# Table of Contents

**Acronyms and Abbreviations** ____ xiii

**Units of Measure and Symbols** ____ xvii

**1.0 Introduction** ____ 1.1

1.1 Hanford Site Location ... 1.1
1.2 Hanford Site Mission ... 1.3
1.3 Primary Operations and Activities ... 1.3
1.4 Hanford Site Management ... 1.6
1.5 Climate and Meteorology ... 1.7
1.5.1 Historical Climatological Information ... 1.10
1.5.2 Monitoring ... 1.11
1.6 Stakeholder Involvement ... 1.13
1.6.1 Role of Native American Tribes ... 1.13
1.6.2 Cultural and Historic Resource Consultations ... 1.14
1.6.3 Hanford Natural Resource Trustee Council ... 1.14
1.6.4 Public Involvement in Hanford Site Decisions ... 1.16
1.6.5 State of Oregon ... 1.17
1.6.6 Hanford Advisory Board (HAB) ... 1.18
1.7 Hanford Site Regulatory Oversight ... 1.18
1.7.1 Environmental Regulations ... 1.18
1.7.2 Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) ... 1.18
1.8 Additional Hanford Area Websites ... 1.20

**2.0 Compliance Summary** ____ 2.1

2.1 Hazardous Materials and Waste Management Statutes and Regulations ... 2.1
2.1.1 Federal Facility Compliance Act of 1992 ... 2.1
2.1.2 Resource Conservation and Recovery Act of 1976 ... 2.1
2.1.3 Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) ... 2.5
2.1.4 Emergency Planning and Community Right-to-Know Act of 1986 ... 2.6
2.1.5 Reportable Releases ... 2.8
2.1.6 Toxic Substances Control Act ... 2.8
2.1.7 National Environmental Policy Act of 1969 (NEPA) ... 2.9
2.1.8 Institutional Controls Plan ... 2.13
2.1.9 Federal Insecticide, Fungicide, and Rodenticide Act ... 2.14
2.2 Radiation Protection Statutes and Regulations ... 2.14
2.2.1 Atomic Energy Act of 1954 ... 2.14
2.2.2 DOE O 458.1, Radiation Protection of the Public and the Environment ... 2.14
2.2.3 DOE O 435.1, Radioactive Waste Management ... 2.16
2.3 Air Quality Statutes and Regulations ... 2.17
2.3.1 Air Quality Regulatory Authority ... 2.17
2.3.2 Air Permits ... 2.17
2.4 Water Quality Statutes and Regulations ... 2.18
2.4.1 Federal Permit – Discharges to Columbia River ... 2.18

2.4.2 State Waste Discharge Permit – Discharges to the Soil Column/Groundwater ..... 2.19
2.4.3 Local Discharge Permit – Discharges to the City of Richland Sewer ..... 2.19
2.4.4 Safe Drinking Water Act of 1974 (SDWA) ..... 2.19
2.5 Natural and Cultural Resources ..... 2.22
2.5.1 Ecological Compliance ..... 2.22
2.5.2 Cultural Resource Compliance ..... 2.24
2.6 Sustainability Statutes ..... 2.24
2.6.1 Chemical Management Systems ..... 2.24
2.6.2 Pollution Prevention Program (42 U.S.C. 133) ..... 2.25
2.6.3 Environmental Orders ..... 2.26
2.7 Occurrence Reporting and Processing of Operations Information ..... 2.27
2.7.1 Operational Emergency; Recurring; or Category 1 ..... 2.28
2.7.2 Operational Emergency; Recurring; or Category 2 ..... 2.28
2.7.3 Operational Emergency; Recurring; or Category 3 ..... 2.28
2.7.4 Operational Emergency; Recurring; or Category 4 ..... 2.28
2.8 Standards and Permits ..... 2.28
2.9 Environmental Noncompliance ..... 2.30
2.9.1 Regulatory Agencies ..... 2.30
2.9.2 Waste Water Permit Deviations ..... 2.34

**3.0 Environmental Management System ..... 3.1**

3.1 Environmental Performance Measures ..... 3.2
3.2 Hanford Site Awards and Recognition ..... 3.8
3.2.1 HPMC Occupational Medical Services ..... 3.8
3.2.2 CH2M Plateau Remediation Company ..... 3.8
3.2.3 Mission Support Alliance, LLC ..... 3.8
3.2.4 Washington Closure Hanford, LLC ..... 3.8

**4.0 Radiological Protection and Doses ..... 4.1**

4.1 External Radiation Monitoring ..... 4.1
4.1.1 External Radiation Measurements ..... 4.1
4.1.2 Waste Disposal Sites Radiological Surveys ..... 4.3
4.2 Potential Radiological Doses ..... 4.4
4.2.1 Maximally Exposed Individual Dose (Off-site Resident) ..... 4.6
4.2.2 Collective Dose ..... 4.12
4.2.3 Compliance with *Clean Air Act* Standards ..... 4.14
4.2.4 Special Case Dose Estimates ..... 4.16
4.2.5 Doses from Non-U.S. Department of Energy Sources ..... 4.19
4.2.6 Dose to Non-Human Biota ..... 4.19
4.2.7 Radiological Dose in Perspective ..... 4.23
4.3 Radiological Clearance of Hanford Site Property ..... 4.25
4.3.1 Radiological Clearance for Potentially Contaminated Personal Property with Hard-to-Detect Radionuclides ..... 4.26
4.3.2 Granular Activated Carbon for Offsite Shipment and Regeneration Radiological Clearance ..... 4.27
4.3.3 Tri-Cities Development Council (TRIDEC) Land Conveyance ..... 4.28

