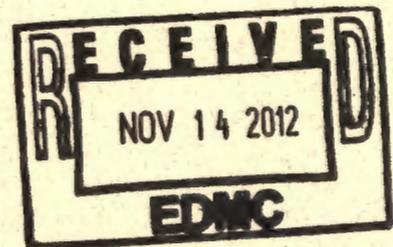


DOE/RL-2010-34
Rev. 1

Removal Action Work Plan for River Corridor General Decommissioning Activities



United States
Department of Energy

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100-NR-1
300-FF-2

Attached to: 1217765

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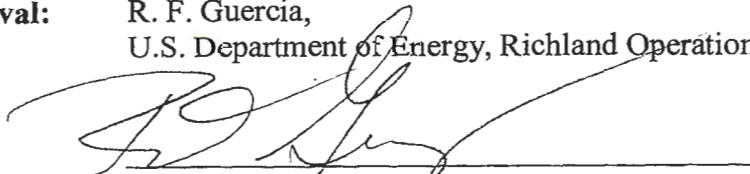
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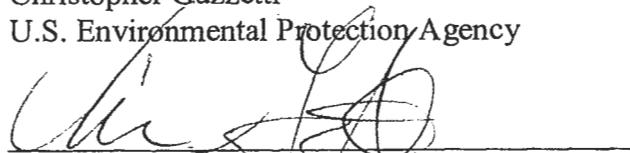
Title: Removal Action Work Plan for River Corridor General Decommissioning Activities

Approval: R. F. Guercia,
U.S. Department of Energy, Richland Operations Office


Signature

10/25/2012
Date

Christopher Guzzetti
U.S. Environmental Protection Agency


Signature

10/25/12
Date

Having considered the extent to which the Removal Action Work Plan, DOE/RL-2010-34, *Removal Action Work Plan for River Corridor General Decommissioning Activities*, could be inconsistent with *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* processes or could alter schedules set forth in Appendix D of the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement), the U.S. Environmental Protection Agency approves pursuant to Section 7.2.4 of the Tri-Party Agreement Action Plan.

Frederick W. Bond
Washington State Department of Ecology


Signature

10/25/12
Date

Having considered the extent to which the Removal Action Work Plan, DOE/RL-2010-34, *Removal Action Work Plan for River Corridor General Decommissioning Activities*, could be inconsistent with *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* processes or could alter schedules set forth in Appendix D of the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement), the State of Washington, Department of Ecology approves pursuant to Section 7.2.4 of the Tri-Party Agreement Action Plan.

Removal Action Work Plan for River Corridor General Decommissioning Activities

October 2012



United States Department of Energy

P.O. Box 550, Richland, Washington 99352

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ACRONYMS

ACM	asbestos-containing material
ALARA	as low as reasonably achievable
ARAR	applicable or relevant and appropriate requirement
BFA	building footprint area
BMP	best management practice
CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</i>
CFR	<i>Code of Federal Regulations</i>
D4	deactivation, decontamination, decommissioning and demolition
DAC	Derived Air Concentration
DOE	U.S. Department of Energy
Ecology	Washington State Department of Ecology
EE/CA	engineering evaluation/cost analysis
EPA	U.S. Environmental Protection Agency
ERDF	Environmental Restoration Disposal Facility
GWQC	groundwater quality criteria
HASP	health and safety plan
HEPA	high-efficiency particulate air (filter)
NTCRA	Non-Time Critical Removal Action
PCB	polychlorinated biphenyl
PPE	personal protective equipment
PTE	potential to emit
RAWP	removal action work plan
RCF	Radiological Counting Facility
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
S&M	surveillance and maintenance
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>
TSCA	<i>Toxic Substances Control Act of 1976</i>
WAC	<i>Washington Administrative Code</i>

METRIC CONVERSION CHART

Into Metric Units			Out of Metric Units		
<i>If You Know</i>	<i>Multiply By</i>	<i>To Get</i>	<i>If You Know</i>	<i>Multiply By</i>	<i>To Get</i>
Length			Length		
inches	25.4	Millimeters	millimeters	0.039	inches
inches	2.54	Centimeters	centimeters	0.394	inches
feet	0.305	Meters	meters	3.281	feet
yards	0.914	Meters	meters	1.094	yards
miles	1.609	Kilometers	kilometers	0.621	miles
Area			Area		
sq. inches	6.452	sq. centimeters	sq. centimeters	0.155	sq. inches
sq. feet	0.093	sq. meters	sq. meters	10.76	sq. feet
sq. yards	0.836	sq. meters	sq. meters	1.196	sq. yards
sq. miles	2.6	sq. kilometers	sq. kilometers	0.4	sq. miles
Acres	0.405	Hectares	hectares	2.47	acres
Mass (weight)			Mass (weight)		
ounces	28.35	Grams	grams	0.035	ounces
pounds	0.454	Kilograms	kilograms	2.205	pounds
ton	0.907	metric ton	metric ton	1.102	ton
volume			Volume		
teaspoons	5	Milliliters	milliliters	0.033	fluid ounces
tablespoons	15	Milliliters	liters	2.1	pints
fluid ounces	30	Milliliters	liters	1.057	quarts
cups	0.24	Liters	liters	0.264	gallons
pints	0.47	Liters	cubic meters	35.315	cubic feet
quarts	0.95	Liters	cubic meters	1.308	cubic yards
gallons	3.8	Liters			
cubic feet	0.028	cubic meters			
cubic yards	0.765	cubic meters			
Temperature			Temperature		
Fahrenheit	subtract 32, then multiply by 5/9	Celsius	Celsius	multiply by 9/5, then add 32	Fahrenheit
Radioactivity			Radioactivity		
picocuries	37	Millibecquerel	millibecquerels	0.027	picocuries

1.0 INTRODUCTION

This removal action work plan (RAWP) implements the River Corridor-related workscope selected by the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA), DOE/RL-2010-22, *Action Memorandum for General Hanford Site Decommissioning Activities* (Action Memorandum) (DOE-RL 2010a), which was based on DOE/RL-2010-14, *Engineering Evaluation/Cost Analysis for General Hanford Site Decommissioning Activities* (DOE-RL 2010b). Specifically, this RAWP will be used for the decommissioning of Hanford excess industrial buildings and structures, and cleanup of miscellaneous debris that are located within the River Corridor Project. This RAWP is one of several being developed to implement the activities covered in the Action Memorandum. The rationale for multiple RAWPs is to facilitate implementation of the workscope by U.S. Department of Energy, Richland Operations Office (DOE-RL) contractors in accordance with their separate contracts, procedures, and processes.

This RAWP implements the deactivation, decontamination, decommissioning, and demolition (D4) of excess industrial buildings, structures¹, and debris² within the scope of the River Corridor Project at the Hanford Site. Removal activities could occur within any River Corridor Project location to include the 100, 300, 400, and 600 Areas of the Hanford Site. Excess industrial buildings, structures, and solid waste debris are owned and managed by DOE-RL in Benton County, Washington (Figure 1-1). The facilities were constructed and operated in support of the overall Hanford reactor and research missions.

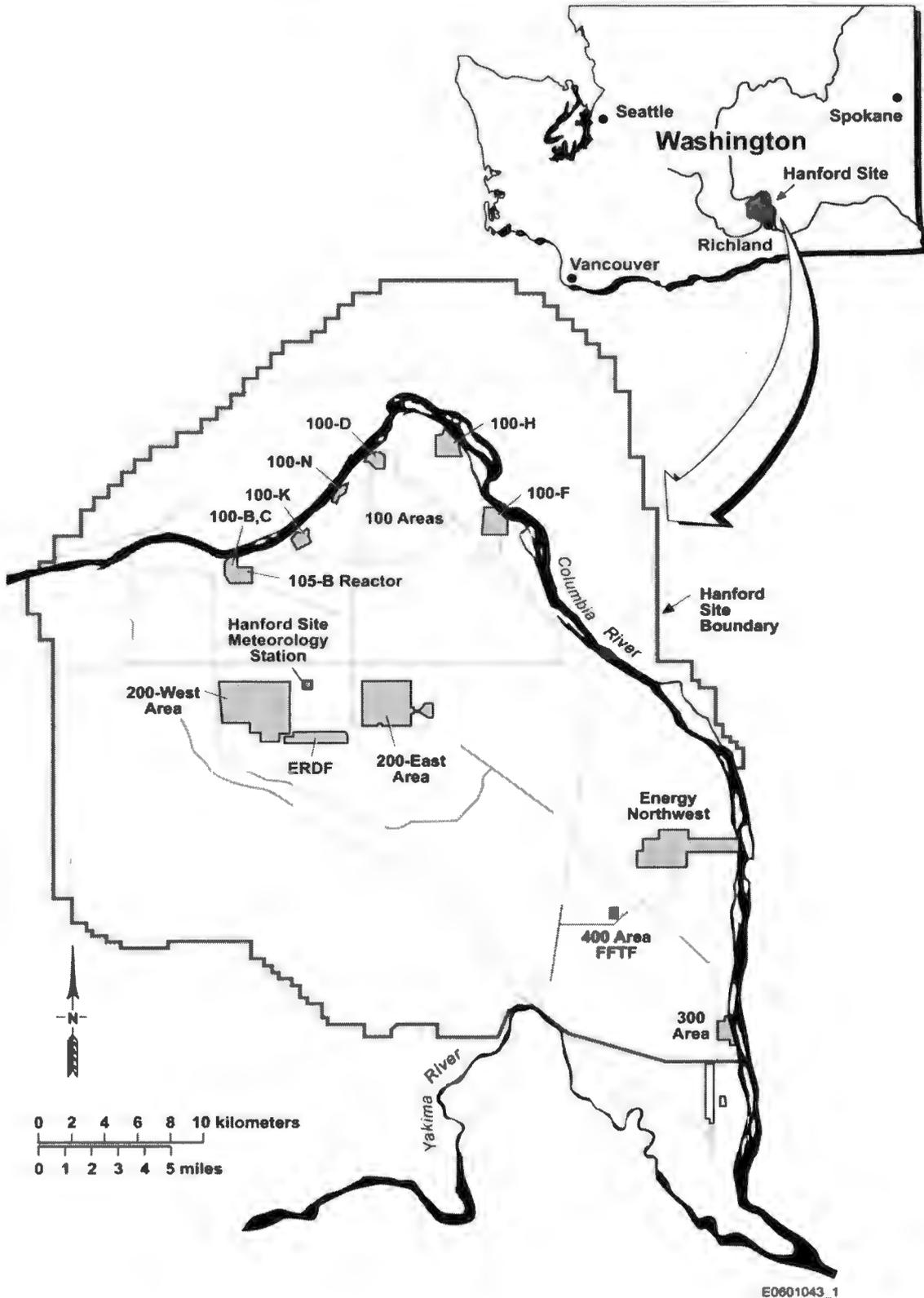
The Hanford Site includes nearly 1,000 buildings/structures that are or have been used to support site activities. Many of these buildings/structures were not used for radiological or chemical processing but may have some incidental contamination from proximity to other buildings/structures. The debris is located throughout the Hanford Site and includes miscellaneous waste forms such as telephone poles, abandoned rail track, concrete rubble, wood, glass, and brick that may contain some radiological or chemical components. Hanford excess industrial buildings/structures are potentially contaminated with radioactive and chemical hazardous substances and are generally small, wood-framed, metal, cinder block, or concrete structures used for offices, change rooms, material storage buildings, or effluent monitoring buildings. To qualify under this Non-Time-Critical Removal Action (NTCRA), the buildings/structures must meet the following criteria:

