

Rocky Flats Site, Colorado, Site Operations Guide

March 2011



**U.S. DEPARTMENT OF
ENERGY**

Legacy
Management

This page intentionally left blank

**U.S. Department of Energy
Office of Legacy Management**

**Rocky Flats Site, Colorado,
Site Operations Guide**

March 2011

Disclaimer

The information in this document represents the most current and best understanding of technical and regulatory issues and responsibilities regarding the Rocky Flats Site. This document will be revised as necessary to reflect changes based on newly obtained information.

Contents

Abbreviations	ix
1.0 Introduction.....	1–1
1.1 Purpose.....	1–4
1.2 Rocky Flats Background.....	1–4
1.3 RFSOG Organization.....	1–10
2.0 Environmental Setting	2–1
2.1 Geology.....	2–1
2.2 Hydrology	2–2
2.2.1 Walnut Creek	2–2
2.2.1.1 McKay Ditch.....	2–2
2.2.1.2 No Name Gulch	2–2
2.2.1.3 North Walnut Creek.....	2–5
2.2.1.4 South Walnut Creek.....	2–5
2.2.2 Woman Creek	2–5
2.2.2.1 South Interceptor Ditch.....	2–5
2.2.3 Other Drainages	2–5
2.3 Hydrogeology	2–6
2.4 Ecology	2–9
2.4.1 Xeric Mixed Grassland	2–10
2.4.2 Mesic Mixed Grassland	2–10
2.4.3 High-Quality Wetlands	2–11
2.4.4 Tall Upland Shrubland.....	2–11
2.4.5 Great Plains Riparian Woodland Complex.....	2–11
2.4.6 Reclaimed Grasslands	2–12
2.4.7 Aquatic Community	2–12
2.4.8 Preble's Mouse Habitat and Populations	2–12
2.4.9 Revegetation Areas	2–13
3.0 Access Controls	3–1
3.1 Institutional Controls	3–1
3.2 Physical Controls	3–2
3.3 Requirements for Site Access	3–2
3.3.1 Training.....	3–2
3.3.2 Protective Equipment.....	3–2
3.3.3 Keys	3–3
3.4 Requirements for Office Access	3–3
4.0 Emergencies and Corrective Action	4–1
4.1 Site and Office Emergencies.....	4–1
4.2 Dam Emergency Response	4–1
4.3 Corrective Actions and Lessons Learned	4–1
5.0 Work Planning Processes	5–1
5.1 LMS Work Planning Process.....	5–1
5.2 Site Work Planning Process.....	5–1
5.2.1 Routine Activities	5–1
5.2.2 Nonroutine Activities.....	5–2
5.2.3 Emergency Response	5–3
5.3 Internal Procedures Process	5–3