**5.0 Environmental Restoration and Waste Management 5.1**
5.1 Cleanup and Remediation Activities 5.1
5.1.1 River Corridor Closure 5.1
5.1.2 100 Area 5.2
5.1.3 200 Area – Central Plateau 5.4
5.1.4 300 Area 5.9
5.2 Facility Decommissioning Activities 5.9
5.2.1 100 Area 5.9
5.2.2 200 Area – Central Plateau 5.9
5.2.3 300 Area 5.11
5.2.4 400 Area 5.11
5.3 Waste Management Activities 5.12
5.3.1 Waste Classifications 5.12
5.3.2 Solid Waste Inventories 5.13
5.3.3 Solid Waste Management 5.14
5.3.4 Liquid Waste Management 5.19
5.4 Underground Waste Storage Tanks 5.22
5.4.1 Single-Shell Tank (SST) System 5.23
5.4.2 Double-shell Tank (DST) System 5.23
5.4.3 Underground Waste Storage Tanks and Associated Facilities Progress on Defense Nuclear Facilities Safety Board (DNFSB) 5.24
5.4.4 SST Closure and Corrective Measures Program 5.25
5.5 Waste Treatment and Immobilization Plant (WTP) 5.26
5.6 Long-term Stewardship 5.28
5.7 Scientific and Technical Contributions to Hanford Site Cleanup 5.30
5.7.1 Waste Processing and Tank Waste Management 5.30
5.7.2 Soil and Groundwater Remediation 5.31
5.7.3 Advanced Simulation Capability for Environmental Management (ASCEM) 5.33

**6.0 Air Monitoring 6.1**
6.1 Air Emissions 6.1
6.1.1 Radioactive Airborne Emissions 6.1
6.1.2 Criteria and Toxic Air Pollutants 6.3
6.2 Ambient Air Monitoring 6.4
6.2.1 Hanford Site Ambient Air Monitoring 6.4
6.2.2 Hanford Site and Off-Site Ambient Air Monitoring 6.9

**7.0 Water Monitoring 7.1**
7.1 Drinking Water Systems 7.1
7.1.1 Drinking Water Treatment Facilities 7.1
7.1.2 Monitoring 7.3
7.1.3 Radiological Results 7.3
7.2 Columbia River Surface Water 7.5
7.2.1 Monitoring 7.9
7.2.2 Radiological Results 7.11
7.2.3 Inorganic and Organic Chemical Results 7.15

7.3 Columbia River Sediment ..... 7.17
7.3.1 Monitoring ..... 7.17
7.3.2 Radiological Results ..... 7.18
7.3.3 Chemical Results ..... 7.20
7.4 Columbia River Seep Water ..... 7.22
7.4.1 Seep Water Monitoring ..... 7.22
7.4.2 Monitoring Results ..... 7.23
7.4.3 Sediment Monitoring ..... 7.26
7.5 Pond Water and Sediment ..... 7.27
7.5.1 West Lake Pond Water ..... 7.27
7.5.2 West Lake Water ..... 7.28
7.5.3 West Lake Sediment ..... 7.29
7.6 Off-site Irrigation Water ..... 7.29
7.7 Liquid Effluent ..... 7.30
7.7.1 Radionuclide Results ..... 7.30
7.7.2 Nonradioactive Hazardous Materials Results ..... 7.30

**8.0 Groundwater Monitoring ..... 8.1**

8.1 River Corridor ..... 8.7
8.1.1 100-BC ..... 8.8
8.1.2 100-FR ..... 8.8
8.1.3 100-HR ..... 8.8
8.1.4 100-KR ..... 8.10
8.1.5 100-NR ..... 8.11
8.1.6 300-FF ..... 8.13
8.1.7 1100-EM and Richland North ..... 8.14
8.2 Central Plateau ..... 8.14
8.2.1 200-BP ..... 8.15
8.2.2 200-PO ..... 8.17
8.2.3 200-UP ..... 8.18
8.2.4 200-ZP ..... 8.20
8.3 Confined Aquifers ..... 8.21
8.4 Wells ..... 8.21
8.5 Additional Information ..... 8.21

**9.0 Soil Monitoring ..... 9.1**

9.1 Monitoring Results ..... 9.1
9.2 Sampling Results ..... 9.1
9.3 Soil Sampling at Hanford Off-site Locations ..... 9.9
9.4 Radiological Contamination Investigations ..... 9.9

**10.0 Biota Monitoring ..... 10.1**

10.1 Agricultural Monitoring ..... 10.1
10.1.1 Milk ..... 10.2
10.1.2 Fruit, Vegetables, and Farm Products ..... 10.3
10.1.3 Wine ..... 10.3

