

APPENDIX F

ESTIMATED INCREMENTAL NONRADIOLOGICAL AIR CONCENTRATIONS ATTRIBUTABLE TO SPENT NUCLEAR FUEL MANAGEMENT ACTIVITIES

TABLE OF CONTENTS

List of Tables

<u>Table</u>		<u>Page</u>
F-1	Estimated maximum incremental concentrations of nonradiological air pollutants for noninvolved worker - Uranium and Thorium Metal Fuels (Fuel Group A) (micrograms per cubic meter).....	F-1
F-2	Estimated maximum incremental concentrations of nonradiological air pollutants for noninvolved worker - Materials Test Reactor-Like Fuels (Fuel Group B) (micrograms per cubic meter).....	F-2
F-3	Estimated maximum incremental concentrations of nonradiological air pollutants for noninvolved worker - HEU/LEU Oxides and Silicides Requiring Resizing or Special Packaging (Fuel Group C) (micrograms per cubic meter).....	F-4
F-4	Estimated maximum incremental concentrations of nonradiological air pollutants for noninvolved worker - Loose Uranium Oxide in Cans (Fuel Group D) (micrograms per cubic meter).....	F-5
F-5	Estimated maximum incremental concentrations of nonradiological air pollutants for noninvolved worker - Higher Actinide Targets (Fuel Group E) (micrograms per cubic meter).....	F-6
F-6	Estimated maximum incremental concentrations of nonradiological air pollutants at SRS boundary for Uranium and Thorium Metal Fuels (Fuel Group A) (micrograms per cubic meter).....	F-7
F-7	Estimated maximum incremental concentrations of nonradiological air pollutants at SRS boundary for Materials Test Reactor-Like Fuels (Fuel Group B) (micrograms per cubic meter)	F-9
F-8	Estimated maximum incremental concentrations of nonradiological air pollutants at SRS boundary for HEU/LEU Oxides and Silicides Requiring Resizing or Special Packaging (Fuel Group C) (micrograms per cubic meter).....	F-11
F-9	Estimated maximum incremental concentrations of nonradiological air pollutants at SRS boundary for Loose Uranium Oxide in Cans (Fuel Group D) (micrograms per cubic meter).....	F-12
F-10	Estimated maximum incremental concentrations of nonradiological air pollutants at SRS boundary for Higher Actinide Targets (Fuel Group E) (micrograms per cubic meter).....	F-14

Table F-1. Estimated maximum incremental concentrations of nonradiological air pollutants for noninvolved worker - Uranium and Thorium Metal Fuels (Fuel Group A).^a

Pollutant	Averaging time	Regulatory standard ^b	Incremental concentration for technology option ^c							
			1	2	3	4	5	6	7	8
Toxic pollutants (mg/m³)										
Nitric acid	24-hour	5	<0.01	NA	<0.01	NA	2.61	<0.01	2.61	<0.01
1,1,1-trichloroethane	24-hour	1,900	—	NA	—	NA	0.02	—	0.02	—
Benzene	24-hour	3.19	—	NA	—	NA	0.02	—	0.02	—
Ethanolamine	24-hour	6	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Ethyl benzene	24-hour	435	—	NA	—	NA	<0.01	—	<0.01	—
Ethylene glycol	24-hour	None	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Formaldehyde	24-hour	0.75	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Glycol ethers	24-hour	80	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Hexachloronaphthalene	24-hour	0.2	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Hexane	24-hour	1,800	<0.01	NA	<0.01	NA	0.02	<0.01	0.02	<0.01
Manganese	24-hour	5	—	NA	—	NA	<0.01	—	<0.01	—
Mercury	24-hour	0.1	—	NA	—	NA	—	—	<0.01	—
Methyl alcohol	24-hour	260	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Methyl ethyl ketone	24-hour	590	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Methyl isobutyl ketone	24-hour	410	—	NA	—	NA	<0.01	—	<0.01	—
Methylene chloride	24-hour	86.7	—	NA	—	NA	0.02	—	0.02	—
Naphthalene	24-hour	50	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Phenol	24-hour	19	—	NA	—	NA	<0.01	—	<0.01	—
Phosphorus	24-hour	0.1	—	NA	—	NA	<0.01	—	<0.01	—
Sodium hydroxide	24-hour	2.0	—	NA	—	NA	<0.01	—	<0.01	—
Toluene	24-hour	754	<0.01	NA	<0.01	NA	0.02	<0.01	0.02	<0.01
Trichloroethene	24-hour	537	—	NA	—	NA	<0.01	—	<0.01	—
Vinyl acetate	24-hour	None	—	NA	—	NA	<0.01	—	<0.01	—
Xylene	24-hour	435	<0.01	NA	<0.01	NA	0.03	<0.01	0.03	<0.01
Criteria pollutants (µg/m³)										
Nitrogen oxides	Annual	NA	0.02	NA	0.02	NA	36.34	0.02	36.34	—
Total suspended particulates (total dust)	24-hour	15	<0.01	NA	<0.01	NA	0.33	<0.01	0.33	—
Particulate matter (respirable fraction)	Annual	5	0.03	NA	0.03	NA	0.02	0.03	0.02	—
	24-hour	NA	0.33	NA	0.33	NA	0.20	0.33	0.20	—
Carbon monoxide	8-hour	55	0.08	NA	0.12	NA	1.57	0.12	1.57	<0.01
	1-hour	NA	0.26	NA	0.39	NA	4.89	0.39	4.89	<0.01
Sulfur dioxide	Annual	NA	<0.01	NA	<0.01	NA	0.02	<0.01	0.02	—
	8-hour	13	<0.01	NA	<0.01	NA	0.28	<0.01	0.28	—
	3-hour	NA	<0.01	NA	<0.01	NA	0.68	<0.01	0.68	—
Gaseous fluorides	1-month	None	—	NA	—	NA	0.10	—	0.10	—
	1-week	NA	—	NA	—	NA	0.17	—	0.17	—
	24-hour	NA	—	NA	—	NA	0.52	—	0.52	—
	12-hour	NA	—	NA	—	NA	0.76	—	0.76	—
Ozone (as VOC)	1-hour	0.2	NC	NA	NC	NA	NC	NC	NC	—

NA = Technology is not applicable to this fuel type.

