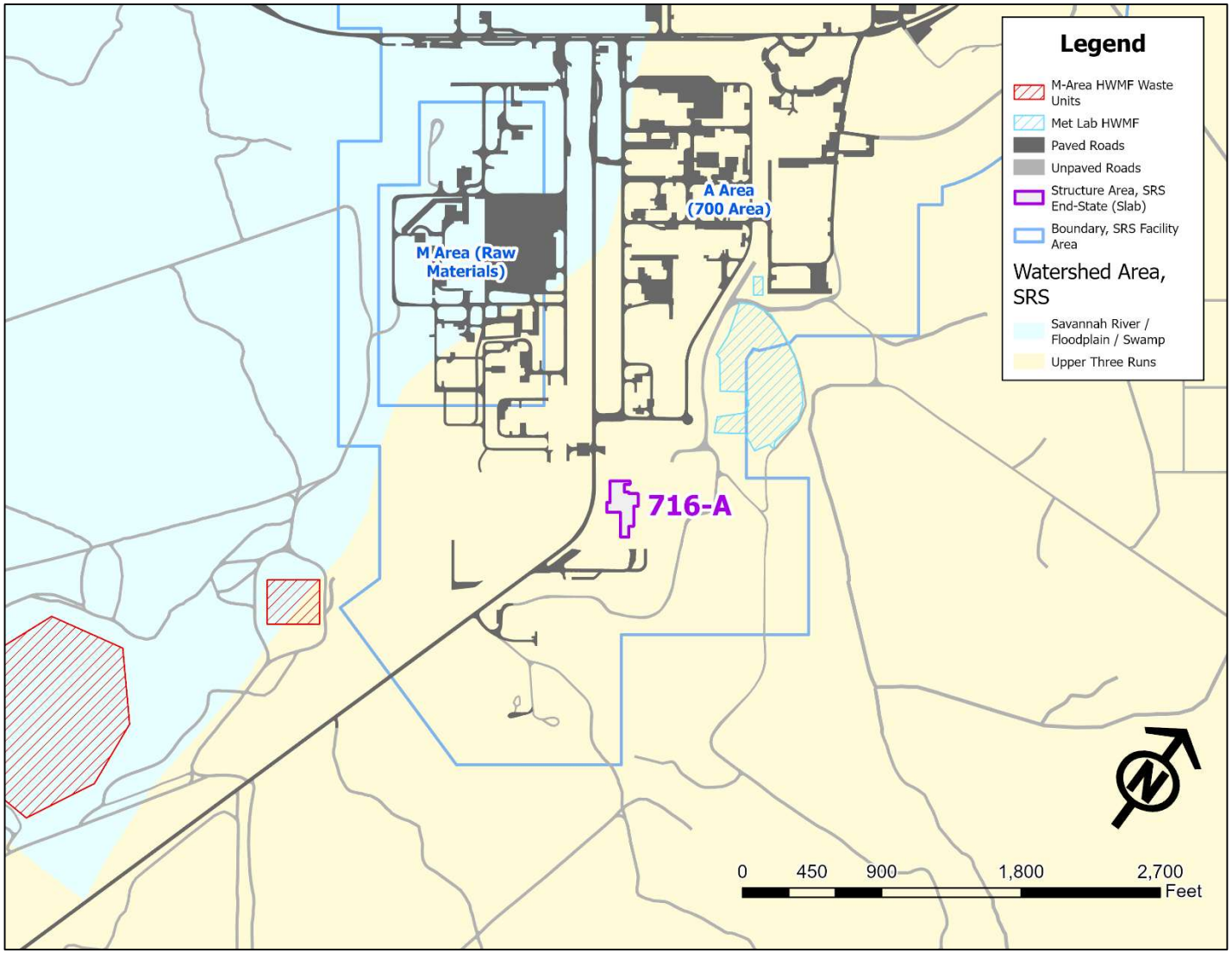


Figure 2-7. Watershed Map of Area Surrounding Building 716-A