10.2 Fish and Wildlife Monitoring ..... 10.4
10.2.1 Mountain Whitefish ..... 10.6
10.2.2 White Sturgeon ..... 10.7
10.2.3 Cottontail Rabbit ..... 10.8
10.2.4 Waterfowl ..... 10.9
10.3 Vegetation Monitoring ..... 10.10
10.3.2 Radiological Contamination ..... 10.15
10.3.3 Vegetation Control ..... 10.16
10.3.4 Mulberry Sampling at the 100N Shoreline ..... 10.19
10.4 Waste Site Remediation and Revegetation ..... 10.21

**11.0 Resource Protection ..... 11.1**

11.1 Ecological Protection ..... 11.1
11.1.1 Rare Plants ..... 11.2
11.1.2 Fish and Wildlife Monitoring ..... 11.3
11.2 Endangered and Threatened Species ..... 11.26
11.3 Cultural and Historic Resource Protection ..... 11.29
11.3.1 Cultural Resources Reviews ..... 11.30
11.3.2 Cultural Resources Protections and Section 110 Activities ..... 11.31
11.3.3 Cultural Resources Consultations and Public Involvement ..... 11.33
11.4 Collection Management and Curation ..... 11.33

**12.0 Quality Assurance ..... 12.1**

12.1 Program Management ..... 12.1
12.2 Quality Control Samples ..... 12.2
12.3 Sample Collection Quality Assurance and Quality Control ..... 12.3
12.4 Media Audits and Comparisons ..... 12.7
12.5 Laboratory Quality Assurance Programs ..... 12.8
12.5.1 Analytical Quality Assurance and Quality Control ..... 12.8
12.5.2 Laboratory Performance Evaluation and Proficiency Testing ..... 12.10
12.6 Data Recording and Data Management ..... 12.10

**13.0 References ..... 13.1**

## Appendices

A Useful Information ..... A.1
B Glossary ..... B.1
C Additional Monitoring Results ..... C.1
D Radiation Dose Calculations ..... D.1

## Figures

**Figure 1.1**. Detailed Geography of the Hanford Site, Hanford Reach National Monument (HRNM), and DOE Portions of the Hanford Site ..... 1.2
**Figure 1.2**. Hanford Site Area Overview ..... 1.5
**Figure 1.3**. Meteorological Monitoring Network Wind Roses from 2015 ..... 1.9
**Figure 2.1**. Alleged Environmental Noncompliance Violations, Concerns, and Associated Fines Summary ..... 2.33
**Figure 3.1**. Fleet Management – Acquisitions FYs 2005–2020 ..... 3.3
**Figure 3.2**. Vehicle Fuel Use – FYs 2005–2015 with Target Objectives through 2020 ..... 3.3
**Figure 3.3**. Water Use – FYs 2007–2015 with Target Objectives through 2015 ..... 3.4
**Figure 3.4**. Electricity Use – FYs 2003–2015 with Target Objectives through 2015 ..... 3.4
**Figure 3.5**. Facility Fuel Use – FYs 2003–2015 with Target Objectives through 2015 ..... 3.5
**Figure 3.6**. Facility Energy Use – FYs 2003–2015 with Target Objectives through 2015 ..... 3.5
**Figure 3.7**. Electronic Product Environmental Assessment Tool Standards Compliance – FYs 2009–2015 with Target Objectives through 2015 ..... 3.6
**Figure 3.8**. Sanitary Waste Reduction – FYs 2008–2015 with Target Objectives through 2015 ..... 3.6
**Figure 3.9**. Regulated Waste Reduction – FYs 2008–2015 with Target Objectives through 2015 ..... 3.7
**Figure 3.10**. On-site Waste Disposal – FYs 2008–2015 at the Environmental Restoration Disposal Facility ..... 3.7
**Figure 4.1**. Background Dose Rates at the Hanford External Dosimetry Program Laboratory ..... 4.2
**Figure 4.2**. On-Site Receptors Evaluated ..... 4.7
**Figure 4.3**. Conceptual Site Model of Exposure Pathways Evaluated in Dose Calculations (Horn Rapids Road MEI) ..... 4.8
**Figure 4.4**. Total Dose for the Hypothetical MEI Over Time ..... 4.9
**Figure 4.5**. Comparison of Measured and Modeled Tritium Air Concentrations Near the 300 Area ..... 4.11
**Figure 4.6**. Collective Total Dose within a 50-mi (80-km) Radius ..... 4.13
**Figure 4.7**. U.S. Annual Average Radiological Doses from Various Sources (2009 National Council on Radiation Protection and Measurements) ..... 4.24
**Figure 4.8**. Radiological Doses from Hanford Site Operations Compared to Annual Average from Natural Sources ..... 4.24
**Figure 5.1**. 618-10 Burial Ground ..... 5.9
**Figure 5.2**. Plutonium Finishing Plant ..... 5.10
**Figure 5.3**. 300 Area ..... 5.11
**Figure 5.4**. Fast Flux Test Facility ..... 5.11
**Figure 5.5**. Central Waste Complex ..... 5.14
**Figure 5.6**. Waste Receiving and Processing Facility ..... 5.15
**Figure 5.7**. T Plant Complex ..... 5.15
**Figure 5.8**. Canister Storage Building, Interim Storage Area ..... 5.16
**Figure 5.9**. LLBG Trenches 31 and 34 ..... 5.17
**Figure 5.10**. LLBG Trench 94 ..... 5.17
**Figure 5.11**. Waste Encapsulation and Storage Facility ..... 5.18