6.0	Health and Safety/Training	6–1
6.1	Training.....	6–1
6.2	HAZCOM	6–2
6.3	Atmospheric Monitoring.....	6–2
7.0	Routine Site O&M	7–1
7.1	Ponds and Surface Water Control Features	7–1
7.2	Landfills	7–2
7.3	Groundwater Plume Treatment Systems	7–5
7.4	Erosion Control and Revegetation	7–7
8.0	Routine Site Inspections	8–1
8.1	Annual Inspection	8–1
8.1.1	Frequency/Timing of Annual Inspection	8–1
8.1.2	Inspection Checklist and Map.....	8–1
8.1.3	Inspection Procedure.....	8–2
8.1.4	Personnel.....	8–3
8.1.5	Ash Pits	8–3
8.1.6	Reports	8–3
8.2	Other Routine Inspections.....	8–4
8.3	Observation Log.....	8–4
8.4	Safety Inspections	8–4
9.0	Routine Environmental Monitoring.....	9–1
9.1	Water Monitoring.....	9–1
9.1.1	Point of Compliance Monitoring	9–7
9.1.1.1	Data and Sample Collection Protocols	9–7
9.1.1.2	Data Evaluation.....	9–10
9.1.2	POE Monitoring.....	9–10
9.1.2.1	Data and Sample Collection Protocols	9–11
9.1.2.2	Data Evaluation.....	9–13
9.1.3	AOC Wells and SW018	9–13
9.1.3.1	Data and Sample Collection Protocols	9–14
9.1.3.2	Data Evaluation.....	9–15
9.1.4	Boundary Wells	9–15
9.1.4.1	Data and Sample Collection Protocols	9–16
9.1.4.2	Data Evaluation.....	9–16
9.1.5	Sentinel Wells	9–16
9.1.5.1	Data and Sample Collection Protocols	9–17
9.1.5.2	Data Evaluation.....	9–19
9.1.6	Evaluation Wells.....	9–19
9.1.6.1	Data and Sample Collection Protocols	9–20
9.1.6.2	Data Evaluation.....	9–22
9.1.7	Investigative Monitoring.....	9–22
9.1.7.1	Data and Sample Collection Protocols	9–23
9.1.7.2	Data Evaluation.....	9–25
9.1.8	PLF Monitoring	9–27
9.1.8.1	Data and Sample Collection Protocols	9–27
9.1.8.2	Data Evaluation.....	9–28
9.1.9	OLF Monitoring.....	9–28
9.1.9.1	Data and Sample Collection Protocols	9–29

9.1.9.2	Data Evaluation.....	9–31
9.1.10	Groundwater Treatment System Monitoring.....	9–31
9.1.10.1	Mound Site Plume Treatment System	9–32
9.1.10.2	East Trenches Plume Treatment System.....	9–35
9.1.10.3	Solar Ponds Plume Treatment System.....	9–37
9.1.10.4	Present Landfill Treatment System.....	9–40
9.1.11	Pre-Discharge Monitoring	9–43
9.1.11.1	Data and Sample Collection Protocols	9–44
9.1.11.2	Data Evaluation.....	9–44
9.1.12	Water Level Wells and Water Level Measurement.....	9–44
9.1.12.1	Data Collection Protocols	9–45
9.1.12.2	Data Evaluation.....	9–46
9.2	Ecological Monitoring	9–46
9.2.1	Regulatory Issues	9–48
9.2.1.1	ESA Issues—Preble’s Mouse Mitigation Monitoring and Management.....	9–48
9.2.1.2	Wetland Mitigation Monitoring and Management	9–49
9.2.1.3	Migratory Bird Treaty Act	9–51
9.2.1.4	Colorado Noxious Weed Act.....	9–51
9.2.1.5	Notifications/Consultations	9–51
9.2.2	Natural Resource Management.....	9–52
9.2.2.1	Vegetation Management	9–53
9.2.2.2	Wildlife Management	9–53
9.2.3	Ecological Monitoring Planning Process.....	9–53
9.2.3.1	Regulatory Monitoring Issues	9–54
9.2.3.2	BMP Monitoring Issues	9–55
9.2.3.3	Ecological Monitoring Methodology.....	9–55
9.3	Air Quality Monitoring.....	9–57
10.0	Routine O&M of Monitoring Locations.....	10–1
10.1	Automated Surface Water Monitoring Stations.....	10–1
10.1.1	Station Operation and Maintenance.....	10–5
10.1.2	Telemetry System	10–8
10.1.3	Applicable Instructions and Resources.....	10–11
10.2	Groundwater Monitoring Wells.....	10–11
10.2.1	Well Maintenance	10–11
10.2.2	Well Abandonment	10–12
10.2.3	Well Replacement	10–13
10.2.4	New Well Installation	10–13
10.2.5	Documentation	10–14
11.0	Routine Environmental Data Collection, Evaluation, and Management.....	11–1
11.1	Sampling and Data Collection	11–1
11.1.1	Automated Surface Water Sample Collection	11–1
11.1.1.1	Continuous Flow-Paced Composite Samples	11–2
11.1.1.2	Flow Pacing of Automated Samplers	11–3
11.1.2	Surface Water Field Data Collection	11–4
11.1.2.1	Manual Field Data Collection	11–4
11.1.2.2	Automated Field Data Collection	11–5
11.1.3	Groundwater Monitoring Considerations	11–6