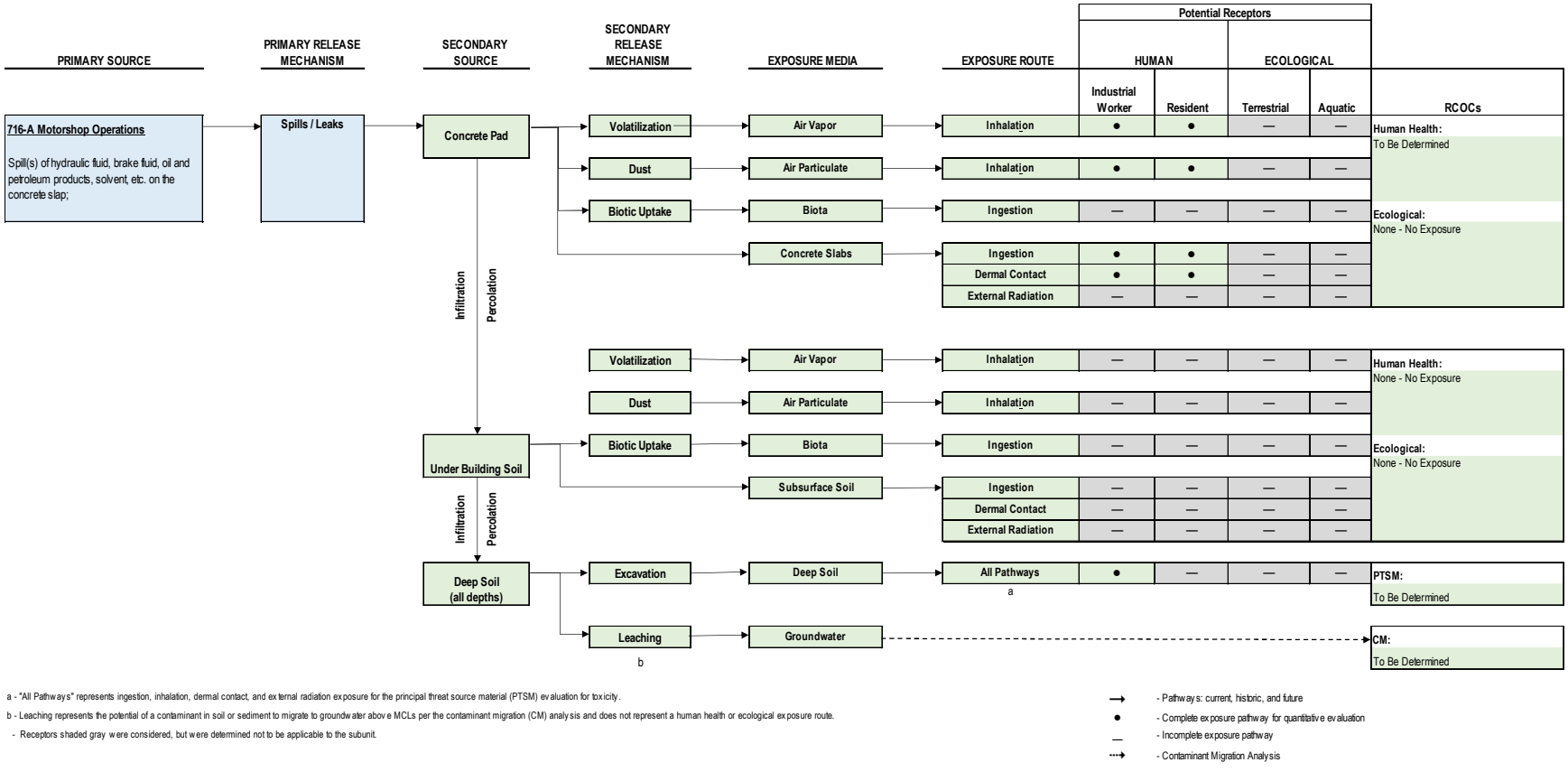


Figure 2-8. Preliminary Conceptual Site Model for the 716-A Automotive Repair Shop