**Figure 5.12**. Integrated Disposal Facility ..... 5.18
**Figure 5.13**. Environmental Restoration Disposal Facility ..... 5.19
**Figure 5.14**. 200 Area Effluent Treatment and Liquid Effluent Retention Facilities ..... 5.20
**Figure 5.15**. Effluent Treatment Facility ..... 5.20
**Figure 5.16**. 200 Area TEDF Ponds A and B ..... 5.21
**Figure 5.17**. 242-A Evaporator ..... 5.22
**Figure 5.18**. 200 Area Tank Farms Aerial Overview ..... 5.22
**Figure 5.19**. Working Continuing at C Farm ..... 5.23
**Figure 5.20**. Waste Treatment and Immobilization Plant ..... 5.27
**Figure 5.21**. MSA LTS Managed Areas ..... 5.29
**Figure 5.22**. Surveillance Team Working Inside the SSE ..... 5.30
**Figure 6.1**. Hanford Site Average Radionuclide Concentrations in Ambient Air Samples Compared to Distant Community Samples ..... 6.7
**Figure 6.2**. Plutonium-239/-240 Air Concentrations at 618-10 Station N548 ..... 6.8
**Figure 6.3**. Ambient Air Sampling Locations ..... 6.9
**Figure 6.4**. Radionuclide Concentrations in Ambient Air Samples ..... 6.14
**Figure 7.1**. Drinking Water Treatment Facilities ..... 7.2
**Figure 7.2**. 400 Area Tritium Concentrations in Drinking Water ..... 7.5
**Figure 7.3**. Surface-Water and Sediment Sampling Locations ..... 7.6
**Figure 7.4**. Columbia River Flow Rates at Priest Rapids Dam ..... 7.9
**Figure 7.5**. Tritium Annual Average Concentrations in Columbia River Water Upstream and Downstream of the Hanford Site ..... 7.11
**Figure 7.6**. Strontium-90 Annual Average Concentrations in Columbia River Water Upstream and Downstream of the Hanford Site ..... 7.12
**Figure 7.7**. Uranium Annual Average Concentrations in Columbia River Water Upstream and Downstream of the Hanford Site ..... 7.13
**Figure 7.8**. Tritium Concentrations in Cross-River Transect Water Samples (Hanford Reach, Columbia River) ..... 7.14
**Figure 7.9**. Selected Anion Concentrations in Columbia River Transect Samples ..... 7.16
**Figure 7.10**. Cesium-137 Average, Maximum, and Minimum Concentrations Measured in Columbia River Sediment ..... 7.19
**Figure 7.11**. Plutonium-239/-240 Average, Maximum, and Minimum Concentrations Measured in Columbia River Sediment ..... 7.19
**Figure 7.12**. Uranium Average, Maximum, and Minimum Concentrations Measured in Columbia River Sediment ..... 7.20
**Figure 7.13**. Selected Metals Average, Maximum, and Minimum Concentrations Measured in Columbia River Sediment (WA and OR) ..... 7.21
**Figure 7.14**. Fast Flux Test Facility Pond Water Tritium Concentration ..... 7.27
**Figure 7.15**. Uranium in West Lake Water Samples ..... 7.28
**Figure 8.1**. Regions of the Hanford Site ..... 8.1
**Figure 8.2**. Hanford Site 2015 Water Table and Directions of Groundwater Flow ..... 8.2
**Figure 8.3**. Hanford Site Plume Areas ..... 8.5
**Figure 8.4**. 2015 Sampling Events (Wells and Aquifer Tubes) ..... 8.5