11.1.3.1	Scheduling.....	11–6
11.1.3.2	Sampling	11–9
11.1.4	Groundwater Field Data Collection	11–10
11.2	Data Evaluation.....	11–10
11.2.1	Surface Water Hydrologic Data.....	11–10
	11.2.1.1 Discharge Data Compilation and Computation	11–10
11.2.2	Groundwater Data.....	11–11
	11.2.2.1 Data Usage	11–12
	11.2.2.2 Comparing Data with Standards	11–14
	11.2.2.3 Trend Analysis	11–16
	11.2.2.4 Comparison with “Threshold” Concentration of Uranium	11–17
11.2.3	Surface Water Data	11–21
	11.2.3.1 Data Usage	11–21
	11.2.3.2 Comparing Data with Standards	11–22
	11.2.3.3 Evaluation Using 30-Day Averages.....	11–22
	11.2.3.4 Evaluation Using 12-Month Rolling Averages.....	11–25
11.3	Data Management	11–29
11.3.1	Water Data	11–29
11.3.2	Ecology	11–30
	11.3.2.1 Historical Ecology Information for Rocky Flats	11–31
11.4	Data QA/QC Objectives for Collection of Water Data	11–31
11.5	Exit Strategy for Water Monitoring.....	11–33
12.0	Nonroutine Activities.....	12–1
12.1	Intrusive Work and Soil Disturbance Evaluation	12–1
12.2	Wildfires and Controlled Burns	12–1
12.3	Nonroutine Sampling/Characterization	12–2
12.4	Source Evaluations.....	12–3
13.0	Information Management	13–1
13.1	Rocky Flats Site Records	13–1
13.2	AR and Post-Decision Record	13–2
	13.2.1 Administrative Record.....	13–2
	13.2.2 Post-Decision Record.....	13–2
13.3	Records Maintenance.....	13–3
13.4	Records Disaster Prevention, Mitigation, and Recovery	13–3
14.0	Regulatory Compliance	14–1
14.1	RCRA Program.....	14–1
14.2	National Pollutant Discharge Elimination System	14–2
14.3	Clean Water Act.....	14–2
14.4	Clean Air Act	14–3
14.5	SARA Title III	14–3
14.6	Natural Resource and Wildlife Protection Laws	14–3
14.7	P2 Program.....	14–4
14.8	NEPA Planning.....	14–4
14.9	Well Construction and Water Use Permits	14–5
14.10	DOT and IATA Regulations	14–5
14.11	EPA Guidance to Management of IDW	14–5
14.12	Spills and Cleanup Guidelines	14–6
	14.12.1 Spill Reporting and Cleanup Guideline	14–6

14.12.1.1	Reporting Inquiry.....	14–7
14.12.1.2	Waste and Cleanup Inquiry.....	14–7
14.12.2	Degree of Cleanup Depends on Characterization.....	14–8
14.13	Waste Management.....	14–9
14.13.1	Sanitary Wastes.....	14–9
14.13.2	Other Wastes	14–10
15.0	Reporting	15–1
15.1	RFLMA Reportable Conditions.....	15–1
15.2	Routine Reporting	15–1
15.2.1	RFLMA-Required Reporting.....	15–1
15.2.1.1	Record of Consultative Agreement.....	15–1
15.2.1.2	Environmental Monitoring.....	15–2
15.2.1.3	Annual Site Inspections and Maintenance.....	15–3
15.2.1.4	Landfill Monitoring and Maintenance	15–3
15.2.1.5	Pond Discharge Notification.....	15–3
15.2.1.6	Geospatial Environmental Mapping System	15–3
15.2.2	DOE-Required Reporting	15–3
15.2.3	Other Routine Reporting.....	15–4
15.2.3.1	Monitoring Wells	15–4
15.3	Emergency/Incident Notification.....	15–6
15.4	CERCLA 5-Year Review	15–7
16.0	Public Involvement	16–1
17.0	References.....	17–1