- The buildings/structures are suitable for routine decommissioning and/or demolition methods.

¹ The terms “buildings” and “structures” is used to generically encompass all of the contaminated, potentially contaminated surface and subsurface structures, buildings, foundations, above ground utilities, fencing, pipelines, ducting, etc., associated with this removal action.

² The term “debris” is used to refer to contaminated and potentially contaminated miscellaneous waste forms (e.g., telephone poles, abandoned rail track, concrete rubble, wood, glass, brick).

Figure 1-1. Hanford Site Map.



- The buildings/structures/debris have not been addressed by another approved CERCLA decision document or *Resource Conservation and Recovery Act of 1976 (RCRA)* closure plan for which the implementation would eliminate the release or threat of release of hazardous substances to the environment.

1.1 PURPOSE AND OBJECTIVE OF THE REMOVAL ACTION WORK PLAN

The purpose of this RAWP is to establish the methods and activities required to perform the following functions:

- Complete D4 of excess industrial buildings and structures (e.g., building contents, aboveground structures, on-grade floor slabs, and the below-grade foundations and piping) addressed within the *Engineering Evaluation/Cost Analysis for General Hanford Decommissioning Activities (EE/CA)* (DOE-RL 2010b).
- Complete removal of miscellaneous debris that has been identified as needing cleanup to protect habitat, human health, and restore the environment.
- Manage and dispose of all waste generated during these actions.

This RAWP satisfies the requirement to submit a work plan outlining how compliance with the removal action objectives and applicable or relevant and appropriate requirements (ARARs) (Section 4.1) will be achieved.

This RAWP directs the removal action activities including the development of specific project tasks that are described in work packages and subcontract task orders. Using the most recent information concerning facility conditions, field-level work packages will be developed to direct work activities and instruct workers in the most applicable work methods. Work packages will be written in accordance with, but do not supersede, the requirements outlined in this RAWP. Existing contractor procedures and specifically developed instructions will be used to perform and control the building, structure, and solid waste debris removal and disposal actions.

Table 1-1 provides a list of the building/structures in the 100, 300, 400, and 600 Areas that have been identified to undergo D4 through implementation of this RAWP as they become excess. As identified in the Action Memorandum, additional buildings may be added, subject to review and approval by the lead regulator.

Table 1-1. Building/Structure List and Location. (5 Pages)

Building Number	Area	Approximate Waste Quantity (ton)
105B Washpad Annex (above-grade)	100-B	360
119-B Vacuum Seal House	100-B	6
151-B Substation	100-B	940

Introduction

Table 1-1. Building/Structure List and Location. (5 Pages)

Building Number	Area	Approximate Waste Quantity (ton)
1608-B Shed	100-B	335
183B ^a	100-B	3446
MO-747 Mobile Office	100-B	395
MO-875 Mobile Office	100-B	226
MO-876 Mobile Office	100-B	226
MO-877 Mobile Office	100-B	47
MO-878 Mobile Office	100-B	63
MO-879 Mobile Office	100-B	63
MO-899 Mobile Office	100-B	105
Storage Box #1	100-B	35
Storage Box #2	100-B	35
210-DR Tent	100-D	25
118-D Tent	100-D	25
151-D Substation	100-D	940
183D ^b	100-D	3446
1902D (below grade) ^b	100-D	50
635 Shipping Shed	100-D	15
MO-084 Mobile Service Building	100-D	47
MO-785 Mobile Service Building	100-D	30
MO-786 Mobile Service Building	100-D	281
MO-787 Mobile Service Building	100-D	175
MO-788 Mobile Service Building	100-D	30
MO-789 Mobile Service Building	100-D	281
MO-790 Mobile Service Building	100-D	226
MO-791 Mobile Service Building	100-D	47
MO-793 Mobile Service Building	100-D	47
MO-794 Mobile Service Building	100-D	30
MO-870 Mobile Service Building	100-D	38
MO-874 Mobile Service Building	100-D	15
MO-889 Water Trailer	100-D	25
MO-980 Mobile Office	100-D	289
MO-929 Water Trailer	100-D	15
MO-989 Water Trailer	100-D	25
CC0643 Storage Box	100-D	35
CC60538 Storage Box	100-D	35
CC1D0545 Storage Box	100-D	35
CC1D0546 Storage Box	100-D	35
MO-417 Mobile Office	100-F	1,754
634 Shipping Shed	100-H	16
MO-229 Mobile Office	100-H	579
MO-796 Mobile Office	100-H	281
MO-797 Mobile Office	100-H	175
MO-798 Mobile Office	100-H	281
MO-799 Mobile Office	100-H	63
MO-848 Mobile Office	100-H	38
HO-64-04265 Service Building	100-H	25
HO-64-4263 Service Building	100-H	25
HO-64-6383 Storage Box	100-H	25

Table 1-1. Building/Structure List and Location. (5 Pages)

Building Number	Area	Approximate Waste Quantity (ton)
HO-64-6387 Storage Box	100-H	25
HO-64-06067 Storage Box	100-H	47
CT0023 Storage Box	100-H	15
CT0024 Storage Box	100-H	42
CT0025 Storage Box	100-H	25
612A Skid Mount Shed	100-K	120
612B Skid Mount Shed	100-K	120
6140 Tent	100-K	25
MO-751 Mobile Service Building	100-K	2,215
MO-755 Mobile Office	100-K	2,215
MO-883 Mobile Service Building	100-K	1,804
MO-884 Mobile Service Building	100-K	601
MO-885 Mobile Service Building	100-K	2,707
MO-886 Mobile Service Building	100-K	456
105ND ^c	100-N	87
1120N ^c	100-N	1956
1143N ^c	100-N	971
1724N Nitrogen Electrical Control ^d	100-N	946
1904N ^c	100-N	916
1904NA/1904NB/1904NC ^c	100-N	320
1112NA (below grade) ^c	100-N	15
1112N (below grade) ^c	100-N	15
1902N81 Valve House	100-N	147
120-N Bioremediation Enclosure	100-N	61
HO-64-3548 Mobile Service Building	100-N	61
HO-64-6337 Mobile Service Building	100-N	35
HO-64-5865 Mobile Service Building	100-N	35
CC0576 Storage Box	100-N	15
CC0577 Storage Box	100-N	35
CC0578 Storage Box	100-N	35
CC0579 Storage Box	100-N	35
CC0580 Storage Box	100-N	35
CC0581 Storage Box	100-N	35
CC0582 Storage Box	100-N	35
CC0583 Storage Box	100-N	35
CC0583 Storage Box	100-N	35
CC0584 Storage Box	100-N	35
CC0585 Storage Box	100-N	35
CC0586 Storage Box	100-N	35
CC0677 Storage Box	100-N	35
CC1N0253 Storage Box	100-N	35
CC1N0410 Storage Box	100-N	35
CC1N0543 Storage Box	100-N	35
CC1N0544 Storage Box	100-N	35
MO100 (1110N) ^c	100-N	213
MO-403 Mobile Office	100-N	434
MO415 (1103N) ^c	100-N	2295
MO425 ^c	100-N	284

Introduction

Table 1-1. Building/Structure List and Location. (5 Pages)

Building Number	Area	Approximate Waste Quantity (ton)
MO426/MO427 ^c	100-N	349
MO-085 Mobile Service Building	100-N	376
MO-088 Mobile Service Building	100-N	15
MO-765 ^c	100-N	200
MO-769 Mobile Office	100-N	63
MO-801 Mobile Office	100-N	1,158
MO-802 Mobile Office	100-N	1,158
MO-803 Mobile Service Building	100-N	501
MO-804 Mobile Service Building	100-N	200
MO-809 Mobile Office	100-N	1,804
MO-811 Mobile Office	100-N	376
MO-865 Mobile Office	100-N	301
MO-866 Mobile Office	100-N	301
MO-868 Mobile Office	100-N	30
HS-007 ^c	100-N	15
HS-008 ^c	100-N	15
331-C ^e	300	1,127
331-D ^e	300	223
331-G ^e	300	249
331-H ^e	300	679
3506-C ^f	300	100
337 Technical Center	300	5,855
337B High-Bay Test Facility	300	14,145
MO-061 Mobile Office	300	2,245
MO-075 Mobile Office	300	301
MO-161 Mobile Office	300	132
MO-245 Mobile Office	300	2,316
MO-246 Mobile Office	300	842
MO-767 Mobile Office	300	1,804
MO-812 Mobile Office	300	4,511
MO-827 Mobile Office	300	289
MO-898 Mobile Office	300	47
MO-984 Mobile Office	300	226
MO-985 Mobile Office	300	226
MO-986 Mobile Office	300	47
MO-987 Mobile Office	300	47
4220 Telephone Exchange	400	14
4221 LAN Hub	400	133
4701B Guard Station	400	205
4701C Guard Station	400	508
4702 Office Barracks	400	3,532
4704N Shop Building	400	1,494
4704S Fire Station	400	1,491
4706 Office Building	400	3,072
4707 Office Building	400	432
4719 Guard Station	400	339
4722B Shop Building	400	764
4722C Shop Building	400	811