— = No air emission associated with this option.

NC = Not Calculated.

VOC = volatile organic compound.

- a. Not all constituents listed in this table appear in Tables 3.3-3 or 3.3-4 because many constituents are not expected to impact SRS ambient air concentrations.
- b. NIOSH (1991) and OSHA TWAs.
- c. Technology options: 1 = Prepare for Direct Disposal/Direct Co-Disposal; 2 = Repackage and Prepare to Ship; 3 = Melt and Dilute; 4 = Mechanical Dilution; 5 = Vitrification Technologies; 6 = Electrometallurgical Treatment; 7 = Conventional Processing; and 8 = Continued Wet Storage.

Table F-2. Estimated maximum incremental concentrations of nonradiological air pollutants for noninvolved worker - Materials Test Reactor-Like Fuels (Fuel Group B).^a

Pollutant	Averaging time	Regulatory standard ^b	Incremental concentration for technology option ^c							
			1	2	3	4	5	6	7	8
Toxic pollutants (mg/m³)										
Nitric acid	24-hour	5	<0.01	NA	<0.01	<0.01	3.91	<0.01	3.91	<0.01
1,1,1-trichloroethane	24-hour	1,900	—	NA	—	—	0.02	—	0.02	—
Benzene	24-hour	3.19	—	NA	—	—	0.03	—	0.03	—
Ethanolamine	24-hour	6	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ethyl benzene	24-hour	435	—	NA	—	—	<0.01	—	<0.01	—
Ethylene glycol	24-hour	None	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Formaldehyde	24-hour	0.75	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Glycol ethers	24-hour	80	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachloronaphthalene	24-hour	0.2	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexane	24-hour	1,800	<0.01	NA	<0.01	<0.01	0.03	<0.01	0.03	<0.01
Manganese	24-hour	5	—	NA	—	—	<0.01	—	<0.01	—
Mercury	24-hour	0.1	—	NA	—	—	—	—	<0.01	—
Methyl alcohol	24-hour	260	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methyl ethyl ketone	24-hour	590	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methyl isobutyl ketone	24-hour	410	—	NA	—	—	<0.01	—	<0.01	—
Methylene chloride	24-hour	86.7	—	NA	—	—	0.03	—	0.03	—
Naphthalene	24-hour	50	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenol	24-hour	19	—	NA	—	—	<0.01	—	<0.01	—
Phosphorus	24-hour	0.1	—	NA	—	—	<0.01	—	<0.01	—
Sodium hydroxide	24-hour	2.0	—	NA	—	—	<0.01	—	<0.01	—
Toluene	24-hour	754	<0.01	NA	<0.01	<0.01	0.03	<0.01	0.03	<0.01
Trichloroethene	24-hour	537	—	NA	—	—	<0.01	—	<0.01	—
Vinyl acetate	24-hour	None	—	NA	—	—	<0.01	—	<0.01	—
Xylene	24-hour	435	<0.01	NA	<0.01	<0.01	0.05	<0.01	0.05	<0.01
Criteria pollutants (µg/m³)										
Nitrogen oxides	Annual	NA	0.02	NA	0.04	0.02	54.51	0.04	54.51	—
Total suspended particulates (total dust)	24-hour	15	<0.01	NA	<0.01	<0.01	0.49	<0.01	0.49	—
Particulate matter (respirable fraction)	Annual	5	0.04	NA	0.04	0.04	0.03	0.04	0.03	—
	24-hour	NA	0.49	NA	0.49	0.49	0.30	0.49	0.30	—
Carbon monoxide	8-hour	55	0.12	NA	0.19	0.12	2.35	0.19	2.35	<0.01
	1-hour	NA	0.39	NA	0.58	0.39	7.34	0.58	7.34	<0.01
Sulfur dioxide	Annual	NA	<0.01	NA	<0.01	<0.01	0.04	<0.01	0.04	—
	8-hour	13	<0.01	NA	<0.01	<0.01	0.42	<0.01	0.42	—
	3-hour	NA	<0.01	NA	<0.01	<0.01	1.02	<0.01	1.02	—
Gaseous fluorides	1-month	None	—	NA	—	—	0.14	—	0.14	—
	1-week	NA	—	NA	—	—	0.26	—	0.26	—
	24-hour	NA	—	NA	—	—	0.78	—	0.78	—
	12-hour	NA	—	NA	—	—	1.14	—	1.14	—
Ozone (as VOC)	1-hour	0.2	NC	NA	NC	NC	NC	NC	NC	—

NA = Technology is not applicable to this fuel type.

— = No air emission associated with this option.

NC = Not Calculated.

VOC = volatile organic compound.

- a. Not all constituents listed in this table appear in Tables 3.3-3 or 3.3-4 because many constituents are not expected to impact SRS ambient air concentrations.
- b. NIOSH (1991) and OSHA TWAs.
- c. Technology options: 1 = Prepare for Direct Disposal/Direct Co-Disposal; 2 = Repackage and Prepare to Ship; 3 = Melt and Dilute; 4 = Mechanical Dilution; 5 = Vitrification Technologies; 6 = Electrometallurgical Treatment; 7 = Conventional Processing; and 8 = Continued Wet Storage.