Figures

Figure 1–1.	Location of the Rocky Flats, Colorado, Site	1–2
Figure 1–2.	Map of the Rocky Flats Federally Owned Property	1–3
Figure 1–3.	Subsurface Features—Remaining Infrastructure (reproduced from RFLMA)	1–5
Figure 1–4.	Subsurface Features—Pits and Trenches (reproduced from RFLMA)	1–6
Figure 1–5.	Remaining Gas, Electric, and Dataline Utilities Extending into the COU and Including Indiana Street Points of Compliance	1–7
Figure 1–6.	Rocky Flats Before and After Closure	1–9
Figure 2–1.	Landslide and High Erosion Areas.....	2–3
Figure 2–2.	Seep Areas	2–7
Figure 2–3.	Preble’s Mouse Protection Areas and Critical Habitat at Rocky Flats.....	2–15
Figure 7–1.	Rocky Flats Ponds and Surface Water Features.....	7–3
Figure 9–1.	Water Monitoring Locations in Relation to Groundwater Contamination.....	9–3
Figure 9–2.	Water Monitoring Locations and Precipitation Gages	9–4
Figure 9–3.	POC Monitoring Locations	9–7
Figure 9–4.	POE Monitoring Locations.....	9–11
Figure 9–5.	AOC Well and SW018 Locations	9–13
Figure 9–6.	Boundary Well Locations.....	9–15
Figure 9–7.	Sentinel Well Locations	9–17
Figure 9–8.	Evaluation Well Locations	9–20
Figure 9–9.	Investigative Monitoring Locations	9–23
Figure 9–10.	Investigative Monitoring Flowchart.....	9–26

Figure 9–11. PLF Monitoring Locations	9–27
Figure 9–12. OLF Monitoring Locations.....	9–29
Figure 9–13. MSPTS Monitoring Locations	9–33
Figure 9–14. ETPTS Monitoring Locations	9–36
Figure 9–15. SPPTS Monitoring Locations.....	9–38
Figure 9–16. PLFTS Monitoring Locations.....	9–41
Figure 9–17. PLFTS Sampling Locations (Detail).....	9–42
Figure 9–18. Pre-Discharge Sampling Locations	9–43
Figure 10–1. Generalized Schematic of the Site Automated Monitoring Network.....	10–3
Figure 10–2. Detailed Rocky Flats Telemetry Schematic	10–4
Figure 11–1. Example Hydrograph Showing Continuous Flow-Paced Composite Sampling ..	11–3
Figure 11–2. Uranium Threshold Flowchart	11–18