Introduction

Table 1-1. Building/Structure List and Location. (5 Pages)

Building Number	Area	Approximate Waste Quantity (ton)
4726 Storage Building	400	100
4727 Storage Building	400	38
4732A Warehouse	400	2,342
4732B Warehouse	400	3,633
4732C Warehouse	400	1,664
4732D Warehouse	400	1,335
4734D ^b	400	1,290
4760 Shop Building	400	1,290
4790 Guard Station	400	790
4790A Microwave Tower	400	253
4791TC Warehouse	400	254
4802 Shop Building	400	237
4814 Warehouse	400	852
4831 Storage Building	400	300
4843 Storage Building	400	852
CC40168 Storage Box	400	23
HS 0079 Storage Box	400	23
MO-480 ^h	600	15
MO-481 ^h	600	35

^a Added by TPA-CN-470, 6/5/11.

^b Added by TPA-CN-493, 12/29/11.

^c Added by TPA-CN-494, 12/29/11.

^d Added by TPA-CN-496, 2/16/12.

^e Added by TPA-CN-430, 2/28/11.

^f Added by TPA-CN-492, 12/14/11

^g Added by TPA-CN-434, 7/14/11.

^h Added by TPA-CN-469, 3/10/11.

1.2 OBJECTIVES

The primary goal of CERCLA removal actions is to minimize or eliminate threats to public health or the environment caused by the presence of hazardous substances. The EE/CA for general Hanford Site decommissioning activities (DOE-RL 2010b) presented three alternatives for future facility management and the resulting levels of protection of public health and the environment that may be anticipated. Based on the evaluation, D4 was the selected alternative. This alternative was chosen based on its overall ability to protect human health and the environment and its effectiveness in maintaining protection for both the short term and the long term. The alternative would also reduce the potential for a release by reducing the inventory of contaminants available to the environment. This alternative provides the best balance of protecting human health and the environment, protecting workers, meeting the removal action objectives, achieving cost effectiveness, and providing an end state that is consistent with future cleanup actions and commitments to the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 2003). The selection and approval of this approach are documented in the Action Memorandum (DOE-RL 2010a).

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Based on the potential hazards identified in Section 1.4, the following removal action objectives have been identified:

- Protect human receptors from exposure to radiological and hazardous substances in facility structures above acceptable exposure levels for nonradiological general employees
- Control the migration of contaminants from the buildings/structures and debris into the environment
- Facilitate and, to the extent practicable, be consistent with anticipated remedial actions at the Hanford Site
- Achieve ARARs to the fullest extent practicable
- Safely treat, as appropriate, and dispose of waste streams generated by the removal action
- Prevent adverse impacts to cultural and natural resources and threatened or endangered species, and minimize wildlife habitat disruption
- Reduce or eliminate the need for future surveillance, maintenance, or periodic inspection activities.

1.3 SCOPE

Facilities and debris sites addressed in the scope of this RAWP include all those that fall within the River Corridor Project work scope, excluding those where DOE has identified a long-term use for the facility. These areas include the 100 Areas, 300 Area, 400 Area, and 600 Area (Figure 1-1). The list of facilities that are addressed within this RAWP is provided in Table 1-1.

Some buildings/structures slated for D4 may be found to be unsuitable for inclusion within this removal action or DOE-RL may find unforeseen future uses prior to performing the decommissioning. If this occurs, and eliminating the buildings/structures from the list identified in Table 1-1 is appropriate, documentation would be placed in the Administrative Record for this NTCRA identifying the buildings/structures and explaining why it is not being addressed under the scope of the NTCRA. Furthermore, DOE-RL may need to D4 other Hanford buildings/structures within the River Corridor Project with similar characteristics, contaminants, and complexities to those specifically identified in Table 1-1. Consistent with the Action Memorandum, this RAWP intends to allow the potential future inclusion of such buildings and structures under the scope of the NTCRA, as appropriate. If additional buildings and structures are added to Table 1-1, concurrence from Ecology and EPA would first be obtained and documentation would be placed in the Administrative Record for this NTCRA, identifying the building or structure and explaining why it is sufficiently similar to the buildings/structures specifically identified in the Action Memorandum (DOE-RL 2010a) and this RAWP.

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Furthermore, it is recognized that the status of the buildings and structures facilities will change over time. Changes could include, but are not limited to, modifying the status of facilities from active to inactive, adding scope to removal action that was previously missed or excluded, and changing the status of facilities from demolished to closed and/or transferred. This RAWP will be revised and Table 1-1 updated, as needed, to incorporate the changes documented in the Administrative Record.

Where below-grade structures remain, a decision may be made to remove the foundation while performing demolition. In other cases, the below-grade structures may remain in place until they are removed to provide access to any newly discovered waste sites. If the remaining structure and underlying soils are determined to be clean, then no further action will be required. Section 2.6 establishes the site completion process.

1.4 HAZARD DESCRIPTION

This section discusses the hazards associated with the buildings/structures and debris sites included in this RAWP. The buildings/structures addressed are limited to those facilities included in Table 1-1. Debris sites are not specifically identified in this RAWP. Rather, debris sites candidate for removal are identified through the River Corridor Project Orphan Waste Sites Program. This program, in part, includes routine inspections intended to identify and characterize undiscovered waste sites including solid waste debris locations.

At this time, not all of the building/structures and debris sites in this document have been fully characterized; therefore, CERCLA hazardous substances have not been conclusively identified in all of the facilities. Following any necessary characterization, the CERCLA hazardous substances will be known.

The hazardous substances will be managed in accordance with as low as reasonably achievable (ALARA) considerations, the applicable requirements provided in Section 4.1, and the waste management plan (Section 4.2) of this RAWP. Contaminant sources addressed by this RAWP include the potential for both radiological and chemical hazardous substances.

1.4.1 Radiological Hazards

Buildings/structures and debris sites within the scope of this RAWP have the potential to be radiologically contaminated. Radiological contaminants may include, but are not limited to the following:

- Americium-241
- Cesium isotopes
- Cobalt-60
- Curium isotopes
- Europium isotopes
- Niobium-94
- Radium-226

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- Selenium-79
- Strontium-90
- Plutonium isotopes
- Technetium-99
- Thorium isotopes
- Uranium isotopes.

1.4.2 Chemical Hazards

For inactive buildings/structures that have been deactivated, all bulk chemical inventories have been removed for recycling or disposal. Bulk chemical inventories may still exist in active buildings and structure, but will be removed prior to initiating D4 activities. Some residual quantities of hazardous chemicals may remain in the process lines, tanks, and drains. Asbestos and lead are found in the greatest quantities and are located throughout many of the building and structures. In addition, several other hazardous materials could be present including, but not limited to, the following:

- Asbestos
- Cadmium
- Beryllium
- Lead
- Polychlorinated biphenyls (PCBs)
- Mercury (in electrical switches)
- Refrigerants (Freon[®])
- Lubricants
- Commercial solvents
- Corrosives
- High-efficiency particulate air (HEPA) filter media (desiccants)
- Sodium vapor and mercury vapor lighting
- Biological hazards from animal intrusion in facilities
- Chemicals (old containers of residual chemical constituents).

The removal of these materials will be performed in accordance with contractor procedures that ensure control over hazardous substances. The contractor's standards and procedures for asbestos and lead ensures that personnel removing, handling, and disposing of waste is performed in a manner that achieves the following objectives:

- Protect the safety of employees and the general public
- Minimize spills and releases to the environment
- Meet applicable DOE, federal, state, and local regulatory requirements.

1.4.2.1 Asbestos. Asbestos-containing material (ACM) could be found in and around the building and structures addressed by this RAWP. Personnel involved in asbestos cleanup will follow the applicable requirements of *29 Code of Federal Regulations*

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(CFR) 1926.1101, "Asbestos." Task-specific requirements for controls will be contained within the associated work package.

1.4.2.2 Cadmium. Cadmium is a byproduct of the metal finishing process. Cadmium could also be present in electrical equipment. At certain levels, cadmium is regulated as a hazardous waste. Waste containing cadmium above regulatory limits will require treatment prior to disposal.

1.4.2.3 Beryllium. Beryllium contamination may be present in buildings and structures addressed under this removal action. Although beryllium is not regulated as a dangerous waste, there are health and safety requirements that must be addressed when working with beryllium-contaminated structures.

1.4.2.4 Lead. Lead may exist in surface coatings (e.g., lead-based paint, lead-shielded cables), plumbing, and as radiological shielding (e.g., lead shot, brick, sheet, and cast-lead forms) inside some of the buildings and structures. Personnel must exercise caution to avoid disturbing or contacting lead or suspect lead material. Workers performing job tasks that involve lead shall follow the applicable requirements in the contractor's procedures and the associated work package.

1.4.2.5 PCBs. PCBs may be found in the painted surfaces of facilities and in the waste oils generated during facility decontamination and deactivation. Material that is painted, and for which the paint contains PCBs, will be managed as "PCB Bulk Product Waste."