Table F-3. Estimated maximum incremental concentrations of nonradiological air pollutants for noninvolved worker - HEU/LEU Oxides and Silicides Requiring Resizing or Special Packaging (Fuel Group C).^a

Pollutant	Averaging time	Regulatory standard ^b	Incremental concentration for technology option ^c							
			1	2	3	4	5	6	7	8
Toxic pollutants (mg/m³)										
Nitric acid	24-hour	5	<0.01	NA	<0.01	<0.01	1.30	<0.01	1.30	<0.01
1,1,1-trichloroethane	24-hour	1,900	—	NA	—	—	<0.01	—	<0.01	—
Benzene	24-hour	3.19	—	NA	—	—	<0.01	—	<0.01	—
Ethanolamine	24-hour	6	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ethyl benzene	24-hour	435	—	NA	—	—	<0.01	—	<0.01	—
Ethylene glycol	24-hour	None	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Formaldehyde	24-hour	0.75	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Glycol ethers	24-hour	80	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachloronaphthalene	24-hour	0.2	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexane	24-hour	1,800	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Manganese	24-hour	5	—	NA	—	—	<0.01	—	<0.01	—
Mercury	24-hour	0.1	—	NA	—	—	—	—	<0.01	—
Methyl alcohol	24-hour	260	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methyl ethyl ketone	24-hour	590	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methyl isobutyl ketone	24-hour	410	—	NA	—	—	<0.01	—	<0.01	—
Methylene chloride	24-hour	86.7	—	NA	—	—	<0.01	—	<0.01	—
Naphthalene	24-hour	50	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenol	24-hour	19	—	NA	—	—	<0.01	—	<0.01	—
Phosphorus	24-hour	0.1	—	NA	—	—	<0.01	—	<0.01	—
Sodium hydroxide	24-hour	2.0	—	NA	—	—	<0.01	—	<0.01	—
Toluene	24-hour	754	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trichloroethene	24-hour	537	—	NA	—	—	<0.01	—	<0.01	—
Vinyl acetate	24-hour	None	—	NA	—	—	<0.01	—	<0.01	—
Xylene	24-hour	435	<0.01	NA	<0.01	<0.01	0.02	<0.01	0.02	<0.01
Criteria pollutants (µg/m³)										
Nitrogen oxides	Annual	NA	<0.01	NA	0.01	<0.01	18.17	0.01	18.17	—
Total suspended particulates (total dust)	24-hour	15	<0.01	NA	<0.01	<0.01	0.16	<0.01	0.16	—
Particulate matter (respirable fraction)	Annual	5	0.01	NA	0.01	0.01	<0.01	0.01	<0.01	—
	24-hour	NA	0.16	NA	0.16	0.16	0.10	0.16	0.10	—
Carbon monoxide	8-hour	55	0.04	NA	0.06	0.04	0.78	0.06	0.78	<0.01
	1-hour	NA	0.13	NA	0.19	0.13	2.45	0.19	2.45	<0.01
Sulfur dioxide	Annual	NA	<0.01	NA	<0.01	<0.01	0.01	<0.01	0.01	—
	8-hour	13	<0.01	NA	<0.01	<0.01	0.14	<0.01	0.14	—
	3-hour	NA	<0.01	NA	<0.01	<0.01	0.34	<0.01	0.34	—
Gaseous fluorides	1-month	None	—	NA	—	—	0.05	—	0.05	—
	1-week	NA	—	NA	—	—	0.09	—	0.09	—
	24-hour	NA	—	NA	—	—	0.26	—	0.26	—
	12-hour	NA	—	NA	—	—	0.38	—	0.38	—
Ozone (as VOC)	1-hour	0.2	NC	NA	NC	NC	NC	NC	NC	—

NA = Technology is not applicable to this fuel type.

LEU = low enriched uranium.

— = No air emission associated with this option.

NC = Not Calculated.

HEU = highly enriched uranium.

VOC = volatile organic compound.

- a. Not all constituents listed in this table appear in Tables 3.3-3 or 3.3-4 because many constituents are not expected to impact SRS ambient air concentrations.
- b. NIOSH (1991) and OSHA TWAs.
- c. Technology options: 1 = Prepare for Direct Disposal/Direct Co-Disposal; 2 = Repackage and Prepare to Ship; 3 = Melt and Dilute; 4 = Mechanical Dilution; 5 = Vitrification Technologies; 6 = Electrometallurgical Treatment; 7 = Conventional Processing; and 8 = Continued Wet Storage.

Table F-4. Estimated maximum incremental concentrations of nonradiological air pollutants for noninvolved worker - Loose Uranium Oxide in Cans (Fuel Group D).^a