Tables

Table 3–1. Institutional Controls for the COU	3–1
Table 9–1. Generalized Water Monitoring Objectives	9–5
Table 9–2. POC Monitoring Locations.....	9–8
Table 9–3. POC Field Data Collection: Parameters and Frequency	9–8
Table 9–4. POC Sample Collection: Type and Analytes.....	9–8
Table 9–5. Annual POC Monitoring Targets (Number of Composite Samples).....	9–9
Table 9–6. POE Monitoring Locations	9–11
Table 9–7. POE Field Data Collection: Parameters and Frequency	9–12
Table 9–8. POE Sample Collection: Type and Analytes	9–12
Table 9–9. Annual POE Monitoring Targets (Number of Composite Samples).....	9–12
Table 9–10. AOC Wells and SW018.....	9–14
Table 9–11. Sampling Frequency for AOC Wells and SW018	9–14
Table 9–12. Boundary Wells	9–16
Table 9–13. Sampling Frequency of Boundary Wells.....	9–16
Table 9–14. Sentinel Wells	9–18
Table 9–15. Sampling Frequency for Sentinel Wells	9–18
Table 9–16. Evaluation Wells	9–21
Table 9–17. Sampling Frequency for Evaluation Wells	9–22
Table 9–18. Investigative Monitoring Locations.....	9–23
Table 9–19. Investigative Field Data Collection: Parameters and Frequency	9–24
Table 9–20. Investigative Sample Collection: Type and Analytes	9–24
Table 9–21. Investigative Monitoring Targets (Number of Composite Samples).....	9–25
Table 9–22. RCRA Monitoring Wells at the PLF	9–28
Table 9–23. Sampling Frequency for RCRA Wells at the PLF.....	9–28
Table 9–24. OLF Surface Water Monitoring Locations.....	9–29
Table 9–25. OLF Surface Water Sample Collection: Type and Analytes	9–30
Table 9–26. RCRA Monitoring Wells at the OLF	9–30
Table 9–27. Sampling Frequency for RCRA Wells at the OLF	9–30
Table 9–28. MSPTS Sampling Locations.....	9–34
Table 9–29. Sampling Frequency for MSPTS Sampling Locations	9–34
Table 9–30. ETPTS Sampling Locations.....	9–36
Table 9–31. Sampling Frequency for ETPTS Sampling Locations.....	9–37

Table 9–32. SPPTS Sampling Locations	9–39
Table 9–33. Sampling Frequency for SPPTS Sampling Locations	9–39
Table 9–34. PLFTS Water Monitoring Locations	9–41
Table 9–35. PLFTS Sample Collection: Type and Analytes	9–42
Table 9–36. Pre-Discharge Sample Collection: Type and Analytes	9–44
Table 9–37. Conservation and Management Goals	9–52
Table 9–38. Regulatory Issues to Consider	9–54
Table 11–1. Minimum Water Sample Size by Analyte	11–2
Table 11–2. Scheduling Monitoring Location Groups for Optimal Data Usability	11–8
Table 11–3. Crosswalk of Original and Replacement Well Identifications	11–14
Table 11–4. Activity to Mass Conversion Factors for Uranium Isotopes	11–19
Table 11–5. Highest Pre-CY05 Uranium Results for AOC, Boundary, and Sentinel Wells...11–20	
Table 15–1. RFLMA Reportable Conditions.....	15–1
Table 15–2. Other Routine Site Reporting	15–5
Table 15–3. Contact Information for Emergency Notifications	15–7

Appendices

- [Appendix A Emergency Contact Information](#)
- [Appendix B Annual Site Inspection Checklist](#)
- [Appendix C Example Contact Record](#)
- [Appendix D Rocky Flats System Closure Plans and Sector Closeout Reports](#)
- [Appendix E Real Property Records](#)
- [Appendix F Rocky Flats Site Soil Disturbance Evaluation Procedure](#)
- [Appendix G Rocky Flats Sample Handling Procedures](#)
- [Appendix H Site-Specific Checklist](#)
- [Appendix I Rocky Flats, Colorado, Site Erosion Control Monitoring and Maintenance Inspection Procedure](#)
- [Appendix J Migratory Bird Treaty Act Issues, Natural Resource Management Activities, and Maintenance and Project Activities at the Rocky Flats Site](#)
- [Appendix K IH Exposure Assessment and Screening Criteria for VOCs at the Rocky Flats Site](#)

Attachments (under separate cover)

- [Attachment A1 Corrective Action Decision/Record of Decision for Rocky Flats Plant \(USDOE\) Peripheral Operable Unit and Central Operable Unit](#)
- [Attachment A2 Rocky Flats Legacy Management Agreement](#)
- [Attachment A3 Environmental Covenant](#)
- [Attachment A4 Lease Agreement of September 26, 2006, Between Broomfield, Colorado, and DOE \(includes Substitute Water Supply Plan \[SWSP\]\)](#)
- [Attachment A5 Use Agreement between DOE and the Woman Creek Reservoir Authority](#)
- [Attachment A6 Subtitle F—Rocky Flats National Wildlife Refuge Act of 2001](#)