1.4.2.6 Mercury. Mercury could be present in electrical equipment. At certain levels, mercury is regulated as a dangerous waste. Waste containing mercury above regulatory limits will require treatment prior to disposal.

1.4.2.7 Refrigerants. Refrigerants are regulated due to their effect on the ozone layer of the atmosphere. Refrigerants will be "recovered" prior to disposal of the equipment.

1.4.2.8 Lubricants. Lubricants sometimes contain hazardous substances. Equipment will be drained of lubricants to the extent practical prior to disposal.

1.4.2.9 Commercial Solvents. Commercial solvents may be designated as a dangerous waste. Equipment will be drained of commercial solvents and may require treatment prior to disposal.

1.4.2.10 Corrosives. Corrosives may be present in facilities that have not been deactivated. In the state of Washington, corrosive solids and liquid waste above the regulatory limits must be managed, treated, and disposed of as a dangerous waste.

1.4.2.11 HEPA Filter Media. HEPA filter media may contain toxic metals above the regulatory limits. HEPA filters may need to be sampled prior to disposal to demonstrate whether or not they contain toxic metals above the regulatory limits.

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1.4.2.12 Sodium Vapor and Mercury Vapor Lighting. Sodium vapor and mercury vapor lighting will be dispositioned through the Hanford Site Centralized Consolidated Recycling Center (CCRC) whenever possible. Sodium above a certain concentration is regulated within the state of Washington as a dangerous waste. Mercury above a certain concentration is regulated as a dangerous waste.

1.4.2.13 Biological Hazards. Biological hazards could be encountered in the facilities contained in this RAWP. Examples of biological hazards include bird and rodent carcasses and feces. Biological hazards will be identified as part of the surveillance and maintenance (S&M) and facility deactivation process.

1.4.2.14 Chemicals. Some bulk chemical inventories have been disposed or recycled during deactivation of these facilities; however, the potential exists for the discovery of old containers of residual chemical constituents (e.g., solvents, greases, hydraulic and fuel oils, aerosols, preservative treated wood).

2.0 REMOVAL ACTION ELEMENTS

The following sections provide a general description of how work activities will be performed to remove the buildings/structures and debris addressed in this RAWP. The general scope of work involved to implement this removal action includes the following activities:

- S&M activities
- Characterization sampling and analysis
- Site mobilization and preparation activities
- Facility D4
- Site completion
- Disposing of waste (including waste generated during S&M activities prior to D4)
- Demobilization.

2.1 SURVEILLANCE AND MAINTENANCE

The goal of the S&M is to sustain a facility in a safe condition. Continued S&M activities are applicable to facilities prior to demolition and may also apply to remaining structures and waste sites following demolition. The S&M measures include routine radiological and hazard monitoring of buildings/structures and debris sites, safety inspections, and maintenance activities necessary to keep site conditions safe. The S&M activities are tailored to the specific conditions of the building/structure and debris site. Waste generated during this period shall be evaluated for disposal at the Environmental Restoration Disposal Facility (ERDF). It is expected that most waste generated during S&M activities will meet the acceptance criteria for ERDF.

2.2 CHARACTERIZATION SAMPLING AND ANALYSIS

Characterization is necessary to support waste disposal activities, to define contaminants present before or after the completion of the removal action, and in some cases to investigate anomalous conditions.

Waste characterization documents produced to support this removal action include DOE/RL-2010-041, *Sampling and Analysis Plan for River Corridor General Decommissioning Activities* (DOE-RL 2010c). Waste characterization will be conducted prior to and during D4 activities for each facility location, as needed. Facility-specific historical information will be used to identify which waste streams are expected to be generated; the initial characterization data needs; and the rationale, strategy, and requirements for the data collection and analysis. Data collection may include survey and sample data. The initial characterization data will be used to:

- Characterize waste for treatment and/or disposal

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- Identify radiological and hazardous conditions that will be encountered during D4 of the facility
- Specify health and safety requirements.

In-process sampling will also be performed, as necessary, to characterize unexpected waste materials encountered during facility D4 and debris removal.

2.3 SITE MOBILIZATION AND PREPARATION WORK

Upon initiation of D4 and debris removal activities, personnel, required equipment, and materials will be mobilized. The first activities to be performed will include mobilizing personnel and temporary infrastructure to support project activities. Personnel will also terminate and/or verify termination of facilities services and utilities, as appropriate. Electrical systems that will be used throughout the D4 activities are discussed in further detail in Section 3.4.

Concurrent with these activities, waste management areas will be set up within the building footprint area (BFA) (Section 4.2.3.1) or within the onsite location outside the BFA to facilitate transportation of the material for disposal in accordance with this document. Supervisor, lunch, change, office, and mobile shower trailers, as well as restroom facilities will be mobilized, as required, at the sites to prepare for D4 activities. Temporary power will be connected from an outside line or generator, and temporary power and lighting will be installed, as needed.

2.4 DEACTIVATION, DECONTAMINATION, DECOMMISSIONING, AND DEMOLITION ACTIVITIES

In general, work activities will begin by developing a baseline of the facility conditions. Biological cleanup, general housekeeping, and removal of hazardous materials may also be necessary. For facilities, fluids will be drained from piping and equipment. Overhead utilities and adjacent concrete and asphalt will be removed, as needed, from the BFA to support demolition activities. Contaminated materials may be fixed in place. These activities will be managed in accordance with the contractor's procedures and work packages that address removing, handling, and disposing of these materials in a manner that protects the safety of employees and the general public, minimizes spills and releases to the environment, and meets all regulatory requirements.

Asbestos abatement activities will be performed in full compliance with all substantive NESHAP standards that are ARAR for the work. Prior to the commencement of the demolition a thorough inspection of the affected facility will be performed for the presence of asbestos, including Category I and Category II nonfriable asbestos-containing material (ACM). All Category II nonfriable ACM will be generally presumed to be potentially friable and will be removed prior to the start of actual demolition activities. If DOE identifies any Category II ACM that should be allowed to remain in place during demolition based on knowledge that the demolition will not render it friable, information identifying the planned demolition approach and describing how

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the Category II ACM will become crumbled, pulverized, or reduced to powder, by the forces expected to act upon it during the demolition or otherwise friable will be provided in advance to EPA for approval. Category I nonfriable ACM will also be removed prior to the start of actual demolition activities, except in situations where demolition practices will be used that can be or have been demonstrated to the satisfaction of the EPA not to render the Category I ACM friable, consistent with NESHAP standards. Demonstration can be performed using existing EPA or Washington State guidance regarding asbestos abatement under NESHAP. Such Category I nonfriable ACM must not be in poor condition and planned demolition activities must not subject the ACM to sanding, grinding, cutting, or abrading. In all cases, ACM that is either friable or cannot be demonstrated to remain nonfriable during demolition will be removed prior to such demolition as required by NESHAP. Unattached, not-in-use, and accessible lead bricks and sheeting; PCBs (primarily motor oils, and light ballasts); mercury (primarily in lighting components and switches); and other hazardous materials will be removed to the extent practical and disposed as hazardous or mixed waste or recycled. Guidelines for waste management are found in Section 4.2.

Piping and drains entering or exiting each building/structure below-grade will be plugged or grouted to prevent potential pathways to the environment. Groundwater wells may be located near or within the footprint of the structures undergoing demolition. The groundwater wells may or may not be affected by the facility demolition. If required, the wells will be decommissioned prior to initiating facility demolition.

2.5 FACILITY DEMOLITION/DEBRIS REMOVAL

The facilities will be demolished using standard demolition techniques (e.g., excavator with a hoe-ram, a hydraulic shear with steel shear jaws, concrete pulverizer jaws or breaker jaws, and/or controlled explosives). Water may be used to control dust generated from demolition and debris removal activities, as appropriate. The amount of water used will be minimized to prevent ponding and runoff. Additional work practices/controls may need to be implemented to control runoff depending on site conditions. Controls will be described in work controlling documents (e.g., work packages) and could include removing asphalt to allow water to infiltrate into the ground as well as establishing berms around the demolition area. Structures will be demolished and disposed. Debris will be removed from any given area using industry standard methods (e.g., front-end loader, dump truck).

How below-grade structures are addressed will depend on the condition of the structures and if any soil contamination may be present or discovered. Below-grade structures that are uncontaminated may be left in place and will be documented in accordance with the site completion process (Section 2.6).

2.6 SITE COMPLETION

Site completion will be pursued when removal actions are completed for a building/structure, or debris, or a geographically-related group of buildings/structures or debris locations. When

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pursuing building/structure completion, a Facility Status Change Form will be prepared to provide a summary of the completed actions, the as-left condition of the area, any characterization data collected during the removal action, and an assessment of the underlying soil. The form will be approved by DOE to document completion of the removal action. The form and instructions for completing the form are provided in Appendix A.

Completion documentation for removal and disposal of miscellaneous debris shall be documented in a report. In general, a report will be written for a specific area(s) and submitted to DOE-RL for their information and use. Information in this report is intended to document the work performed, quantity of material removed and disposed, and cost information. This information, in turn, can be utilized or referenced in other CERCLA closeout reports, such as remedial action reports.

Following removal, field surveys and a visual inspection will be performed to support facility completion. Field survey results will be reviewed to determine that no contamination exists in the soil or remaining below-grade structures (if present). A visual inspection will be performed to confirm that there is no soil staining or anomalies present. Should the visual inspection identify anomalies in the soil, verification sampling will be performed in accordance with the *Sampling and Analysis Plan for River Corridor General Decommissioning Activities* (DOE-RL 2010c). After an investigation/inspection indicates that no further removal action is necessary, any below-grade void spaces will be backfilled with clean soil. Any structures to be left in place will be removed 1 to 3 ft below grade to facilitate backfill to match general area grade at the site. The final grade of the site will match the surrounding terrain. Existing borrow pits will be used to obtain clean backfill material.