Pollutant	Averaging time	Regulatory standard ^b	Incremental concentration for technology option ^c							
			1	2	3	4	5	6	7	8
Toxic pollutants (mg/m³)										
Nitric acid	24-hour	5	NA	NA	<0.01	NA	0.13	<0.01	0.13	<0.01
1,1,1-trichloroethane	24-hour	1,900	NA	NA	—	NA	<0.01	—	<0.01	—
Benzene	24-hour	3.19	NA	NA	—	NA	<0.01	—	<0.01	—
Ethanolamine	24-hour	6	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Ethyl benzene	24-hour	435	NA	NA	—	NA	<0.01	—	<0.01	—
Ethylene glycol	24-hour	None	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Formaldehyde	24-hour	0.75	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Glycol ethers	24-hour	80	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Hexachloronaphthalene	24-hour	0.2	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Hexane	24-hour	1,800	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Manganese	24-hour	5	NA	NA	—	NA	<0.01	—	<0.01	—
Mercury	24-hour	0.1	NA	NA	—	NA	—	—	<0.01	—
Methyl alcohol	24-hour	260	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Methyl ethyl ketone	24-hour	590	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Methyl isobutyl ketone	24-hour	410	NA	NA	—	NA	<0.01	—	<0.01	—
Methylene chloride	24-hour	86.7	NA	NA	—	NA	<0.01	—	<0.01	—
Naphthalene	24-hour	50	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Phenol	24-hour	19	NA	NA	—	NA	<0.01	—	<0.01	—
Phosphorus	24-hour	0.1	NA	NA	—	NA	<0.01	—	<0.01	—
Sodium hydroxide	24-hour	2.0	NA	NA	—	NA	<0.01	—	<0.01	—
Toluene	24-hour	754	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Trichloroethene	24-hour	537	NA	NA	—	NA	<0.01	—	<0.01	—
Vinyl acetate	24-hour	None	NA	NA	—	NA	<0.01	—	<0.01	—
Xylene	24-hour	435	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Criteria pollutants (µg/m³)										
Nitrogen oxides	Annual	NA	NA	NA	<0.01	NA	1.82	<0.01	1.82	—
Total suspended particulates (total dust)	24-hour	15	NA	NA	<0.01	NA	0.02	<0.01	0.02	—
Particulate matter (respirable fraction)	Annual	5	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	—
	24-hour	NA	NA	NA	0.02	NA	0.01	0.02	0.01	—
Carbon monoxide	8-hour	55	NA	NA	<0.01	NA	0.08	<0.01	0.08	<0.01
	1-hour	NA	NA	NA	0.02	NA	0.24	0.02	0.24	<0.01
Sulfur dioxide	Annual	NA	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	—
	8-hour	13	NA	NA	<0.01	NA	0.01	<0.01	0.01	—
	3-hour	NA	NA	NA	<0.01	NA	0.03	<0.01	0.03	—
Gaseous fluorides	1-month	None	NA	NA	—	NA	<0.01	—	<0.01	—
	1-week	NA	NA	NA	—	NA	<0.01	—	<0.01	—
	24-hour	NA	NA	NA	—	NA	0.03	—	0.03	—
	12-hour	NA	NA	NA	—	NA	0.04	—	0.04	—
Ozone (as VOC)	1-hour	0.2	NA	NA	NC	NA	NC	NC	NC	—

NA = Technology is not applicable to this fuel type.

— = No air emission associated with this option.

NC = Not Calculated.

VOC = volatile organic compound.

- a. Not all constituents listed in this table appear in Tables 3.3-3 or 3.3-4 because many constituents are not expected to impact SRS ambient air concentrations.
- b. NIOSH (1991) and OSHA TWAs.
- c. Technology options: 1 = Prepare for Direct Disposal/Direct Co-Disposal; 2 = Repackage and Prepare to Ship; 3 = Melt and Dilute; 4 = Mechanical Dilution; 5 = Vitrification Technologies; 6 = Electrometallurgical Treatment; 7 = Conventional Processing; and 8 = Continued Wet Storage.

Table F-5. Estimated maximum incremental concentrations of nonradiological air pollutants for noninvolved worker - Higher Actinide Targets (Fuel Group E).^a

Pollutant	Averaging time	Regulatory standard ^b	Incremental concentration for technology option ^c							
			1	2	3	4	5	6	7	8
Toxic pollutants (mg/m³)										
Nitric acid	24-hour	5	NA	—	NA	NA	NA	NA	NA	<0.01
1,1,1-Trichloroethane	24-hour	1,900	NA	—	NA	NA	NA	NA	NA	—
Benzene	24-hour	3.19	NA	—	NA	NA	NA	NA	NA	—
Ethanolamine	24-hour	6	NA	—	NA	NA	NA	NA	NA	<0.01
Ethyl benzene	24-hour	435	NA	—	NA	NA	NA	NA	NA	—
Ethylene glycol	24-hour	None	NA	—	NA	NA	NA	NA	NA	<0.01
Formaldehyde	24-hour	0.75	NA	—	NA	NA	NA	NA	NA	<0.01
Glycol ethers	24-hour	80	NA	—	NA	NA	NA	NA	NA	<0.01
Hexachloronaphthalene	24-hour	0.2	NA	—	NA	NA	NA	NA	NA	<0.01
Hexane	24-hour	1,800	NA	—	NA	NA	NA	NA	NA	<0.01
Manganese	24-hour	5	NA	—	NA	NA	NA	NA	NA	—
Mercury	24-hour	0.1	NA	—	NA	NA	NA	NA	NA	—
Methyl alcohol	24-hour	260	NA	—	NA	NA	NA	NA	NA	<0.01
Methyl ethyl ketone	24-hour	590	NA	—	NA	NA	NA	NA	NA	<0.01
Methyl isobutyl ketone	24-hour	410	NA	—	NA	NA	NA	NA	NA	—
Methylene chloride	24-hour	86.7	NA	—	NA	NA	NA	NA	NA	—
Naphthalene	24-hour	50	NA	—	NA	NA	NA	NA	NA	<0.01
Phenol	24-hour	19	NA	—	NA	NA	NA	NA	NA	—
Phosphorus	24-hour	0.1	NA	—	NA	NA	NA	NA	NA	—
Sodium hydroxide	24-hour	2.0	NA	—	NA	NA	NA	NA	NA	—
Toluene	24-hour	754	NA	—	NA	NA	NA	NA	NA	<0.01
Trichloroethene	24-hour	537	NA	—	NA	NA	NA	NA	NA	—
Vinyl acetate	24-hour	None	NA	—	NA	NA	NA	NA	NA	—
Xylene	24-hour	435	NA	—	NA	NA	NA	NA	NA	<0.01
Criteria pollutants (µg/m³)										
Nitrogen oxides	Annual	NA	NA	—	NA	NA	NA	NA	NA	—
Total suspended particulates (total dust)	24-hour	15	NA	—	NA	NA	NA	NA	NA	—
Particulate matter (respirable fraction)	Annual	5	NA	—	NA	NA	NA	NA	NA	—
	24-hour	NA	NA	—	NA	NA	NA	NA	NA	—
Carbon monoxide	8-hour	55	NA	—	NA	NA	NA	NA	NA	<0.01
	1-hour	NA	NA	—	NA	NA	NA	NA	NA	<0.01
Sulfur dioxide	Annual	NA	NA	—	NA	NA	NA	NA	NA	—
	8-hour	13	NA	—	NA	NA	NA	NA	NA	—
	3-hour	NA	NA	—	NA	NA	NA	NA	NA	—
Gaseous fluorides	1-month	None	NA	—	NA	NA	NA	NA	NA	—
	1-week	NA	NA	—	NA	NA	NA	NA	NA	—
	24-hour	NA	NA	—	NA	NA	NA	NA	NA	—
	12-hour	NA	NA	—	NA	NA	NA	NA	NA	—
Ozone (as VOC)	1-hour	0.2	NA	—	NA	NA	NA	NA	NA	—