**Figure 8.5**. Maximum Concentrations of Groundwater Contaminants in Each Groundwater Interest Area in 2015 Expressed as Multiples of Water Quality Standards ..... 8.6
**Figure 8.6**. Maximum Concentrations of Groundwater Contaminants in Each Groundwater Interest Area in 2015 Expressed as Multiples of Water Quality Standards ..... 8.7
**Figure 8.7**. 100-HR Hexavalent Chromium Plume in 1999 (early in interim action period) and 2015 (during interim action) ..... 8.9
**Figure 8.8**. 100-KR Hexavalent Chromium Plume in 1996 (before interim action) and 2015 (during interim action) ..... 8.11
**Figure 8.9**. 100-NR 2015 Strontium-90 Plume and Apatite Barrier ..... 8.12
**Figure 8.10**. 300-FF Uranium Plume in 1996 and 2015 ..... 8.13
**Figure 8.11**. Groundwater Contaminants in the Central Plateau ..... 8.15
**Figure 8.12**. 200-BP Technetium-99 Plume in 2007 and 2015 ..... 8.16
**Figure 8.13**. Hanford Site Tritium Plumes in 1980 and 2015 ..... 8.17
**Figure 8.14**. WMA S-SX Technetium-99 Plume in 2007 and 2015 ..... 8.19
**Figure 8.15**. 200 West Carbon Tetrachloride Plume in 1996 (upper part of confined aquifer) and 2015 (including available vertical interval data) ..... 8.20
**Figure 9.1**. Hanford Site Soil Samples Average Concentrations of Selected Radionuclides, 2011–2015 ..... 9.4
**Figure 10.1**. Agricultural Monitoring Locations ..... 10.1
**Figure 10.2**. Animal Monitoring Locations ..... 10.5
**Figure 10.3**. Strontium-90 Concentrations in Cottontail Bone Samples ..... 10.9
**Figure 10.4**. Strontium-90 Concentrations in Canada Goose Bone Samples ..... 10.10
**Figure 10.5**. Hanford Site Vegetation Average Concentrations of Select Radionuclides ..... 10.13
**Figure 10.6**. Mulberry Tree Sample Locations and Strontium-90 Concentrations (pCi/g) in Fruit Samples ..... 10.20
**Figure 11.1**. Visual Hanford Reach Fall Chinook Salmon Redd Counts 1948 to 2015 ..... 11.5
**Figure 11.2**. Bald Eagle Boat Survey Results for the 2015-16 Season ..... 11.8
**Figure 11.3**. Raptor and Common Raven Nests Located on DOE-RL Managed Lands of the Hanford Site in 2015 ..... 11.10
**Figure 11.4**. Number of Raptor and Raven Nest Sites Located on Hanford Site DOE-RL Managed Lands, 2012–2015 ..... 11.11
**Figure 11.5**. Roadside Bird Survey Routes ..... 11.13
**Figure 11.6**. DOE-managed Portion of the Hanford Site and ALE Reserve with Habitat Suitability Score >0.90 ..... 11.16
**Figure 11.7**. Number of Reptiles Observed per 500-m Segment in 2015 Reptile Visual Encounter Transects ..... 11.18
**Figure 11.8**. Active Burrowing Owl Burrows Documented During 2015 Surveys ..... 11.20
**Figure 11.9**. HAMMER Burrow Status During 2015 Surveys and Banding ..... 11.21
**Figure 11.10**. Hexagons Surveyed for Black-tailed Jackrabbits ..... 11.23
**Figure 11.11**. Distribution Map Containing All Badger Data to Date ..... 11.25
**Figure 11.12**. Hanford Site National Historic Preservation Act Section 106 Reviews by Area ..... 11.31
**Figure 11.13**. Archives Storage Area at WSU-TC ..... 11.34

## Tables

**Table 1.1**. Meteorology Station* Monthly and Annual Climatological Data ..... 1.12
**Table 2.1.** Emergency Planning and Community Right-to-Know Act Requirements Summary ..... 2.6
**Table 2.2**. Emergency Planning and Community Right-to-Know Compliance Reporting ..... 2.7
**Table 2.3**. Average Quantity of the 10 Hazardous Chemicals Stored in Greatest Quantities ..... 2.7
**Table 2.4**. Toxic Chemicals Exceeding Reporting Thresholds ..... 2.7
**Table 2.5**. Radiation Standards for Public Protection from All Routine DOE Concentrations ..... 2.16
**Table 2.6**. Selected Drinking Water Standards ..... 2.20
**Table 2.7**. Selected Surface Freshwater Quality Criteria for Toxic Pollutants ..... 2.21
**Table 2.8**. Washington State Water Quality Criteria for the Columbia River, Hanford Reach* ..... 2.22
**Table 2.9**. Recycle Quantities ..... 2.25
**Table 2.10**. Environmental Permits ..... 2.29
**Table 2.11**. Alleged Environmental Noncompliance Summary by Program Area, 2010–2015 ..... 2.30
**Table 2.12**. Summary of Alleged Environmental Noncompliances for CY 2015 ..... 2.31
**Table 2.13**. CY 2015 Wastewater Permit Deviations ..... 2.34
**Table 3.1**. DOE Contract Actions and Contractor Implementation ..... 3.1
**Table 3.2**. DOE Order and Executive Order Issuance ..... 3.2
**Table 3.3**. Hanford Site Environmental Management System Internet Links ..... 3.2
**Table 4.1**. Thermoluminescent Dosimeter Locations, 2015 ..... 4.2
**Table 4.2**. Pathway Doses for the Hypothetical MEI Residing at Horn Rapids Road ..... 4.9
**Table 4.3**. Collective Pathway Doses within a 50-mi (80-km) Radius ..... 4.13
**Table 4.4**. Annual Doses for a Hypothetical Individual at the Hanford Townsite and White Bluffs Bank Locations (2015) ..... 4.19
**Table 4.5**. Estimated Doses to Biota Associated with Columbia River Sediment and Water* ..... 4.21
**Table 4.6**. Estimated Doses to Biota Associated with West Lake* ..... 4.21
**Table 4.7**. Estimated Doses to Terrestrial Biota Associated with On- and Off-site Soil* ..... 4.22
**Table 4.8**. Estimated Risk from Various Activities and Exposures ..... 4.25
**Table 4.9**. Approved Release Criteria (Authorized Limits) for Select Hard-to-Detect Radionuclides* for Residual Beta-Gamma Surface Contamination ..... 4.27
**Table 4.10**. Approved Modified Authorized Limits for Off-site Shipment and Regeneration of Granular Activated Carbon ..... 4.28
**Table 5.1**. Central Plateau Operable Unit Structure ..... 5.5
**Table 5.2**. Solid Waste* Quantities Generated on the Hanford Site ..... 5.13
**Table 5.3**. Solid Waste* Quantities Received on the Hanford Site from Off-site Sources ..... 5.13
**Table 5.4**. Dangerous Waste* Quantities Shipped Off the Hanford Site ..... 5.13
**Table 5.5**. Tank Farm System Quantities of Waste* Retrieved and Stored ..... 5.24
**Table 6.1**. Hanford Site Radioactive Airborne Emissions ..... 6.2
**Table 6.2**. Hanford Site Criteria and Toxic Air Pollutant Emissions ..... 6.3
**Table 6.3**. Hanford Site Monitoring Locations and Analyses for Ambient Air Monitoring Samples ..... 6.5
**Table 6.4**. Hanford Site and Off-site Ambient Air Sampling Locations and Analytes ..... 6.10
**Table 7.1**. Drinking Water Systems ..... 7.1
**Table 7.2**. Drinking Water Annual Average Concentrations of Selected Radiological Constituents ..... 7.4