If in-process measurements or final investigation/inspections indicates soil contamination exists, an evaluation will be performed (e.g., location, site access, contaminants of concern) to determine how much, if any, of the site will be interim stabilized with backfill. In addition, any discovered contamination that has not been removed from the site will be identified by DOE-RL as a new Waste Information Data System site under the Tri-Party Agreement, with concurrence by Ecology and EPA. Available characterization information for any given building/structure will document the status of conditions at the conclusion of this removal action.

2.7 EQUIPMENT DECONTAMINATION

Gross equipment decontamination methods will be employed when necessary to remove loose contamination within the contamination area. Best management practices (BMPs) for gross cleaning and/or decontamination of heavy equipment and vehicles consist of using wipes and nonhazardous materials to remove loose contamination. Wet grit blasting or grinding may be used if other methods are not effective. Decontamination that is necessary to allow removal of demolition or debris cleanup equipment from potentially contaminated areas will be accomplished using standard industry practices and BMPs. Water may be used to clean equipment in the contamination area; however, the use of water will be minimized. Soaps, detergents, or other cleaning agents that are regulated as a hazardous waste will not be added to the wash water. Pressure washing (if required) will normally be performed using cold water;

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however, hot water may be used if needed. Steam cleaning may be used if other decontamination methods prove to be ineffective.

One or more areas will be established within the building footprint area (BFA) or in the onsite area, at a location that may or may not have been previously contaminated, to conduct additional or final decontamination. Spent decontamination water and associated contamination from the decontamination of equipment (e.g., trackhoe excavators, front-end loaders) will be discharged to the ground within the decontamination area. These practices apply to both D4 and debris removal locations.

2.8 WASTE MANAGEMENT AND DISPOSAL

Waste management will include both S&M activities conducted prior to D4, as well as wastes generated during D4. All waste management activities will be performed in accordance with waste management ARARs identified in the Action Memoranda (DOE-RL 2010a) and this RAWP. Certain materials are eligible for salvage and recycling. This is encouraged if the appropriate regulatory and project requirements are met and it is economically feasible for the project to do so. Waste from the removal action will be disposed at ERDF. Treatment of waste may be necessary prior to disposal at ERDF.

An interim step between load-out of the ERDF roll-off containers and disposal at ERDF is placement on the container in a queue. In most cases, the containers are in the queue for less than 24 hours. However, there is the potential for two additional waste streams to be generated while managing the waste. The first is water (e.g., from dust suppression or moisture in the air) found in an ERDF roll-off container. Water is found in both containers that have been loaded with demolition debris and in empty containers. In these instances the water will either be absorbed in the container or the container will be returned to the demolition load-out area to be repackaged prior to being shipped to ERDF. The second waste stream is from leaking equipment (e.g., hydraulic fluid, diesel, oil). These spills are appropriate for ERDF disposal when the spill occurs from equipment supporting the CERCLA activity, the waste meets the ERDF waste acceptance criteria, and the spill occurred within the CERCLA onsite area. Waste will be managed in accordance with Section 4.2.3.

2.9 DEMOBILIZATION

At the completion of D4 and debris removal activities, the trailers and equipment used to perform this removal action may be demobilized or turned over to personnel conducting additional removal actions.

In some cases, equipment (e.g., change rooms and shower trailers) may no longer be used due to levels of contamination or disrepair. In these instances, the equipment will be deactivated in accordance with Section 2.4 and demolished in accordance with Section 2.5.

3.0 SAFETY AND HEALTH MANAGEMENT AND CONTROLS

3.1 EMERGENCY MANAGEMENT

The contractor's Emergency Management Program (e.g., preparedness, planning, and response) contains the administrative responsibilities for compliance with the *Hanford Emergency Management Plan* (DOE-RL 2002) and applicable DOE Orders. The Emergency Management Program establishes a coordinated emergency response organization capable of planning for, responding to, and recovering from industrial, security, and hazardous material incidents. Emergency action plans for contractor-managed hazardous facilities identify the capabilities necessary to respond to emergency conditions, provide guidance and instruction for initiating emergency response actions, and serve as a basis for training personnel in emergency actions for each facility.

The emergency response actions within the emergency action plan are provided for recognizing incidents and/or abnormal conditions, initiating initial protective actions, and making the proper notifications. The emergency action plans are consistent with Hanford Site emergency procedures and meet the requirements of the *Hanford Emergency Management Plan* (DOE-RL 2002).

3.2 SAFEGUARDS AND SECURITY

Access to the Hanford Site is restricted. Access to each removal action area is controlled by the contractor using such items as fences and signs. Access requirements for employees, nonemployees, and/or visitors are defined in a health and safety plan (HASP).

3.3 HEALTH AND SAFETY PROGRAM

3.3.1 Worker Safety Program

The contractor's Hazardous Waste Operations Safety and Health Program was developed for employees involved in hazardous waste site activities. The program was developed to comply with the requirements of 29 CFR 1910.120 and 10 CFR 835 to ensure the safety and health of workers during hazardous waste operations. The Integrated Safety Management System will be incorporated into all work activities. The program includes the following elements:

- Organizational structure that specifies the official chain-of-command and the overall responsibilities of supervisors and employees
- Comprehensive work plan developed before work begins at a site to identify operations and objectives and to address the logistics and resources required to accomplish project goals

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- Development of a site-specific health and safety plan when workers may be exposed to hazardous substances
- Worker training commensurate with individual job duties and work assignments
- Medical surveillance program administered to comply with the Occupational Safety and Health Administration requirements (29 CFR 1910.120)
- Contractor's procedures and project/task-specific implementing plans and procedures
- Voluntary Protection Plan.

3.3.2 Site-Specific Health and Safety Plan and Activity Hazards Analysis

A HASP will be developed that defines the chemical, radiological, and physical hazards, and specifies the controls and requirements for work activities associated with this RAWP.

Access and work activities are controlled in accordance with approved work packages, as required by established internal work requirements and procedures. A HASP addresses the health and safety hazards of each phase of site operation and includes the requirements for hazardous waste operations and/or construction activities, as specified in 29 CFR 1910.120. As part of work package development, a job hazards analysis will be written to identify and control unique hazards associated with specific tasks not already covered under a HASP. The elements included in the HASP are as follows:

- A general overview of the hazards associated with the area
- List of employee training assignments
- List of personal protective equipment (PPE) to be used by employees at the work site
- Medical surveillance requirements
- Work site control measures
- Emergency response
- Confined space entry procedures
- Spill containment program.

Before work and each activity begin, a pre-job briefing will be held with the involved workers. This briefing includes reviews of the hazards that may be encountered and the associated requirements.

3.3.3 Radiological Controls and Protection

The Radiological Controls and Protection Program is defined in DOE-approved programs and contractor-approved procedures. The Radiological Controls and Protection Program implements the contractor's policy to reduce safety or health risks to levels that are ALARA and to ensure the adequate protection of workers. The contractor's Radiological Protection Program meets the requirements of 10 CFR 835. Appropriate dosimetry, radiological work permits, PPE, ALARA planning, periodic surveys, and radiological control technical support will also be provided.

Safety and Health Management and Controls

The standard contractor's controls for work in radiological areas are assessed as adequate to control project activities. These controls provide for radiological controls planning to identify the specific conditions, and the controls also govern the specific requirements for an activity, periodic radiation and contamination surveys of the work area, and periodic or continuous observation of the work by the Radiological Controls organization. The ALARA planning process will be used to identify shielding requirements, contamination control requirements (including local ventilation controls), radiation monitoring requirements, and other radiation control requirements for the individual tasks conducted during the projects.

If necessary, boundary air samplers to monitor worker protection will be stationed around the perimeter of the demolition or debris removal area; these air samplers will be positioned in accordance with prevailing wind directions and can be moved as conditions warrant. Additionally, an air sampler may be mounted on the heavy equipment used for demolition or debris removal. All air samples are analyzed on a daily operating basis. The demolition area will be posted as an Airborne Radioactivity Area at 1 Derived Air Concentration (DAC) or 12 DAC-h based on a 40-hour work week (0.3 DAC). If analysis of samples indicates anomalous results, the work processes will be reassessed, as appropriate, to ensure worker protection and help prevent an offsite release.

Measures are also taken to minimize the possibility of releases to the environment. The air monitoring section of this document (Section 4.3.3.) addresses the radionuclide inventory and activities that could cause potential release of this inventory, but not to the exclusion of 10 CFR 835 requirements.

4.0 ENVIRONMENTAL MANAGEMENT AND CONTROLS

4.1 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

The ARARs for this removal action are identified in the Action Memorandum (DOE-RL 2010a). The key ARARs include waste management standards, standards controlling releases to the environment, and standards for protection of cultural and natural resources.

4.2 WASTE MANAGEMENT PLAN

A variety of waste streams will be generated under this removal action. It is anticipated that some of the waste will potentially be determined to be low-level waste. However, dangerous or mixed waste, PCB waste, and asbestos and asbestos-containing material also could be generated. The majority of the waste will be in a solid form. However, some liquid wastes might be generated. Waste management activities will be performed in accordance with the following ARARs:

- The *Atomic Energy Act of 1954* for management of radioactive waste by DOE.
- RCRA, as implemented by 40 CFR 260 through 268 and *Washington Administrative Code (WAC) 173-303*, for management of dangerous waste. The identification, storage, treatment, and disposal of hazardous waste and the hazardous component of mixed waste are governed by RCRA. The state of Washington, which implements RCRA requirements under WAC 173-303, has been authorized to implement most elements of the RCRA program. The dangerous waste standards for generation and storage will apply to the management of any dangerous or mixed waste generated by the decommissioning activities at the Hanford excess industrial buildings/structures and as a result of debris cleanup activities. Treatment standards for dangerous or mixed waste subject to RCRA land disposal restrictions are specified in WAC 173-303-140, which incorporates 40 CFR 268 by reference.
- *Toxic Substances Control Act of 1976 (TSCA)* includes standards for management of PCB waste. The disposal of PCB wastes are governed by regulations at 40 CFR 761. PCB wastes that are generated during decommissioning and debris cleanup activities will be disposed at ERDF or other appropriate facility in accordance with the substantive provisions of 40 CFR 761. PCBs also are considered underlying hazardous constituents under RCRA for waste that designates as dangerous or mixed waste, and thus could require treatment to meet WAC 173-303 and 40 CFR 268 requirements.
- The *Clean Air Act and Amendments of 1990*, as implemented by 40 CFR 61, Subpart M. Removal and disposal of asbestos and ACM are regulated under the *Clean Air Act and Amendments of 1990* (40 CFR 61, Subpart M). These regulations provide for special precautions to control environmental releases or exposure to personnel due to airborne emissions of asbestos fibers during removal actions.