NA = Technology is not applicable to this fuel type.

— = No air emission associated with this option.

NC = Not Calculated.

VOC = volatile organic compound.

- a. Not all constituents listed in this table appear in Tables 3.3-3 or 3.3-4 because many constituents are not expected to impact SRS ambient air concentrations.
- b. NIOSH (1991) and OSHA TWAs.
- c. Technology options: 1 = Prepare for Direct Disposal/Direct Co-Disposal; 2 = Repackage and Prepare to Ship; 3 = Melt and Dilute; 4 = Mechanical Dilution; 5 = Vitrification Technologies; 6 = Electrometallurgical Treatment; 7 = Conventional Processing; and 8 = Continued Wet Storage.

Table F-6. Estimated maximum incremental concentrations of nonradiological air pollutants at SRS boundary for Uranium and Thorium Metal Fuels (Fuel Group A).^a

Pollutant	Averaging time	Regulatory standard	Incremental concentration for technology option ^b							
			1	2	3	4	5	6	7	8
Toxic pollutants (mg/m³)										
Nitric acid	24-hour	125	—	NA	—	NA	0.10	—	0.10	—
1,1,1-trichloroethane	24-hour	9,550	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Benzene	24-hour	150	—	NA	—	NA	<0.01	—	<0.01	—
Ethanolamine	24-hour	200	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Ethyl benzene	24-hour	4,350	—	NA	—	NA	<0.01	—	<0.01	—
Ethylene glycol	24-hour	650	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Formaldehyde	24-hour	15	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Glycol ethers	24-hour	+	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Hexachloronaphthalene	24-hour	1	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Hexane	24-hour	900	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Manganese	24-hour	25	—	NA	—	NA	<0.01	—	<0.01	—
Mercury	24-hour	0.25	—	NA	—	NA	—	—	<0.01	—
Methyl alcohol	24-hour	1,310	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Methyl ethyl ketone	24-hour	14,750	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Methyl isobutyl ketone	24-hour	2,050	—	NA	—	NA	<0.01	—	<0.01	—
Methylene chloride	24-hour	8,750	—	NA	—	NA	<0.01	—	<0.01	—
Naphthalene	24-hour	1,250	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Phenol	24-hour	190	—	NA	—	NA	<0.01	—	<0.01	—
Phosphorus	24-hour	0.5	—	NA	—	NA	<0.01	—	<0.01	—
Sodium hydroxide	24-hour	50	—	NA	—	NA	<0.01	—	<0.01	—
Toluene	24-hour	2,000	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Trichloroethene	24-hour	6,750	—	NA	—	NA	<0.01	—	<0.01	—
Vinyl acetate	24-hour	176	—	NA	—	NA	<0.01	—	<0.01	—
Xylene	24-hour	4,350	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Criteria pollutants (µg/m³)										
Nitrogen oxides	Annual	100	<0.01	NA	<0.01	NA	1.10	<0.01	1.10	<0.01
Total suspended particulates (total dust)	Annual	75	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Particulate matter (respirable fraction)	Annual	50	—	NA	—	NA	<0.01	—	<0.01	—
	24-hour	150	—	NA	—	NA	0.04	—	0.04	—
Carbon monoxide	8-hour	10,000	0.02	NA	0.03	NA	0.43	0.03	0.43	<0.01
	1-hour	40,000	0.12	NA	0.18	NA	3.20	0.18	3.20	<0.01
Sulfur dioxide	Annual	80	<0.01	NA	<0.01	NA	<0.01	<0.01	<0.01	—
	8-hour	365	<0.01	NA	0.01	NA	0.04	0.01	0.04	—
	3-hour	1,300	—	NA	—	NA	0.32	—	0.32	—
Gaseous fluorides	1-month	0.8	—	NA	—	NA	<0.01	—	<0.01	—
	1-week	1.6	—	NA	—	NA	0.01	—	0.01	—
	24-hour	2.9	—	NA	—	NA	0.02	—	0.02	—
	12-hour	3.7	—	NA	—	NA	0.04	—	0.04	—
Ozone (as VOC)	1-hour	235	0.05	NA	0.07	NA	0.26	0.08	0.26	—

NA = Technology is not applicable to this fuel type.

— = No air emission associated with this option.

+ = No state standard.

VOC = volatile organic compound.

- a. Not all constituents listed in this table appear in Tables 3.3-3 or 3.3-4 because many constituents are not expected to impact SRS ambient air concentrations.