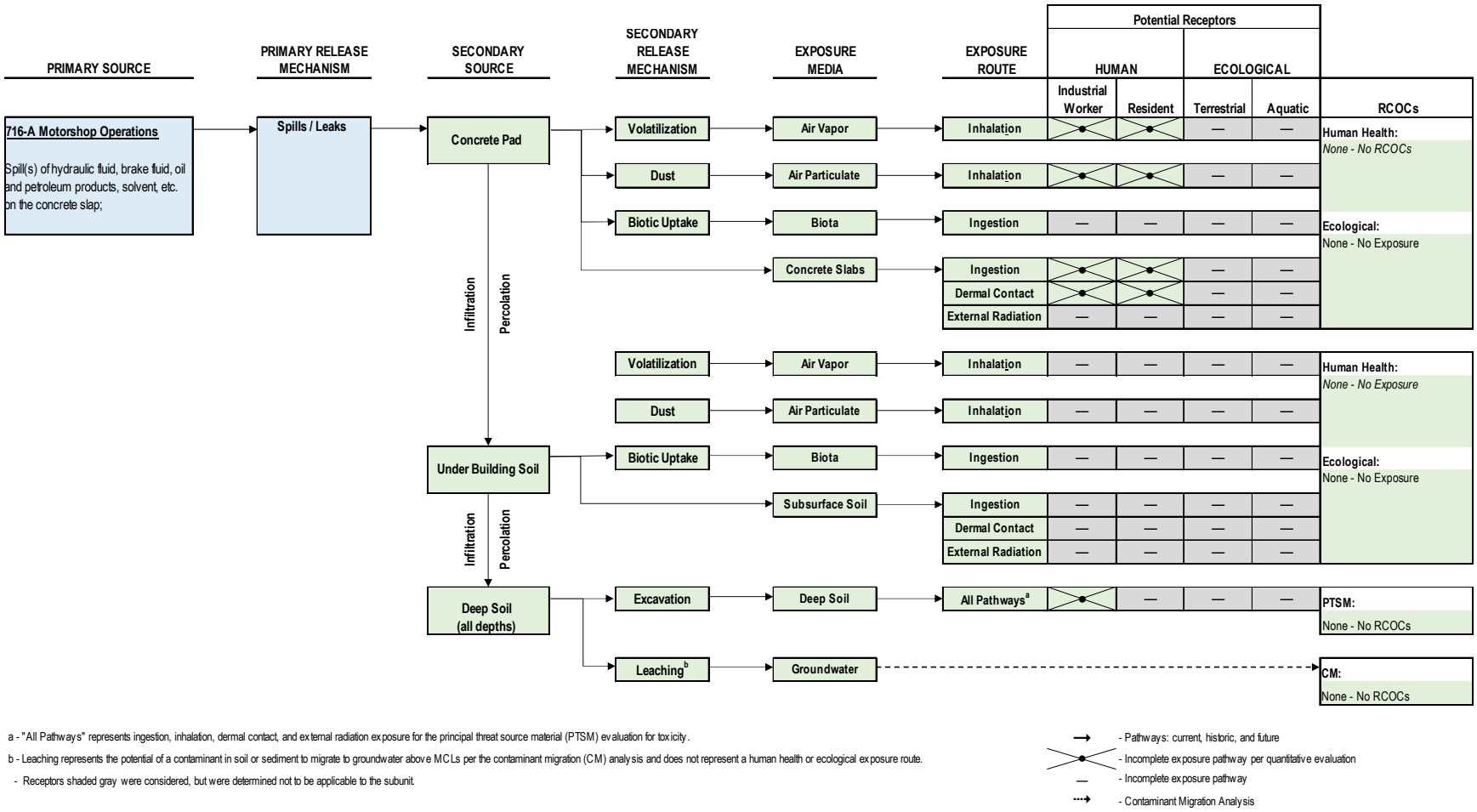


Figure 3-3. Refined Conceptual Site Model for the 716-A Automotive Repair Shop

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Table A.2-1. Data Summary Table Automotive Repair Shop (716-A) OU Soil (All Depths)