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Wastes generated through implementation of this removal action will be disposed of at ERDF, the preferred waste disposal facility, in accordance with the waste acceptance criteria (WCH 2009). Alternate onsite and/or offsite waste treatment or disposal facilities that meet 40 CFR 300.440 criteria may be considered if determined to be suitable.

DOE may also identify certain wastes generated from activities under the scope of the NTCRA for use in remedial actions (e.g., backfill) under the barrier associated with the 221-U Facility remedy, if such wastes meet applicable criteria of the decision document. DOE would consult with Ecology and EPA for candidate wastes prior to decisions regarding such use including identification of storage locations.

Waste management activities that may be addressed in the work packages include waste characterization, designation, staging, packaging, handling, marking, labeling, segregation, storage, transportation, and disposal and are briefly described in the following subsections.

4.2.1 Waste Characterization and Designation

Waste generated will be characterized in accordance with the contractor's procedures, the requirements of the receiving facility, and DOE/RL-2010-41, *Sampling and Analysis Plan for River Corridor General Decommissioning Activities* (DOE-RL 2010c). Characterization will be conducted through process knowledge, sampling/analysis, and radiological and industrial hygiene surveys.

Contractor personnel will assess the buildings, structures, and debris before the demolition and removal activities begin and, as needed, during the removal action. As appropriate, radiological surveys will be performed using hand-held or other instruments or equipment.

The data generated as part of waste characterization will be used to develop the following information (as applicable):

- Contaminant identification
- Contaminant concentrations
- Waste treatment requirements
- Waste packaging and disposal requirements
- Worker health and safety conditions
- Decontamination requirements
- Operational precautions
- Waste acceptance documents
- Transportation documents.

4.2.2 Waste Handling, Storage, and Packaging

Bulk waste may be placed in roll-off containers or haul trucks for ERDF disposal. The containers will be covered when waste is not being added or removed. Lightweight material (e.g., plastic and paper) will be bagged, if appropriate, prior to placement in the container to

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eliminate the potential for materials blowing out of the container or truck. Waste will be staged in the area of contamination, a site-specific waste storage area, or at the ERDF, as appropriate. Applicable packaging and pre-transportation requirements for dangerous or mixed waste generated by the removal action will be identified and implemented before movement of waste. Before being removed from the area of contamination or site-specific waste storage area, containers and haul trucks being released from radiologically controlled areas will meet exterior contamination limits. Other waste-type-specific handling and packaging requirements may be applicable and will be described in the contractor's work documents, as appropriate.

The BFA is defined to include the individual building/structure or debris site footprint and the surrounding area suitable to support D4 of buildings/structures or debris removal. Waste management locations outside of the BFA and within the onsite area will meet the substantive requirements of the ARARs. For waste management inside the BFA, safe and effective management practices will be established to ensure protection of human health and the environment during performance of demolition and related work.

For the buildings/structures and debris addressed under this action, the onsite area is defined as the main industrial portion of the building/structure, group of buildings/structures, or general debris location area and includes ERDF container queues used under this work plan. The contractor leased facilities at Energy Northwest are considered a noncontiguous onsite CERCLA facility for managing recovered ozone depleting substances (i.e., R-12) and for craft support activities necessary for implementation of the response actions in the 100 Areas, 300 Area, 400 Area, 600 Areas, and ERDF. Within the onsite area only the substantive provisions of the ARARs will be applied.

As an alternative to management within the BFA, waste that is not immediately transported to ERDF or other EPA-approved disposal facility may be stored in staging piles. Staging piles used for the onsite management of materials that are designated as dangerous waste will be operated in accordance with the following substantive provisions of standards and design criteria prescribed in 40 CFR 264.554, paragraphs (d) through (k):

- Staging piles will be used only as part of this removal action for temporary storage at a facility and must be located within the contiguous property where the waste to be managed in the staging piles is oriented.
- The staging pile will be designed to prevent or minimize releases of hazardous wastes and hazardous constituents into the environment and minimize or adequately control cross-media transfer. To protect human health and the environment this may include installation of berms, dust control practices, or using plastic liners or covers, as appropriate.
- The staging pile must not operate more than 2 years (measured from the first time removal action waste is placed in the pile), except when EPA grants an operating term extension. A record of the date when removal action waste was first placed in the staging pile must be maintained until final closeout of the site is achieved.

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- Ignitable or reactive waste will not be placed in a staging pile unless it has been treated or mixed before being placed in the pile (i.e., the waste no longer meets the definition of ignitable or reactive waste), or the waste is managed to protect it from exposure to any material or condition that may cause it to ignite.
- Incompatible wastes will not be placed in the same staging pile unless the requirements in 40 CFR 264.17(b) have been met. The incompatible materials will be separated or the waste will not be piled on the same base where incompatible wastes or materials were previously piled unless the base has been decontaminated sufficiently to comply with 40 CFR 264.17(b).

Approval of this RAWP constitutes general authorization to operate staging piles during the execution of this removal action. Specific staging pile locations will be identified in project drawings. Field operations of staging piles will be accomplished as described above.

Once the materials have been removed to close out the staging pile, characterization of the residual soil will be performed as appropriate. In cases where staging piles for industrial waste sites are located in an uncontaminated area, the observational approach may be used. In situations where sampling is appropriate and results indicate presence of residual contamination, efforts will be made to remove such contamination.

4.2.2.1 Common Waste Handling, Storage, and Packaging Requirements. The requirements in the following paragraphs are common to both the BFA and the onsite area.

Nonbulk containers or packages of waste requiring tracking (e.g., hazardous, mixed) will be assigned a package identification number by a waste transportation specialist. Containers in poor condition will have the contents transferred to a container in good condition. Portable fire extinguishers and spill-control equipment will be available.

Bulk waste may be placed in bulk roll-off containers for ERDF disposal. The containers will be covered. Lightweight material (e.g., paper and plastic) will be bagged, if appropriate, prior to placement in the container to eliminate the potential of the materials blowing out of the container.

All containers, packages, or items requiring storage in a radioactive materials area will be marked/labeled with radioactive material markings. Storage of all containers (except for containers used to collect fluorescent light tubes) will be closed and secured when not being filled or emptied. Containers will be appropriately labeled and/or marked in accordance with all applicable requirements. Containers will be stored to prevent the accumulation of water.

4.2.2.2 Specific Waste Handling, Storage, and Packaging Requirements. The following specific requirements apply only outside the BFA, either in the onsite area or at an offsite facility, for the variety of wastes that may be encountered during S&M and the D4/debris removal actions.

Miscellaneous Solid Waste. Miscellaneous solid waste (e.g., rubblized demolition materials, debris, and soils) will be managed, as appropriate, for the nonradiological and radiological

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contaminants present or suspected to be present, if any. Miscellaneous solid waste that has contacted suspect dangerous or suspect mixed waste will be treated as such. Field screening will be used to segregate radioactive waste from nonradioactive waste. Containers will be properly marked and labeled. The containers will be segregated as appropriate, and staged at the designated waste container storage area or within the area of contamination. Miscellaneous solid waste will be dispositioned based on waste characterization information.

Low-Level Radioactive Waste. Liquids will be collected in appropriate containers. Dependant upon volume and characteristics (e.g., pH, oils, waste codes), containers will vary from drums to bulk holding tanks.

Demolition debris will be sized in accordance with the waste acceptance criteria of the disposal facility. Radioactive solids will be placed in containers for ERDF disposal.

Hazardous/Dangerous Waste. Hazardous/dangerous waste managed outside of the BFA will be packaged and stored to prevent dispersion and public exposures as required by WAC 173-303. Waste-specific storage and packaging requirements will be described in the contractor's work control documents, as appropriate, to address WAC and U.S. Department of Transportation requirements.

Mixed Waste. Mixed waste will be managed in compliance with the substantive requirements for both hazardous/dangerous wastes and radioactive waste. Storage is allowed at the Hanford Site's Central Waste Complex under the offsite acceptability determination issued by EPA (EPA 2002).

Asbestos. Removal, handling, packaging, and disposal of asbestos and ACM will be performed in accordance with substantive provisions of 40 CFR 61.145(c), 40 CFR 61.150, 29 CFR 1926.1101, and the contractor's procedures for ACM removal.

Ozone-Depleting Substances. 40 CFR 82, Subpart F establishes requirements for the recovery, recycling, and reclamation of ozone-depleting substances from refrigeration equipment that may be present within facilities addressed by this removal action. The substantive requirements of Subpart F will apply to actions being taken within the onsite area. The substantive and administrative requirements are applicable when performing recovery, recycling, reclamation, or disposal actions at offsite facilities. Wastes containing CERCLA hazardous substances (unless present in de minimis concentrations) may only be released to an offsite facility that has received approval from EPA in accordance with 40 CFR 300.440.

PCBs. PCBs are identified as potential contaminants in this RAWP, and PCB-contaminated waste could be generated. The various waste matrixes that may contain PCBs include PCB oils, PCB removal action waste, and PCB-contaminated items.