- b. Technology options: 1 = Prepare for Direct Disposal/Direct Co-Disposal; 2 = Repackage and Prepare to Ship; 3 = Melt and Dilute; 4 = Mechanical Dilution; 5 = Vitrification Technologies; 6 = Electrometallurgical Treatment; 7 = Conventional Processing; and 8 = Continued Wet Storage.
-

Table F-7. Estimated maximum incremental concentrations of nonradiological air pollutants at SRS boundary for Materials Test Reactor-Like Fuels (Fuel Group B).^a

Pollutant	Averaging time	Regulatory standard	Incremental concentration for technology option ^b							
			1	2	3	4	5	6	7	8
Toxic pollutants (mg/m³)										
Nitric acid	24-hour	125	—	NA	—	—	0.15	—	0.15	—
1,1,1-trichloroethane	24-hour	9,550	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzene	24-hour	150	—	NA	—	—	<0.01	—	<0.01	—
Ethanolamine	24-hour	200	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ethyl benzene	24-hour	4,350	—	NA	—	—	<0.01	—	<0.01	—
Ethylene glycol	24-hour	650	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Formaldehyde	24-hour	15	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Glycol ethers	24-hour	+	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachloronaphthalene	24-hour	1	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexane	24-hour	900	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Manganese	24-hour	25	—	NA	—	—	<0.01	—	<0.01	—
Mercury	24-hour	0.25	—	NA	—	—	—	—	<0.01	—
Methyl alcohol	24-hour	1310	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methyl ethyl ketone	24-hour	14,750	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methyl isobutyl ketone	24-hour	2,050	—	NA	—	—	<0.01	—	<0.01	—
Methylene chloride	24-hour	8,750	—	NA	—	—	<0.01	—	<0.01	—
Naphthalene	24-hour	1,250	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenol	24-hour	190	—	NA	—	—	<0.01	—	<0.01	—
Phosphorus	24-hour	0.5	—	NA	—	—	<0.01	—	<0.01	—
Sodium hydroxide	24-hour	50	—	NA	—	—	<0.01	—	<0.01	—
Toluene	24-hour	2,000	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trichloroethene	24-hour	6,750	—	NA	—	—	<0.01	—	<0.01	—
Vinyl acetate	24-hour	176	—	NA	—	—	<0.01	—	<0.01	—
Xylene	24-hour	4,350	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Criteria pollutants (µg/m³)										
Nitrogen oxide	Annual	100	<0.01	NA	<0.01	<0.01	1.65	<0.01	1.65	<0.01
Total suspended particulates (total dust)	Annual	75	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Particulate matter (respirable fraction)	Annual	50	—	NA	—	—	<0.01	—	<0.01	—
	24-hour	150	—	NA	—	—	0.06	—	0.06	—
Carbon monoxide	8-hour	10,000	0.03	NA	0.05	0.03	0.65	0.05	0.65	<0.01
	1-hour	40,000	0.18	NA	0.27	0.18	4.80	0.27	4.80	<0.01
Sulfur dioxide	Annual	80	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	—
	8-hour	365	0.01	NA	0.02	0.01	0.06	0.02	0.06	—
	3-hour	1,300	—	NA	—	—	0.48	—	0.48	—
Gaseous fluorides	1-month	0.8	—	NA	—	—	<0.01	—	<0.01	—
	1-week	1.6	—	NA	—	—	0.02	—	0.02	—
	24-hour	2.9	—	NA	—	—	0.03	—	0.03	—
	12-hour	3.7	—	NA	—	—	0.06	—	0.06	—
Ozone (as VOC)	1-hour	235	0.08	NA	0.11	0.08	0.39	0.11	0.39	—

NA = Technology is not applicable to this fuel type.

— = No air emission associated with this option.

+ = No state standard.

VOC = volatile organic compound.

- a. Not all constituents listed in this table appear in Tables 3.3-3 or 3.3-4 because many constituents are not expected to impact SRS ambient air concentrations.

- b. Technology options: 1 = Prepare for Direct Disposal/Direct Co-Disposal; 2 = Repackage and Prepare to Ship; 3 = Melt and Dilute; 4 = Mechanical Dilution; 5 = Vitrification Technologies; 6 = Electrometallurgical Treatment; 7 = Conventional Processing; and 8 = Continued Wet Storage.
-

Table F-8. Estimated maximum incremental concentrations of nonradiological air pollutants at SRS boundary for HEU/LEU Oxides and Silicides Requiring Resizing or Special Packaging (Fuel Group C).^a