**Table 7.3**. Tritium Concentrations in Hanford Site 400 Area Drinking Water Wells* ..... 7.5
**Table 7.4**. Surface Water Surveillance ..... 7.7
**Table 7.5**. Columbia River Sediment ..... 7.7
**Table 7.6**. Columbia River Seep Monitoring ..... 7.22
**Table 7.7**. Columbia River Sediment Monitoring ..... 7.26
**Table 8.1**. Overview of River Corridor Groundwater Interest Areas ..... 8.3
**Table 8.2**. Overview of Central Plateau Groundwater Interest Areas ..... 8.4
**Table 9.1**. Soil Sample Locations ..... 9.1
**Table 9.2**. Accessible Soil Concentration Limits for Selected Radionuclides* ..... 9.2
**Table 9.3**. Concentrations of Selected Radionuclides in Hanford Site Soil Samples* ..... 9.6
**Table 9.4**. Radionuclide Concentrations in Other Contractor Project Soil Samples* ..... 9.8
**Table 9.5**. Concentrations of Selected Radionuclides in Hanford Site Soil Samples Collected Off Site* ..... 9.9
**Table 9.6**. Soil Contamination Incidents Investigated ..... 9.10
**Table 10.1**. Agricultural Monitoring Location ..... 10.2
**Table 10.2**. Animal Monitoring Analysis ..... 10.4
**Table 10.3**. Metals Analyses for the Mountain Whitefish Samples ..... 10.7
**Table 10.4**. White Sturgeon Metals Analyses ..... 10.8
**Table 10.5**. Vegetation Monitoring Locations ..... 10.11
**Table 10.6**. Hanford Site Vegetation Concentrations of Select Radionuclides ..... 10.14
**Table 10.7**. Hanford Site Concentrations of Select Radionuclides in Off-site Soil Samples* ..... 10.15
**Table 10.8**. Hanford Site Vegetation Contamination Incidents Investigated ..... 10.16
**Table 10.9**. Concentrations (pCi/g)* of Select Radionuclides in 100N Shoreline Mulberry Tree Samples ..... 10.21
**Table 11.1**. Summary of Fall Chinook Visual Aerial Redd Counts for CY 2015 Aerial Surveys in the Hanford Reach of the Columbia River ..... 11.4
**Table 11.2**. Summary of Fall Chinook Visual Aerial Redd Counts for CY 2015 Aerial Surveys by Operational Area Sub-sections ..... 11.4
**Table 11.3**. Summary of Steelhead Redd Counts for the 2015 Aerial Surveys in the Hanford Reach of the Columbia River ..... 11.6
**Table 11.4**. Summary of Steelhead Redd Counts by Sub-areas Adjacent to Hanford Site Operations for the 2015 Aerial Surveys in the Hanford Reach of the Columbia River ..... 11.6
**Table 11.5**. Nest Substrates Used by Raptors and Ravens in 2015 on DOE-RL Managed Lands of the Hanford Site ..... 11.9
**Table 11.6**. Species Richness and Abundance During 2015 Roadside Bird Surveys ..... 11.14
**Table 11.7**. Federal and State Status of Reptile Species Predicted and Documented to Occur on the Hanford Site ..... 11.17
**Table 11.8**. Federal and State Endangered, Threatened, Sensitive, and Candidate Species ..... 11.26
**Table 11.9**. Washington State Monitored Animal Species ..... 11.28
**Table 11.10**. Hanford Site Washington State Review and Watch List Plant Species ..... 11.29
**Table 11.11**. Sites and Isolates Recorded or Updated ..... 11.32
**Table 12.1**. Field and Laboratory Quality Control Sample Types, Characteristics, and Frequency ..... 12.2

**Table 12.2**. Laboratories and Types of Environmental Surveillance Samples Analyzed ..... 12.3
**Table 12.3**. Field Duplicate Samples and Locations ..... 12.3
**Table 12.4**. Field Duplicate Sample Results ..... 12.4
**Table 12.5**. DOE Mixed Analyte Performance Evaluation Program Results for General Engineering Laboratories, LLC ..... 12.9
**Table 12.6**. DOE Mixed Analyte Performance Evaluation Program Results for TestAmerica Richland Laboratory ..... 12.9