The PCB bulk product waste or removal action waste will be managed within the facility of origination or a centralized area within the CERCLA onsite area (following approval of a centralized area by EPA). Outside the facility, containers will be marked with an M_L marking (CAUTION – CONTAINS PCBs) as required by the TSCA.

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Areas outside the facility containing packaged PCBs will be marked with signs posting “DANGER-UNAUTHORIZED PERSONNEL KEEP OUT” at each entrance. The M_L marking will also be posted in accordance with 40 CFR 761.

Staging of PCB waste must be done in a manner that satisfies substantive provisions of 40 CFR 761.65(b). The use of an “overpack” container is acceptable for outside storage. Although the “overpack” containers may not represent the typical concept of a “facility,” they satisfy the substantive requirements for roof, walls, nonporous floors, and spill protection.

Liquid Waste. All liquid waste treated or disposed of at offsite locations must first be approved by EPA. Possible disposal locations include the Effluent Treatment Facility or a facility outside of the Hanford Site. This does not include liquid waste that is free or contains de minimis levels of CERCLA hazardous substances. Water meeting groundwater quality criteria (GWQC) (WAC 173-200) can be used for dust suppression.

Radiological Counting Facility Sample Wastes. The Radiological Counting Facility (RCF) (MO-432 and MO-265) will continue to process samples under CERCLA authority for an extended period of time prior to being subject to D4. The primary waste materials generated from radiological counting at the RCF includes samples, sample residues, and secondary waste (e.g., PPE such as gloves and wipes). Laboratory calibration standard wastes or inter-laboratory comparison sample wastes may be generated. Some waste may be generated from maintenance or calibration of sample equipment.

Sample counting wastes, including any associated secondary waste, will routinely be sent back to the project of origin for disposition. Alternatively, sample counting associated wastes, including existing sample wastes from Hanford Site CERCLA projects, may be sent directly to ERDF for disposal if the waste meets the ERDF waste acceptance criteria.

Other RCF sample-related waste, such as inter-laboratory comparison samples and maintenance/calibration waste, may also be sent to ERDF for disposal if it contains CERCLA hazardous substances (including potentially radiologically contaminated wastes) and meets the waste acceptance criteria. Otherwise, the wastes will be handled as solid waste as described above. Some oils associated with the equipment may be recycled as appropriate.

For wastes containing CERCLA hazardous substances that must be sent offsite for disposal, EPA approval of the offsite facility would be sought in accordance with 40 CFR 300.440.

4.2.3 Waste Treatment

Treatment (e.g., solidification, separation, elementary neutralization, mercury amalgamation, size reduction, repackaging) of certain waste streams may be necessary to provide safe transport, meet waste disposal facility waste acceptance criteria, and/or to address land disposal restrictions. When necessary, treatment may be conducted at the generating site, ERDF, or at an EPA-approved offsite facility. Offsite treatment must be performed at a facility approved by the EPA in accordance with 40 CFR 300.440. Return of treated waste from offsite treatment facilities for disposal at the ERDF requires authorization from DOE.

4.2.4 Waste Minimization and Recycling

Waste minimization practices will be followed to the extent technically and economically feasible during waste management. Introduction of clean materials into a contamination area, as well as contamination of clean materials, will be minimized to the extent practicable. Emphasis will be placed on source reduction to eliminate or minimize the volume of waste generated. Materials released offsite for disposal/recycle must be certified free of contamination in accordance with DOE guidance for non-real property. Waste materials meeting this criterion are not considered CERCLA waste and, therefore, are not subject to the 40 CFR 300.440 offsite acceptability determinations.

4.2.5 Waste Transportation and Shipping

All shipments will be made in accordance with applicable U.S. Department of Transportation regulations, 49 CFR 171-179, applicable sections of WAC 173-303, and the contractor's waste transportation procedures.

The removal action is expected to require offsite transportation of wastes and potentially contaminated samples. The offsite handling and shipping of wastes and potentially contaminated samples will be in accordance with the *Hazardous Materials Transportation Act of 1974*, as implemented through 49 CFR 100 through 179.

4.2.6 Disposal

All waste resulting from this action will be evaluated to determine if the waste meets ERDF waste acceptance criteria for disposal as the preferred location. CERCLA waste disposed of at any disposal facility other than ERDF requires EPA approval in accordance with 40 CFR 300.440. Any PCB waste that does not meet ERDF waste acceptance criteria (BHI 2002) may be transported for disposal to a TSCA offsite disposal facility following the receipt of an offsite acceptability determination by EPA.

Solid waste may be sent for offsite disposal at a municipal/industrial landfill. Disposal of materials containing no or de minimis levels of CERCLA hazardous substances would not require an offsite acceptability determination per 40 CFR 300.440.

4.3 STANDARDS CONTROLLING RELEASES TO THE ENVIRONMENT

4.3.1 Standards Controlling Air Emissions to the Environment

There is a potential that D4 of some buildings/structures has the potential to emit (PTE) radionuclides. Implementing best available radionuclide control technology for new construction or significant modifications, or as low as reasonably available control technology for existing emission units or nonsignificant modifications (pursuant to WAC 246-247-040[3] and [4], and 40 CFR 61.12[c]) have been identified as applicable requirements. Air monitoring

(40 CFR 61.93, appropriate sections, and WAC 246-247-075[8]) has also been identified as a requirement that may be applicable for the removal action. This plan describes how the substantive portions of these requirements will be implemented for this removal action.

Updates to this plan may be accomplished through the unit manager's meeting minutes. When the RAWP is updated, changes made through the unit manager's meeting will be incorporated into the revised RAWP.

Additional standards controlling air emissions to the environment are addressed in Section 4.3.3 of this RAWP.

4.3.2 Radiological Airborne Emissions

The potential exists for radioactive airborne emissions resulting from some of the D4 activities. There is a small PTE radioactive airborne emission resulting from some debris removal activities. However, the PTE for these types of activities is expected to be insignificant compared to that of the actual D4 activities. Prior to the D4 of a facility, scoping surveys will determine whether or not an emissions estimate is required. If required, the emissions estimate will be provided for review and approval by the lead agency prior to demolition. Radiological contamination is not expected to be encountered during debris removal.

However, based on historical data reviews, most of the facilities identified within this RAWP are believed to have little or no radiological contamination. The PTE from facilities with no appreciable radiological contamination is negligible. In lieu of an emission estimate, a summary of the facility's environmental hazards (no PTE) will be provided to the lead agency for their review and approval. If, however, contamination is discovered at levels with a PTE during the D4 activities, an emission estimate will be prepared as described above.

Emission estimates will be developed based on inventory assumptions for the facilities. The PTE will be determined by applying a release fraction of $1E-03$ for particulate and liquids for most of the pre-demolition and demolition activities. A release fraction of 1 will be assumed for gases (if any are present), activities involving torch cutting, the use of HEPA-filtered vacuums, and HEPA-filtered decontamination tools (e.g., scabblers, scarifiers). It is anticipated that no more than 1% of the total inventory will be subject to techniques that assume a release fraction of 1. The CAP-88-PC, Version 2.0 model will be used to determine the total effective dose equivalent (or annual unabated offsite dose) to the maximally exposed individual.

The emission estimates will be based on the primary isotopes (e.g., uranium isotopes) that are anticipated to be encountered and that make up most of the potential offsite dose. It is recognized that other isotopes may be present in very limited quantities that would not impact the emission estimates. Characterization data will be used to verify the inventory assumptions for the facilities, and the emission estimates will be revised if the inventory is not within the assumptions used for the PTE calculations.

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4.3.3 Emissions Controls and Monitoring

The following activities implement emission controls for D4 and debris removal activities.

- Water will be applied during demolition, excavation, container loading, and backfilling processes to minimize airborne releases.
- Fixatives will be applied to any contaminated debris or soils that are being stockpiled and that will be inactive for more than 24 hours, excluding items that have been wrapped. However, if a soil fixative has already been applied and the soil and/or debris will remain undisturbed, further uses of fixatives will not be reapplied unless needed. The fixatives or other controls will not be applied when the contaminated soils and/or debris are frozen or it is raining, snowing, or other freezing precipitation is falling at the end of work operations.
- Haul trucks transporting bulk materials with removable contaminants will be covered to contain the materials while in transit to the ERDF.

Because of the likelihood for radionuclide contamination existing in buildings/structures, and debris included in this RAWP is considered low, radionuclide air monitoring will be performed only when it has been determined a PTE exists and an emissions estimate is developed (Section 4.3.2). If radionuclide contamination is discovered during characterization or removal activities on any given building/structure or debris location that is determined to have a PTE, an emissions estimate will be developed for approval and radionuclide air monitoring will be performed.

4.3.4 Liquid Effluents

Stormwater runoff from some of the facilities listed in the action memoranda may be discharged to engineered structures (e.g., injection wells). State Waste Discharge Permit ST 4511 (Ecology 2005) issued pursuant to WAC 173-216 addresses discharges of stormwater to engineered structures. Substantive provisions of the permit include the implementation of BMPs, which are intended to prevent or reduce the spread of contamination and pollution of groundwater of the state, and meeting the GWQC. The substantive requirements of WAC 173-218 are applicable to the decommissioning of underground injection control wells that do not require further removal action under an operable unit. Sampling and analysis of the stormwater discharge is not normally required as long as the proper pollution prevention and BMPs are followed, unless contamination exists. Stormwater that has become contaminated (i.e., stormwater found in basements or pits located in contaminated buildings) is to be sampled to verify that the GWQC are met prior to discharge to the injection well.

The removal actions specified in the action memoranda will result in a unique set of circumstances for each facility. Additional BMPs may be needed to prevent the discharge of contaminated stormwater runoff to an injection well. These practices could include berming, rerouting stormwater discharges, creating new discharge locations, or closing the injection well. If an existing injection well must be closed and does not require further action under CERCLA, it will be decommissioned in accordance with WAC 173-218. Where additional BMPs are

Environmental Management and Controls

required to prevent contamination of stormwater runoff to the injection wells, they will be documented in facility-specific, work-controlling documents (e.g., work packages).