Pollutant	Averaging time	Regulatory standard	Incremental concentration for technology option ^b							
			1	2	3	4	5	6	7	8
Toxic pollutants (mg/m³)										
Nitric acid	24-hour	125	—	NA	—	—	0.05	—	0.05	—
1,1,1-trichloroethane	24-hour	9,550	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzene	24-hour	150	—	NA	—	—	<0.01	—	<0.01	—
Ethanolamine	24-hour	200	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ethyl benzene	24-hour	4,350	—	NA	—	—	<0.01	—	<0.01	—
Ethylene glycol	24-hour	650	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Formaldehyde	24-hour	15	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Glycol ethers	24-hour	+	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachloronaphthalene	24-hour	1	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexane	24-hour	900	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Manganese	24-hour	25	—	NA	—	—	<0.01	—	<0.01	—
Mercury	24-hour	0.25	—	NA	—	—	—	—	<0.01	—
Methyl alcohol	24-hour	1310	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methyl ethyl ketone	24-hour	14,750	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methyl isobutyl ketone	24-hour	2,050	—	NA	—	—	<0.01	—	<0.01	—
Methylene chloride	24-hour	8,750	—	NA	—	—	<0.01	—	<0.01	—
Naphthalene	24-hour	1,250	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenol	24-hour	190	—	NA	—	—	<0.01	—	<0.01	—
Phosphorus	24-hour	0.5	—	NA	—	—	<0.01	—	<0.01	—
Sodium hydroxide	24-hour	20	—	NA	—	—	<0.01	—	<0.01	—
Toluene	24-hour	2,000	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trichloroethene	24-hour	6,750	—	NA	—	—	<0.01	—	<0.01	—
Vinyl acetate	24-hour	176	—	NA	—	—	<0.01	—	<0.01	—
Xylene	24-hour	4,350	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Criteria pollutants (µg/m³)										
Nitrogen oxide	Annual	100	<0.01	NA	<0.01	<0.01	0.55	<0.01	0.55	<0.01
Total suspended particulates (total dust)	Annual	75	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Particulate matter (respirable fraction)	Annual	50	—	NA	—	—	<0.01	—	<0.01	—
	24-hour	150	—	NA	—	—	0.02	—	0.02	—
Carbon monoxide	8-hour	10,000	0.01	NA	0.02	0.01	0.22	0.02	0.22	<0.01
	1-hour	40,000	0.06	NA	0.09	0.06	1.60	0.09	1.60	<0.01
Sulfur dioxide	Annual	80	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	8-hour	365	<0.01	NA	<0.01	<0.01	0.02	<0.01	0.02	—
	3-hour	1,300	—	NA	—	—	0.16	—	0.16	—
Gaseous fluorides	1-month	0.8	—	NA	—	—	<0.01	—	<0.01	—
	1-week	1.6	—	NA	—	—	<0.01	—	<0.01	—
	24-hour	2.9	—	NA	—	—	0.01	—	0.01	—
	12-hour	3.7	—	NA	—	—	0.02	—	0.02	—
Ozone (as VOC)	1-hour	235	0.03	NA	0.04	0.03	0.13	0.04	0.13	—

NA = Technology is not applicable to this fuel type.

HEU = highly enriched uranium.

— = No air emission associated with this option.

LEU = low enriched uranium.

+ = No state standard.

VOC = volatile organic compound.

a. Not all constituents listed in this table appear in Tables 3.3-3 or 3.3-4 because many constituents are not expected to impact SRS ambient air concentrations.

b. Technology options: 1 = Prepare for Direct Disposal/Direct Co-Disposal; 2 = Repackage and Prepare to Ship; 3 = Melt and Dilute; 4 = Mechanical Dilution; 5 = Vitrification Technologies; 6 = Electrometallurgical Treatment; 7 = Conventional Processing; and 8 = Continued Wet Storage.

Table F-9. Estimated maximum incremental concentrations of nonradiological air pollutants at SRS boundary for Loose Uranium Oxide in Cans (Fuel Group D).^a

Pollutant	Averaging time	Regulatory standard	Incremental concentration for technology option ^b							
			1	2	3	4	5	6	7	8
Toxic pollutants (mg/m³)										
Nitric acid	24-hour	125	NA	NA	–	NA	<0.01	–	<0.01	–
1,1,1-trichloroethane	24-hour	9,550	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Benzene	24-hour	150	NA	NA	–	NA	<0.01	–	<0.01	–
Ethanolamine	24-hour	200	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Ethyl benzene	24-hour	4,350	NA	NA	–	NA	<0.01	–	<0.01	–
Ethylene glycol	24-hour	650	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Formaldehyde	24-hour	7.5	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Glycol ethers	24-hour	+	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Hexachloronaphthalene	24-hour	1	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Hexane	24-hour	200	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Manganese	24-hour	25	NA	NA	–	NA	<0.01	–	<0.01	–
Mercury	24-hour	0.25	NA	NA	–	NA	–	–	<0.01	–
Methyl alcohol	24-hour	1,310	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Methyl ethyl ketone	24-hour	14,750	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Methyl isobutyl ketone	24-hour	2,050	NA	NA	–	NA	<0.01	–	<0.01	–
Methylene chloride	24-hour	8,750	NA	NA	–	NA	<0.01	–	<0.01	–
Naphthalene	24-hour	1,250	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Phenol	24-hour	190	NA	NA	–	NA	<0.01	–	<0.01	–
Phosphorus	24-hour	0.5	NA	NA	–	NA	<0.01	–	<0.01	–
Sodium hydroxide	24-hour	20	NA	NA	–	NA	<0.01	–	<0.01	–
Toluene	24-hour	2,000	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Trichloroethene	24-hour	6,750	NA	NA	–	NA	<0.01	–	<0.01	–
Vinyl acetate	24-hour	176	NA	NA	–	NA	<0.01	–	<0.01	–
Xylene	24-hour	4,350	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Criteria pollutants (µg/m³)										
Nitrogen oxide	Annual	100	NA	NA	<0.01	NA	0.06	<0.01	0.06	<0.01
Total suspended particulates (total dust)	Annual	75	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	<0.01
Particulate matter (respirable fraction)	Annual	50	NA	NA	–	NA	<0.01	–	<0.01	–
	24-hour	150	NA	NA	–	NA	<0.01	–	<0.01	–
Carbon monoxide	8-hour	10,000	NA	NA	<0.01	NA	0.02	<0.01	0.02	<0.01
	1-hour	40,000	NA	NA	<0.01	NA	0.16	<0.01	0.16	<0.01
Sulfur dioxide	Annual	80	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	–
	8-hour	365	NA	NA	<0.01	NA	<0.01	<0.01	<0.01	–
	3-hour	1,300	NA	NA	–	NA	0.02	–	0.02	–
Gaseous fluorides	1-month	0.8	NA	NA	–	NA	<0.01	–	<0.01	–
	1-week	1.6	NA	NA	–	NA	<0.01	–	<0.01	–
	24-hour	2.9	NA	NA	–	NA	<0.01	–	<0.01	–
	12-hour	3.7	NA	NA	–	NA	<0.01	–	<0.01	–
Ozone (as VOC)	1-hour	235	NA	NA	<0.01	NA	0.01	<0.01	0.01	–

NA = Technology is not applicable to this fuel type.