Analyte Name	Units	Sample #	Detects	Non-Detects	J-Detects	Distr. Code	UCL Method	Mean	95%UCL	Max Result	Min	RME	Max Location	Qualifier of Max	Max Sample Date
Inorganics															
ALUMINUM	mg/kg	70	70	--	--	N	1	4.08E+03	4.82E+03	1.59E+04	4.78E+02	4.82E+03	ARS-005-SB		12/10/24
ANTIMONY	mg/kg	70	20	50	20	N	2	8.26E-01	5.20E-01	1.70E+00	3.47E-01	5.20E-01	ARS-004-SB	J	12/03/24
ARSENIC	mg/kg	70	60	10	20	N	2	6.40E+00	6.52E+00	2.30E+01	6.37E-01	6.52E+00	ARS-005-SB	J	12/10/24
BARIUM	mg/kg	70	70	--	7	N	1	1.14E+01	2.15E+01	4.16E+02	4.12E-01	2.15E+01	ARS-005-SB		12/09/24
BERYLLIUM	mg/kg	70	36	34	31	N	2	3.20E-01	2.62E-01	1.50E+00	1.05E-01	2.62E-01	ARS-005-SB		12/09/24
CADMIUM	mg/kg	70	4	66	4	N	2	1.19E-01	9.37E-02	1.47E-01	1.03E-01	9.37E-02	ARS-005-SB	J	12/09/24
CALCIUM	mg/kg	70	69	1	14	N	2	1.37E+02	2.03E+02	2.50E+03	1.04E+01	2.03E+02	ARS-006-SB		12/04/24
CHROMIUM	mg/kg	70	70	--	1	G	4	1.56E+01	1.87E+01	6.51E+01	7.78E-01	1.87E+01	ARS-004-SB		12/02/24
COBALT	mg/kg	70	36	34	28	N	2	8.12E-01	8.18E-01	1.40E+01	1.62E-01	8.18E-01	ARS-005-SB		12/09/24
COPPER	mg/kg	70	68	2	41	N	2	2.05E+00	2.26E+00	7.61E+00	3.43E-01	2.26E+00	ARS-005-SB		12/09/24
IRON	mg/kg	70	70	--	--	N	1	1.45E+04	1.65E+04	3.79E+04	1.01E+03	1.65E+04	ARS-003-SB		11/20/24
LEAD	mg/kg	70	69	1	11	N	2	4.98E+00	5.53E+00	1.66E+01	9.16E-01	5.53E+00	ARS-005-SB		12/09/24
MAGNESIUM	mg/kg	70	62	8	30	G	4	5.48E+01	6.60E+01	6.69E+02	8.95E+00	6.60E+01	ARS-005-SB		12/10/24
MANGANESE	mg/kg	70	70	--	2	G	8	2.22E+01	2.69E+01	7.53E+01	7.06E-01	2.69E+01	ARS-005-SB		12/09/24
MERCURY	mg/kg	70	29	41	25	N	2	2.23E-01	1.60E-01	9.77E-02	1.02E-02	9.77E-02	ARS-001-SB		11/21/24
NICKEL	mg/kg	70	60	10	28	N	2	9.31E-01	1.02E+00	6.40E+00	1.70E-01	1.02E+00	ARS-005-SB		12/09/24