- Attachment A7 Ronald W. Reagan Defense Authorization Act for Fiscal Year 2005, Sec. 3118, Local Stakeholder Organizations for 2006 Closure Sites
- Attachment A8 H.R. 1815 National Defense Authorization Act for Fiscal Year 2006 (Mining Rights at Rocky Flats)
- Attachment B1 Operations and Maintenance Plan for the Rocky Flats Surface Water Control Project
- Attachment B2 Emergency Response Plan for Rocky Flats Site Dams
- Attachment B3 Standley Lake Protection Project Operations Agreement
- Attachment C1 Operation and Maintenance Manual for Rocky Flats Groundwater Treatment Systems
- Attachment D1 Final Landfill Monitoring and Maintenance Plan for the Original Landfill
- Attachment D2 Present Landfill Monitoring and Maintenance Plan and Post-Closure Plan
- Attachment E1 Master Rocky Flats Site Ecology Reports Reference List
- Attachment E2 Memorandum of Agreement for the Administration of a Wetland Bank at Rocky Flats
- Attachment E3 Programmatic Biological Assessment for Department of Energy Activities at the Rocky Flats Environmental Technology Site, Part I
- Attachment E4 Programmatic Biological Assessment for Department of Energy Activities at the Rocky Flats Environmental Technology Site, Part II
- Attachment E5 Rocky Flats, Colorado, Site Revegetation Plan
- Attachment E6 Rocky Flats, Colorado, Site Vegetation Management Plan
- Attachment E7 Rocky Flats, Colorado, Site Wetland Mitigation Monitoring and Management Plan
- Attachment E8 Erosion Control Plan for Rocky Flats Property Central Operable Unit
- Attachment E9 Ecological Monitoring Methods Handbook for the Rocky Flats, Colorado, Site
- Attachment E10 Wildland Fire Management Plan for the Rocky Flats Site
- Attachment F1 Rocky Flats Environmental Technology Site Survey Control Network Report
- Attachment F2 Memorandum of Understanding between the Jefferson County Sheriff and the DOE
- Attachment F3 Rocky Flats, Colorado, Site Chemical Management Plan

Abbreviations

Ag	silver
Am	americium
ANSI/ASQ	American National Standards Institute/American Society for Quality
AOC	Area of Concern
AR	Administrative Record
ARAR	applicable or relevant and appropriate requirement
BA	Biological Assessment
Be	beryllium
BMP	best management practice
BO	Biological Opinion
BZ	Buffer Zone
CAD/ROD	Corrective Action Decision/Record of Decision
CCR	Code of Colorado Regulations
Cd	cadmium
CDOW	Colorado Division of Wildlife
CDPHE	Colorado Department of Public Health and Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 USC 9601, et seq.)
CESQG	conditionally exempt small quantity generator
CFR	<i>Code of Federal Regulations</i>
CHWA	Colorado Hazardous Waste Act
CMP	Chemical Management Plan
CNWA	Colorado Noxious Weed Act
COC	chain of custody
COU	Central Operable Unit
CPR	cardiopulmonary resuscitation
Cr	chromium
CSI	Crest Stage Indicator
CWA	Clean Water Act
CWQCC	Colorado Water Quality Control Commission
CY	calendar year
DER	Duplicate Error Ratio
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
DQA	data quality assessment
ECP	Erosion Control Plan
EMS	Environmental Management System
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ERP	<i>Emergency Response Plan for the Rocky Flats Site Dams</i>
ESA	Endangered Species Act
ET	evapotranspiration
ETPTS	East Trenches Plume Treatment System
FC	functional channel
FDCS	field data collection system
FY	fiscal year
GEMS	Geospatial Environmental Mapping System