– = No air emission associated with this option.

+= No state standard.

VOC = volatile organic compound.

- a. Not all constituents listed in this table appear in Tables 3.3-3 or 3.3-4 because many constituents are not expected to impact SRS ambient air concentrations.

- b. Technology options: 1 = Prepare for Direct Disposal/Direct Co-Disposal; 2 = Repackage and Prepare to Ship; 3 = Melt and Dilute; 4 = Mechanical Dilution; 5 = Vitrification Technologies; 6 = Electrometallurgical Treatment; 7 = Conventional Processing; and 8 = Continued Wet Storage.
-

Table F-10. Estimated maximum incremental concentrations of nonradiological air pollutants at SRS boundary for Higher Actinide Targets (Fuel Group E).^a

Pollutant	Averaging time	Regulatory standard	Incremental concentration for technology option ^b							
			1	2	3	4	5	6	7	8
Toxic pollutants (mg/m³)										
Nitric acid	24-hour	125	NA	—	NA	NA	NA	NA	NA	—
1,1,1-trichloroethane	24-hour	9,550	NA	<0.01	NA	NA	NA	NA	NA	<0.01
Benzene	24-hour	150	NA	—	NA	NA	NA	NA	NA	—
Ethanolamine	24-hour	200	NA	<0.01	NA	NA	NA	NA	NA	<0.01
Ethyl benzene	24-hour	4,350	NA	—	NA	NA	NA	NA	NA	—
Ethylene glycol	24-hour	650	NA	<0.01	NA	NA	NA	NA	NA	<0.01
Formaldehyde	24-hour	15	NA	<0.01	NA	NA	NA	NA	NA	<0.01
Glycol ethers	24-hour	+	NA	<0.01	NA	NA	NA	NA	NA	<0.01
Hexachloronaphthalene	24-hour	1	NA	<0.01	NA	NA	NA	NA	NA	<0.01
Hexane	24-hour	900	NA	<0.01	NA	NA	NA	NA	NA	<0.01
Manganese	24-hour	25	NA	—	NA	NA	NA	NA	NA	—
Mercury	24-hour	0.25	NA	—	NA	NA	NA	NA	NA	—
Methyl alcohol	24-hour	1,310	NA	<0.01	NA	NA	NA	NA	NA	<0.01
Methyl ethyl ketone	24-hour	14,750	NA	<0.01	NA	NA	NA	NA	NA	<0.01
Methyl isobutyl ketone	24-hour	2,050	NA	—	NA	NA	NA	NA	NA	—
Methylene chloride	24-hour	515	NA	—	NA	NA	NA	NA	NA	—
Naphthalene	24-hour	1,250	NA	<0.01	NA	NA	NA	NA	NA	<0.01
Phenol	24-hour	190	NA	—	NA	NA	NA	NA	NA	—
Phosphorus	24-hour	0.5	NA	—	NA	NA	NA	NA	NA	—
Sodium hydroxide	24-hour	50	NA	—	NA	NA	NA	NA	NA	—
Toluene	24-hour	2,000	NA	<0.01	NA	NA	NA	NA	NA	<0.01
Trichloroethene	24-hour	6,750	NA	—	NA	NA	NA	NA	NA	—
Vinyl acetate	24-hour	176	NA	—	NA	NA	NA	NA	NA	—
Xylene	24-hour	4,350	NA	<0.01	NA	NA	NA	NA	NA	<0.01
Criteria pollutants (µg/m³)										
Nitrogen oxide	Annual	100	NA	—	NA	NA	NA	NA	NA	<0.01
Total suspended particulates (total dust)	Annual	75	NA	—	NA	NA	NA	NA	NA	<0.01
Particulate matter (respirable fraction)	Annual	50	NA	—	NA	NA	NA	NA	NA	—
	24-hour	150	NA	—	NA	NA	NA	NA	NA	—
Carbon monoxide	8-hour	10,000	NA	—	NA	NA	NA	NA	NA	<0.01
	1-hour	40,000	NA	—	NA	NA	NA	NA	NA	<0.01
Sulfur dioxide	Annual	80	NA	—	NA	NA	NA	NA	NA	—
	8-hour	365	NA	—	NA	NA	NA	NA	NA	—
	3-hour	1,300	NA	—	NA	NA	NA	NA	NA	—
Gaseous fluorides	1-month	0.8	NA	—	NA	NA	NA	NA	NA	—
	1-week	1.6	NA	—	NA	NA	NA	NA	NA	—
	24-hour	2.9	NA	—	NA	NA	NA	NA	NA	—
	12-hour	3.7	NA	—	NA	NA	NA	NA	NA	—
Ozone (as VOC)	1-hour	245	NA	<0.01	NA	NA	NA	NA	NA	—

NA = Technology is not applicable to this fuel type.

— = No air emission associated with this option.

+= No state standard.

VOC = volatile organic compound.

- a. Not all constituents listed in this table appear in Tables 3.3-3 or 3.3-4 because many constituents are not expected to impact SRS ambient air concentrations.

- b. Technology options: 1 = Prepare for Direct Disposal/Direct Co-Disposal; 2 = Repackage and Prepare to Ship; 3 = Melt and Dilute; 4 = Mechanical Dilution; 5 = Vitrification Technologies; 6 = Electrometallurgical Treatment; 7 = Conventional Processing; and 8 = Continued Wet Storage.
-

Direct Disposal, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Group D, 4, 9
Electrometallurgical Treatment, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Group E, 5, 10
Group A, 1, 6	HEU, 8
Group B, 2, 7	LEU, 8
Group C, 8	Melt and Dilute, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 uranium, 3, 8