POTASSIUM	mg/kg	70	55	15	24	G	8	4.63E+01	5.24E+01	3.82E+02	7.56E+00	5.24E+01	ARS-005-SB		12/10/24
SELENIUM	mg/kg	70	35	35	32	L	9	1.42E+00	1.24E+00	7.37E+00	5.17E-01	1.24E+00	ARS-005-SB	J	12/10/24
SILVER	mg/kg	70	27	43	23	L	9	2.91E-01	2.16E-01	1.11E+00	1.05E-01	2.16E-01	ARS-003-SB		11/20/24
SODIUM	mg/kg	70	21	49	19	N	2	1.67E+01	1.14E+01	7.42E+01	7.66E+00	1.14E+01	ARS-006-SB		12/04/24
THALLIUM	mg/kg	70	50	20	28	N	2	2.27E+00	2.06E+00	4.72E+00	6.42E-01	2.06E+00	ARS-004-SB		12/02/24
VANADIUM	mg/kg	70	70	--	--	G	8	3.59E+01	4.20E+01	1.06E+02	4.53E+00	4.20E+01	ARS-003-SB		11/20/24
ZINC	mg/kg	70	56	14	36	N	4	1.90E+00	2.00E+00	7.97E+00	3.89E-01	2.00E+00	ARS-005-SB	J	12/10/24
Organics															
ACETONE	mg/kg	70	23	47	15	N	4	4.04E-03	2.48E-03	8.76E-03	1.50E-03	2.48E-03	ARS-003-SB		11/20/24
BENZO[B]FLUORANTHENE	mg/kg	70	1	69	1	--	--	5.59E+00	--	1.17E-02	1.17E-02	1.17E-02	ARS-005-SB	J	12/09/24
BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	mg/kg	70	3	67	3	N	4	2.02E-02	1.13E-02	2.67E-02	1.66E-02	1.13E-02	ARS-005-SB	J	12/09/24
BUTYL BENZYL PHTHALATE	mg/kg	70	1	69	1	--	--	5.59E+00	--	1.46E-02	1.46E-02	1.46E-02	ARS-005-SB	J	12/09/24
DICHLOROMETHANE (METHYLENE CHLORIDE)	mg/kg	70	1	69	1	--	--	6.71E-01	--	1.89E-03	1.89E-03	1.89E-03	ARS-002-SB	J	11/19/24
DIETHYL PHTHALATE	mg/kg	70	1	69	1	--	--	5.59E+00	--	1.33E-02	1.33E-02	1.33E-02	ARS-005-SB	J	12/05/24
DI-N-BUTYL PHTHALATE	mg/kg	70	2	68	2	N	2	1.34E-02	1.05E-02	1.35E-02	1.32E-02	1.05E-02	ARS-005-SB	J	12/09/24
N-DIOCTYL PHTHALATE	mg/kg	70	1	69	1	--	--	5.59E+00	--	1.54E-02	1.54E-02	1.54E-02	ARS-005-SB	J	12/09/24
TOLUENE	mg/kg	70	1	69	1	--	--	1.34E-01	--	5.35E-04	5.35E-04	5.35E-04	ARS-002-SB	J	11/19/24
TRICHLOROETHYLENE (TCE)	mg/kg	70	1	69	--	--	--	1.34E-01	--	1.20E-03	1.20E-03	1.20E-03	ARS-005-SB		12/10/24