GIS	Geographic Information System
gpm	gallons per minute
GWIS	Groundwater Intercept System
H&S	Health and Safety
HAZCOM	hazardous communication
HQ	headquarters
HR ICP/MS	high-resolution inductively coupled plasma/mass spectrometry
HRC®	Hydrogen Release Compound®
HRR	Historical Release Report
IA	Industrial Area
IATA	International Air Transportation Association
IDW	investigation-derived waste
IH	Industrial Hygiene
IHSS	Individual Hazardous Substance Site
IM/IRA	interim measure/interim remedial action
IMP	Integrated Monitoring Plan
ITS	Intercept Trench System
ITSS	Intercept Trench System Setup
JSA	job safety analysis
K-H	Kaiser-Hill Company, L.L.C.
L	liter
LANL	Los Alamos National Laboratory
LM	Office of Legacy Management
LMS	Legacy Management Support
m³	cubic meter
M&M	monitoring and maintenance
M-K	Mann-Kendall
MBTA	Migratory Bird Treaty Act
MG	million gallons
mg/L	milligrams per liter
mL	milliliter
MP	measuring point
mrem	millirem
MSDS	Material Safety Data Sheet
MSPTS	Mound Site Plume Treatment System
NA	not applicable
NARA	National Archives and Records Administration
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NPH	no public hazard
NPL	National Priorities List
NRC	National Response Center
NSQ	nonsufficient quantity
NWP	nationwide permit
NWTC	National Wind Technology Center
O&M	operation and maintenance
ODBC	Open Database Connectivity
OLE	Object Linking & Embedding

OLF	Original Landfill
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
P2	pollution prevention
P/AE	Project/Activity Evaluation
PBA	programmatic biological assessment
pCi/g	picocuries per gram
pCi/L	picocuries per liter
PDA	personal data assistant
PID	photoionization detector
PIP	Public Involvement Plan
PLF	present landfill
PLFTS	Present Landfill Treatment System
POC	point of compliance
POD	plan of the day
POE	point of evaluation
POU	peripheral operable unit
POW	Plan of the Week
PPA	Pollution Prevention Act
PPE	personal protective equipment
PQL	practical quantitation limit
Pu	plutonium
PU&D	Property Utilization and Disposal
PVC	polyvinyl chloride
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RCRA	Resource Conservation and Recovery Act (42 USC 6901, et seq.)
RFCA	Rocky Flats Cleanup Agreement
RFETS	Rocky Flats Environmental Technology Site
RFLMA	<i>Rocky Flats Legacy Management Agreement</i>
RFP	Rocky Flats Plant
RFSOG	<i>Rocky Flats Site Operations Guide</i>
RFSRP	<i>Rocky Flats Site, Colorado, Site Revegetation Plan</i>
RFSVMP	<i>Rocky Flats Site, Colorado, Site Vegetation Management Plan</i>
RFSWP	<i>Rocky Flats Site, Colorado, Site Wetland Mitigation Monitoring and Management Plan</i>
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPD	relative percent difference
RQ	reportable quantity
RTU	remote terminal unit
S-K	Seasonal-Kendall
SAP	Sampling and Analysis Plan
SARA	Superfund Amendments and Reauthorization Act
SCADA/HMI	supervisory control and data acquisition/human machine interface
SED	Sitewide Ecological Database
SEEPro	Site Environmental Evaluation for Projects

SEP	Solar Evaporation Ponds
SID	South Interceptor Ditch
SME	subject matter expert
SPP	Solar Ponds Plume
SPPTS	Solar Ponds Plume Treatment System
SVOC	semivolatile organic compound
SWSP	Substitute Water Supply Plan
TIMS	thermal ionization mass spectrometry
TM	temporary modification
TSS	total suspended solids
U	uranium
µg/L	micrograms per liter
UHSU	upper hydrostratigraphic unit
USACOE	U.S. Army Corps of Engineers
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VOC	volatile organic compound
VSP	Visual Sample Plan
WPP	work planning process
ZVI	zero-valent iron