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## Acronyms and Abbreviations

| | |
|---|---|
| AEA | *Atomic Energy Act* |
| AFRI | Applied Field Research Initiative |
| ALARA | as low as reasonably achievable |
| ALARACT | As Low As Reasonably Achievable Control Technology |
| ALE | Fitzner/Eberhardt Arid Lands Ecology Reserve |
| AR/PIR | Administrative Record/Public Information Repository |
| ARAR | applicable or relevant and appropriate requirement |
| ASCEM | Advanced Simulation Capability for Environmental Management |
| ASME | American Society of Mechanical Engineers |
| ATL | Advanced Technologies and Laboratories, Inc. |
| BHI | Bechtel Hanford, Inc. (now Bechtel National, Inc., as below) |
| BNI | Bechtel National, Inc. |
| BRMP | Biological Resources Management Plan |
| C&D | construction and demolition |
| CAFO | Consent Agreement and Final Order |
| CERCLA | *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* |
| CFR | *Code of Federal Regulations* |
| CHPRC | CH2M Plateau Remediation Company |
| CHRP | Cultural and Historic Resource Protection |
| CLUP-EIS | *Final Hanford Comprehensive Land-Use Plan Environmental Impact Statement*, DOE/EIS-0222-F |
| COC | contaminant of concern |
| Council | Hanford Natural Resource Trustee Council |
| CRR | Cultural Resource Review |
| CSB | Canister Storage Building |
| CTUIR | Confederated Tribes of the Umatilla Indian Reservation |
| CVDF | Cold Vacuum Drying Facility |
| CWC | Central Waste Complex |
| CY | calendar year |
| D4 | deactivation, decommissioning, decontamination, and demolition |
| DOE | U.S. Department of Energy |
| DOECAP | DOE Consolidated Audit Program |
| DOE-HQ | U.S. Department of Energy, Headquarters |
| DCG | Derived Concentration Guides |
| DNFSB | Defense Nuclear Facility Safety Board |
| DST | double-shell tank |
| DWS | drinking water standard |
| EA | environmental assessment |
| Ecology | Washington State Department of Ecology |
| EDP | environmental data point |
| ETF | 200 Area Effluent Treatment Facility |
| EIS | Environmental Impact Statement |
| EM | U.S. Department of Energy, Office of Environmental Management |
| EMS | Environmental Management System |
| EMSL | Environmental Molecular Sciences Laboratory, a DOE user facility on the PNNL campus |

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| EPA | U.S. Environmental Protection Agency |
| EPCRA | Emergency Planning and Community Right-to-Know Act of 1986 |
| ERDF | Environmental Restoration Disposal Facility |
| ERT | electrical resistance tomography |
| ETF | Effluent Treatment Facility |
| EVOC | (HAMMER) Emergency Vehicle Operations Course |
| FBR | fluidized bed reactors |
| FFTF | Fast Flux Test Facility |
| FONSI | finding of no significant impact |
| FR | *Federal Register* |
| FS | feasibility study |
| FY | fiscal year |
| GEA | gamma energy analysis |
| GHG | greenhouse gases |
| GIS | Geographic Information Systems |
| GPS | Global Positioning System |
| HAB | Hanford Advisory Board |
| HAMMER | Volpentest HAMMER Federal Training Center |
| HASQARD | Hanford Analytical Services Quality Assurance Requirements Document |
| HCP-EIS | *Final Hanford Comprehensive Land-Use Plan Environmental Impact Statement* |
| HEDP | Hanford External Dosimetry Program |
| HEPA | high-efficiency particulate absorber |
| HLW | high-level waste |
| HPMC | HPMC Occupational Medical Services |
| HRNM | Hanford Reach National Monument |
| HRS | Hazard Ranking System |
| HSS | U.S. Department of Energy, Office of Health, Safety, and Security |
| HTO | tritiated water vapor |
| HQ | U.S. Department of Energy, Headquarters |
| IAP | Injury Assessment Plan |
| IC | institutional control |
| ICRP | International Commission on Radiological Protection |
| IDF | Integrated Disposal Facility |
| IRT | Independent Review Team |
| ISCORS | Interagency Steering Committee on Radiation Standards |
| ISMS | Integrated Safety Management System |
| ISO | International Organization for Standardization |
| ISS | interim safe storage |
| IT | Information Technology |
| KBC | K Basins Closure Project |
| LERF | Liquid Effluent Retention Facility (200 Area) |
| LLBG | low-level burial ground |
| LLW | low-level waste |
| LLWMA | Low-level Waste Management Area |
| LOSS | large on-site sewer systems |
| LTS | long-term stewardship |
| MAPEP | Mixed Analyte Performance Evaluation Program |