Distribution Code:
N - Normal Distribution G - Gamma Distribution
L - Lognormal Distribution X - Non-Parameric

UCL Method Code: (as determined by ProUCL)
1) Student's t UCL 2) Kaplan-Meier (KM) t UCL 3) Adjusted Gamma UCL
4) KM Approximate Gamma UCL 5) Hall's Bootstrap UCL 6) Land's H-Statistic (H) UCL
7) KM Adjusted Gamma UCL 8) 95% Approximate Gamma UCL 9) 95% H-UCL (KM-log)

ND: Non-Detect
RME: Reasonable Maximum Exposure
UCL: Upper Confidence Limit

Table A.2-2. Unit Specific Constituent Screening Table Automotive Repair Shop (716-A) OU Soil (All Depths)

ANALYTE NAME	Units	95% UCL	Max Result[1]	Qualifier of Max	Max Location	Sample Depth (ft)	SRS 2X Mean Background[2]	Is Max Detect>2X SRS Mean Bkg?[3]
Inorganics								
ALUMINUM	mg/kg	4.82E+03	1.59E+04		ARS-005-SB	144.5	1.34E+04	Yes
ANTIMONY	mg/kg	5.20E-01	1.70E+00	J	ARS-004-SB	23.5	2.65E+00	No
ARSENIC	mg/kg	6.52E+00	2.30E+01	J	ARS-005-SB	144.5	4.45E+00	Yes
BARIUM	mg/kg	2.15E+01	4.16E+02		ARS-005-SB	115.5	3.31E+01	Yes
BERYLLIUM	mg/kg	2.62E-01	1.50E+00		ARS-005-SB	115.5	3.05E-01	Yes
CADMIUM	mg/kg	9.37E-02	1.47E-01	J	ARS-005-SB	85.0	4.44E-01	No
CALCIUM	mg/kg	2.03E+02	2.50E+03		ARS-006-SB	22.0	3.34E+02	Yes
CHROMIUM	mg/kg	1.87E+01	6.51E+01		ARS-004-SB	19.5	2.29E+01	Yes
COBALT	mg/kg	8.18E-01	1.40E+01		ARS-005-SB	115.5	1.40E+00	Yes
COPPER	mg/kg	2.26E+00	7.61E+00		ARS-005-SB	76.0	6.35E+00	Yes
IRON	mg/kg	1.65E+04	3.79E+04		ARS-003-SB	16.5	2.20E+04	Yes
LEAD	mg/kg	5.53E+00	1.66E+01		ARS-005-SB	85.0	1.08E+01	Yes
MAGNESIUM	mg/kg	6.60E+010	6.69E+02		ARS-005-SB	144.5	2.46E+02	Yes
MANGANESE	mg/kg	2.69E+01	7.53E+01		ARS-005-SB	115.5	6.33E+01	Yes
MERCURY	mg/kg	1.60E-01	9.77E-02		ARS-001-SB	5.5	6.68E-02	Yes
NICKEL	mg/kg	1.02E+00	6.40E+00		ARS-005-SB	115.5	4.15E+00	Yes
POTASSIUM	mg/kg	5.24E+01	3.82E+02		ARS-005-SB	144.5	2.13E+02	Yes
SELENIUM	mg/kg	1.24E+00	7.37E+00	J	ARS-005-SB	144.5	3.71E+00	Yes
SILVER	mg/kg	2.16E-01	1.11E+00		ARS-003-SB	16.5	6.37E-01	Yes
SODIUM	mg/kg	1.14E+010	7.42E+01		ARS-006-SB	22.0	4.36E+01	Yes
THALLIUM	mg/kg	2.0660E+00	4.72E+00		ARS-004-SB	19.5	2.94E+00	Yes
VANADIUM	mg/kg	4.20E+01	1.06E+02		ARS-003-SB	16.5	5.81E+01	Yes
ZINC	mg/kg	2.00E+00	7.97E+00	J	ARS-005-SB	144.5	7.44E+00	Yes
Organics								
ACETONE	mg/kg	2.48E-03	8.76E-03		ARS-003-SB	25.5	--	Yes
BENZO[B]FLUORANTHENE	mg/kg	--	1.17E-02	J	ARS-005-SB	135.5	--	Yes
BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	mg/kg	1.13E-02	2.67E-02	J	ARS-005-SB	135.5	--	Yes
BUTYL BENZYL PHTHALATE	mg/kg	--	1.46E-02	J	ARS-005-SB	135.5	--	Yes
DICHLOROMETHANE (METHYLENE CHLORIDE)	mg/kg	--	1.89E-03	J	ARS-002-SB	29.5	--	Yes
DIETHYL PHTHALATE	mg/kg	--	1.33E-02	J	ARS-005-SB	21.5	--	Yes
DI-N-BUTYL PHTHALATE	mg/kg	1.05E-02	1.35E-02	J	ARS-005-SB	135.5	--	Yes
N-DIOCTYL PHTHALATE	mg/kg	--	1.54E-02	J	ARS-005-SB	135.5	--	Yes
TOLUENE	mg/kg	--	5.35E-04	J	ARS-002-SB	29.5	--	Yes
TRICHLOROETHYLENE (TCE)	mg/kg	--	1.20E-03		ARS-005-SB	161.5	--	Yes

