

Table of Contents

Dedication	i
Acknowledgements	iii
To Our Readers	vii
Table of Contents	ix
List of Figures	xiii
List of Tables	xv
Acronyms and Abbreviations	xvii
Sampling Location Information	xxv
1 Introduction	1-1
1.1 History	1-1
1.2 Missions	1-2
1.3 Organization	1-2
1.4 Site Location, Demographics, and Environment	1-6
1.5 DOE-EM Primary Site Activities	1-9
1.6 NNSA Primary Site Activities	1-12
1.7 Special Environmental Studies	1-13
2 Environmental Management System	2-1
2017 Highlights	2-1
2.1 SRS EMS Implementation	2-2
2.2 Sustainability Accomplishments	2-4
2.3 EMS Best Practices	2-11
3 Compliance Summary	3-1
2017 Highlights	3-1

3.1	Introduction	3-3
3.2	Federal Facility Agreement	3-3
3.3	Regulatory Compliance	3-9
3.4	Major DOE Orders for Environmental Compliance	3-22
3.5	Regulatory Self-Disclosures	3-23
3.6	Environmental Audits	3-23
3.7	Key Federal Laws Compliance Summary	3-26
3.8	Environmental Compliance Summary	3-29
4	Nonradiological Environmental Monitoring Program	4-1
	2017 Highlights	4-1
4.1	Introduction	4-2
4.2	Calculated Air Emissions	4-3
4.3	Water Monitoring	4-4
4.4	Precipitation Chemistry and Deposition	4-13
5	Radiological Environmental Monitoring Program	5-1
	2017 Highlights	5-1
5.1	Introduction	5-2
5.2	SRS Offsite Monitoring	5-4
5.3	Air Pathway	5-5
5.4	Water Pathway	5-15
5.5	Aquatic Food Products	5-27
5.6	Wildlife Surveillance	5-29
5.7	Five-Year Comprehensive Sampling	5-32
6	Radiological Dose Assessment	6-1
	2017 Highlights	6-1
6.1	Introduction	6-2
6.2	What is Radiation Dose?	6-3

6.3	Calculating Dose.....	6-3
6.4	Offsite Representative Person Dose Calculation Results.....	6-8
6.5	Sportsman Dose Calculation Results.....	6-17
6.6	Release of Material Containing Residual Radioactivity	6-19
6.7	Radiation Dose to Aquatic and Terrestrial Biota.....	6-20
7	Groundwater Management Program	7-1
	2017 Highlights.....	7-1
7.1	Introduction	7-1
7.2	Groundwater at SRS.....	7-2
7.3	Groundwater Protection Program at SRS	7-3
8	Quality Assurance	8-1
	2017 Highlights.....	8-1
8.1	Introduction	8-1
8.2	Background	8-2
8.3	Quality Assurance Program Summary	8-2
8.4	Environmental Monitoring Program QA Activities	8-3
8.5	Environmental Monitoring Program QC Activities.....	8-6
8.6	Records Management.....	8-9
	Appendix A: Environmental Management System.....	A-1
	Appendix B: Environmental Surveillance Media and Sampling Frequencies	B-1
	Appendix C: Nonradiological Environmental Monitoring Program Supplemental Information	C-1
	Appendix D: Radiological Environmental Monitoring Program Supplemental Information.....	D-1
	Appendix E: Groundwater Management Program Supplemental Information	E-1
	Appendix F: Glossary.....	F-1
	Appendix G: References	G-1
	Appendix H: Units of Measure.....	H-1