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| MARS | Mobile Arm Retrieval System |
| MBTA | *Migratory Bird Treaty Act of 1918* |
| MEI | maximally exposed individual |
| MRAD | Environmental Resource Associates |
| MNA | monitored natural attenuation |
| MSA | Mission Support Alliance, LLC |
| NCRP | National Council on Radiation Protection and Measurements |
| NEPA | *National Environmental Policy Act of 1969* |
| NESHAP | National Emission Standards for Hazardous Air Pollutants |
| NHPA | *National Historic Preservation Act of 1966* |
| NLOP | North Load-out Pit |
| NOAA | National Oceanic and Atmospheric Administration |
| NOC | Notice of Construction |
| NPL | National Priorities List |
| NPS | National Park Service |
| NRDWL | Nonradioactive Dangerous Waste Landfill |
| NPDES | National Pollutant Discharge Elimination System |
| NRC | U.S. Nuclear Regulatory Commission |
| NRDA | natural resource damage assessment |
| NRHP | National Register of Historic Places |
| OEA | Office of Independent Enterprise Assessments |
| OFI | opportunities for improvements |
| ORP | U.S. Department of Energy, Office of River Protection |
| OSHA | Occupational Safety and Health Administration |
| OSS | on-site sewer systems |
| OU | operable unit |
| P&T | pump and treat |
| PCB | polychlorinated biphenyl |
| PED | Preliminary Estimate of Damage |
| PFP | Plutonium Finishing Plant |
| PHOENIX | PNNL-Hanford Online Environmental Information eXchange |
| PNL | Pacific Northwest Laboratory (pre-1995 name) |
| PNNL | Pacific Northwest National Laboratory (1995 and later) |
| PQL | practical quantitation limit |
| PRF | Plutonium Reclamation Facility |
| PRTR | Plutonium Recycle Test Reactor |
| PRZ | Periodically Rewetted Zone |
| PT | pretreatment |
| PUREX | Plutonium/Uranium Extraction (Plant) |
| QA | quality assurance |
| QC | quality control |
| QRA | quantitative risk assessment |
| RBDA | risk-based disposal approval |
| RCRA | *Resource Conservation and Recovery Act of 1976* |
| RCW | *Revised Code of Washington* |
| REDOX | reduction/oxidation (Plant) |
| RESRAD | RESidual RADioactive |

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|---|---|
| RI | remedial investigation |
| RFI/CMS | RCRA facility investigation/corrective measures study |
| RFID | radiofrequency identification |
| RL | U.S. Department of Energy, Richland Operations Office |
| ROD | record of decision |
| RPD | relative percent difference |
| RUM | Ringold Formation upper mud unit |
| SARA | *Superfund Amendments and Reauthorization Act* |
| SCWE | Safety Conscious Work Environment |
| SDWA | Safe Drinking Water Act |
| SEP | special environmental project |
| SHPO | Washington State Historic Preservation Office |
| SOW | statement of work |
| SST | single-shell tank |
| SWL | Solid Waste Landfill |
| TCP | Traditional Cultural Property |
| TEDF | Treated Effluent Disposal Facility (200 Area) |
| THP | total petroleum hydrocarbons |
| TLD | thermoluminescent dosimeter |
| TPA | Tri-Party Agreement (official name *Hanford Federal Facility Agreement and Consent Order*) |
| TRIDEC | Tri-Cities Economic Development Council |
| TPA agencies | U.S. Department of Energy, U.S. Environmental Protection Agency, and Washington State Department of Ecology |
| TSCA | *Toxic Substances Control Act* |
| TSD | treatment, storage, and disposal |
| TWG | Technical Work Group |
| U.S.C. | *United States Code* |
| USFWS | United States Fish and Wildlife Service |
| USGS | U.S. Geological Survey |
| VOA | volatile organic analyses |
| VPP | Voluntary Protection Program |
| VPPPA | Voluntary Protection Program Participants Association |
| WAC | *Washington Administrative Code* |
| WBGT | wet-bulb global temperature |
| WCH | Washington Closure Hanford, LCC |
| WDFW | Washington Department of Fish and Wildlife |
| WDOH | Washington State Department of Health |
| WESF | Waste Encapsulation and Storage Facility |
| WHCWG | (Washington) Wildlife Habitat Connectivity Working Group |
| WIPP | Waste Isolation Pilot Plant |
| WMA | waste management area |
| WNHP | Washington Natural Heritage Program |
| WRAP | Waste Receiving and Processing (Facility) |
| WRPS | Washington River Protection Solutions, LLC |
| WSCF | Waste Sampling and Characterization Facility |
| WTP | Waste Treatment and Immobilization Plant |

## Units of Measure and Symbols

| | |
|---|---|
| ac | acre(s) |
| Bq | becquerel |
| C | Celsius |
| $CO_2e$ | carbon dioxide equivalent |
| cm | centimeter(s) |
| dpm | disintegrations per minute |
| F | Fahrenheit |
| ft | foot/feet |
| g | gram(s) |
| gal | gallon(s) |
| ha | hectare(s) |
| kg | kilogram(s) |
| in. | inch(es) |
| km | kilometer(s) |
| L | liter(s) |
| lb(s) | pound(s) |
| m | meter(s) |
| mi | mile(s) |
| min | minute(s) |
| mg | milligram(s) |
| mL | milliliter(s) |
| mrem | millirem |
| MT | metric tons |
| pCi | picocuries |
| ppm | parts per million |
| rem | roentgen equivalent in man |
| Sv | sievert |
| $[unit]^2$ | square unit of measure |
| $[unit]^3$ | cubed unit of measure |
| yr | year(s) |
| | |
| ° | degree(s) |
| µ | microgram(s) |
| µS | microsiemen(s) |
| µSv | millisievert(s) |
| / | per |
| % | percent |

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