Table Notes:
UCL = upper confidence level
J = estimated value
NA = not available
1 = Max = maximum detected concentration from all depth intervals
2 = Background Soils Statistical Summary report for the Savannah River Site, ERD-EN-2005-0223, Appendix B-2 (All Depth Intervals) (WSRC 2006)
3 = Constituents identified as an USC if maximum detected concentration is greater than 2X SRS Mean Concentration. Organics are not considered naturally occurring and therefore identified as USCs.

Table B-5. Tier I Screening Results for the Automotive Repair Shop (716-A) OU

Analyte	Source Zone Concentration[1]	Tier I Source-Specific SSL	Tier I Mass Limit SSL	Failing Analytes
	[mg/kg]			
Acetone	2.48E-03	5.90E+01	3.30E+01	
Dichloromethane (Methylene chloride)	1.89E-03	1.88E-02	9.15E-03	
Toluene	5.35E-04	9.19E+00	1.83E+00	
Trichloroethylene	1.20E-03	5.25E-02	9.15E-03	
Benzo(b)fluoranthene	1.17E-02	1.20E+01	4.58E-04	
Bis(2-ethylhexyl) phthalate	1.13E-02	2.60E+01	1.10E-02	
Butylbenzyl phthalate	1.46E-02	8.61E+00	3.27E-02	
Diethyl phthalate	1.33E-02	9.60E+01	3.06E+01	
Di-n-butyl phthalate	1.05E-02	5.81E+01	1.65E+00	
Di-n-octyl phthalate	1.54E-02	NA	NA	NA
Aluminum	4.82E+03	3.91E+05	3.66E+01	
Arsenic, Inorganic	6.52E+00	2.93E+01	1.83E-02	
Barium	2.15E+01	7.49E+02	3.66E+00	
Beryllium and compounds	2.62E-01	6.17E+01	7.32E-03	
Calcium	2.03E+02	NA	NA	NA
Chromium, Total	1.87E+01	1.37E+03	1.83E-01	
Cobalt	8.18E-01	8.22E+00	1.10E-02	

Table B-5. Tier I Screening Results for the 716-A OU *(continued/end)*

Analyte	Source Zone Concentration[1]	Tier I Source-Specific SSL	Tier I Mass Limit SSL	Failing Analytes
	[mg/kg]			
Copper, Total	2.26E+00	1.53E+03	2.38E+00	
Iron	1.65E+04	8.21E+04	2.56E+01	
Lead and compounds	5.53E+00	1.03E+03	2.75E-02	
Magnesium	6.60E+0~~0~~1	NA	NA	NA
Manganese	2.69E+01	9.25E+02	7.87E-01	
Mercury (elemental)	1.60E-01	3.52E+01	3.66E-03	
Nickel Soluble Salts	1.02E+00	1.42E+02	7.14E-01	
Potassium	5.24E+01	NA	NA	NA
Selenium	1.24E+00	9.77E+02	9.15E-02	
Silver	2.16E-01	1.66E+02	1.72E-01	
Sodium, total recoverable	1.14E+0~~0~~1	NA	NA	NA
Thallium Soluble Salts	2.06~~60~~E+00	2.78E+00	3.66E-03	
Vanadium, total recoverable	4.20E+01	1.68E+03	1.57E-01	
Zinc (metallic)	2.00E+00	2.95E+03	1.10E+01	

1 - The maximum detected concentrations were used when the 95% UCL could not be estimated for certain constituents.

NA – Not Available, due to absence of Action Level as noted in Table B-1