The substantive requirements of the “Minimum Standards for Construction and Maintenance of Wells” (WAC 173-160) are applicable when decommissioning groundwater wells that are found to require closure prior to performing D4 activities (i.e., the well is located within the BFA boundary).

4.4 STANDARDS FOR THE PROTECTION OF NATURAL AND HISTORICAL RESOURCES

The *Archeological and Historic Preservation Act of 1974* (16 U.S.C. 469-469c) provides for the preservation of historical and archeological data (including artifacts) that might be irreparably lost or destroyed as the result of a proposed action. Although the removal action will occur in previously disturbed areas and the discovery of artifacts is unlikely, this law would be applicable to any significant artifacts that may be discovered. The likelihood would be greater at debris site locations that may be less disturbed and at borrow sites from which backfill material is obtained. Controls will be established in work planning documentation to address discovery and protection requirements. If archeological materials are discovered, a mitigation plan will be developed in consultation with appropriate authorities.

The *Native American Graves Protection and Repatriation Act of 1990* (as implemented by 43 CFR 10) requires agencies to consult and notify culturally affiliated tribes when Native American human remains are inadvertently discovered during project activities. It is unlikely that work proposed in this removal action would inadvertently uncover human remains. If human remains were encountered, the procedures documented in the *Hanford Cultural Resources Management Plan* (DOE-RL 2003) would be followed.

The *National Historic Preservation Act of 1966* (as implemented by 36 CFR 800) requires federal agencies to evaluate historic properties for National Register of Historic Places (36 CFR 800, Section 106) eligibility and to mitigate adverse effects of federal activities on any site eligible for listing in the National Register. A programmatic agreement prepared by DOE (DOE-RL 1996) specifies how activities at the Hanford Site will identify, evaluate, and treat buildings and historic archaeological remains from the Hanford era. The accompanying treatment plan (DOE-RL 1998) directs the process for evaluating properties on the Hanford Site.

The *Endangered Species Act of 1973* and WAC 232-012-297 require the conservation of critical habitat on which endangered or threatened species depend, and prohibit activities that threaten the continued existence of listed species or destruction of critical habitat. The *Migratory Bird Treaty Act of 1918* makes it illegal to remove, capture, or kill any migratory bird, or any part of nests or the eggs of any such birds. Although adverse impacts to endangered or threatened species or migratory birds are not expected, activity specific ecological reviews will be conducted to identify and mitigate any potentially adverse impacts prior to beginning field work, particularly in debris site locations.

5.0 PROJECT ADMINISTRATION

5.1 PROJECT SCHEDULE AND COST ESTIMATE

The following sections describe the management approach for implementation of the removal action including schedule summary information, a description of the project team, training and qualifications, quality assurance, and post-removal action activities.

The projected cost for this removal action is identified in Table 5-1.

Table 5-1. Summary of Present Worth Cost Estimate.

Alternative	Present-Worth Cost
Alternative 3: Decontamination, Deactivation, Decommissioning, and Demolition of Buildings/Structures and Cleanup of Debris	\$17,000,000

NOTE: Accuracy range of the cost estimate is -30% to +50%.

5.2 CHANGE MANAGEMENT

If a change arises that results in a fundamental change to the selected response action that is not within the scope of work, another EE/CA or an EE/CA addendum and supporting documentation will be prepared to allow DOE to select a revised response action.

Established configuration/change control processes ensure that proposed changes are reviewed in relation to the specified commitments. If a breach of these commitments is discovered, work ceases so stabilization and/or recovery actions may be identified and implemented as appropriate. Change management will comply with the appropriate contractor's procedures. Determining the significance of the change is the responsibility of DOE. Contractor management is responsible for tracking changes and obtaining appropriate reviews by contractor staff. Contractor management will discuss the change with DOE, and DOE will then discuss the type of change that is necessary with EPA and Ecology. Appropriate documentation will follow.

5.3 PERSONNEL TRAINING AND QUALIFICATIONS

During the performance of project activities, the experience and capabilities of the operating staff are extremely important in maintaining worker and environmental safety. Day-to-day knowledge of ongoing operations, month-to-month understanding of conditions encountered, and lessons learned will be imperative to continue safe operations.

Training requirements will ensure that personnel have been instructed in the methods and technologies to work safely in and around radiological areas, and to maintain their individual radiation exposure and the radiation exposures of others ALARA. Standardized core courses and

Project Administration

training material will be presented and site-specific information and technologies will be added to adequately train workers.

Health physics workers are required to have completed and be current in radiological control technician qualification training. These training courses require the successful completion of examinations to demonstrate understanding of theoretical and classroom material.

Specialized training will be provided as needed to instruct workers in the use of nonstandard equipment, in the performance of abnormal operations, and in the hazards of specific activities. Specialized training may be provided by on-the-job training activities, classroom instruction and testing, or pre-job briefings. The depth of training in any discipline will be commensurate with the degree of the hazard(s) involved and the knowledge required for task performance.

Some activities will require the acquisition of expert services as opposed to project staff training. Assaying of waste packages and dismantling the facility by specialized methods (e.g., diamond wire sawing) are examples of activities requiring expert assistance.

The contractor training program provides workers with the knowledge and skills necessary to safely execute assigned duties. A graded approach is used to ensure that workers receive a level of training commensurate with their responsibility that complies with applicable requirements. Specialized employee training includes pre-job safety briefings, plan-of-the-day meetings, and facility/work site orientations. The following training and qualifications may be applicable as required by job assignment for work activities:

- The HASP, radiological work permit, and hazards analysis will include specific requirements for project activities being conducted (e.g., PPE and required training for project personnel). This is discussed in detail in Section 3.5.

5.4 QUALITY ASSURANCE REQUIREMENTS

Overall quality assurance for the RAWP will be planned and implemented in accordance with 10 CFR 830, Subpart A, "Quality Assurance Requirements"; *EPA Requirements for Quality Assurance Project Plans* (EPA 2001); and *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods* (EPA 1999). The quality assurance activities will use a graded approach based on the potential impact on the environment, safety, health, reliability, and continuity of operations. Other specific activities will include quality assurance implementation, responsibilities and authority, document control, quality assurance records, and audits.

5.5 PROJECT CLOSEOUT

At the completion of all removal action activities, any documentation that addresses remaining facility conditions that has not already been recorded will be forwarded to the records retention center where it will be stored with records from the River Corridor Project. Updates to the Waste Information Data System will be performed with concurrence by EPA and Ecology, as

necessary, and end state condition of buildings/structures/debris sites at the time of project closeout will be provided to the DOE. Facility Status Change Forms will be archived in the Administrative Record. A decommissioning project final report or equivalent may be prepared consistent with a graded approach after all technical work has been completed and verified. The final report will describe decommissioning activities, accomplishments, final facility status, and applicable lessons learned.

6.0 REFERENCES

- 10 CFR 830, "Nuclear Safety Management," *Code of Federal Regulations*, as amended.
- 10 CFR 835, "Occupational Radiation Protection," *Code of Federal Regulations*, as amended.
- 29 CFR 1910, "Occupational Safety and Health Standards," *Code of Federal Regulations*, as amended.
- 29 CFR 1926, "Safety and Health Regulations for Construction," *Code of Federal Regulations*, as amended.
- 36 CFR 800, "Protection of Historic and Cultural Properties," *Code of Federal Regulations*, as amended.
- 40 CFR 61, "National Emission Standards for Hazardous Air Pollutants," *Code of Federal Regulations*, as amended.
- 40 CFR 82, "Protection of Stratospheric Ozone," *Code of Federal Regulations*, as amended.
- 40 CFR 122, "EPA Administered Permit Programs: The National Pollutant Discharge Elimination System," *Code of Federal Regulations*, as amended.
- 40 CFR 260, "Hazardous Waste Management System: General," *Code of Federal Regulations*, as amended.
- 40 CFR 264, "Standards for Owners and Operators of hazardous Waste Treatment, Storage, and Disposal Facilities," *Code of Federal Regulations*, as amended.
- 40 CFR 268, "Land Disposal Restrictions," *Code of Federal Regulations*, as amended.
- 40 CFR 300, "National Oil and Hazardous Substances Pollution Contingency Plan," *Code of Federal Regulations*, as amended.
- 40 CFR 761, "Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions," *Code of Federal Regulations*, as amended.
- 43 CFR 10, "Native American Graves Protection and Repatriation Regulations," *Code of Federal Regulations*, as amended.
- 49 CFR 100-179, "U.S. Department of Transportation Requirements for the Transportation of Hazardous Materials," *Code of Federal Regulations*, as amended.
- Archeological and Historic Preservation Act of 1974*, 16 U.S.C. 469-469c.

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DOE-RL, 2010a, *Action Memorandum for General Hanford Site Decommissioning Activities*, DOE/RL-2010-22, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 2010b, *Engineering Evaluation/Cost Analysis for General Hanford Site Decommissioning Activities*, DOE-RL-2010-14, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 2010c, *Sampling and Analysis Plan for River Corridor General Decommissioning Activities*, DOE/RL-2010-41, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington,

Ecology, 2005, *State Waste Discharge Permit Number ST 4511*, Washington State Department of Ecology, Olympia, Washington.

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Hazardous Materials Transportation Act of 1974, 49 U.S.C. 1801-1813, et seq.

Migratory Bird Treaty Act of 1918, 16 U.S.C. 703, et seq.

National Historic Preservation Act of 1966, 16 U.S.C. 470, et seq.

Native American Graves Protection and Repatriation Act of 1990, 25 U.S.C. 3001, et seq.

Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901, et seq.

Toxic Substances Control Act of 1976, 15 U.S.C. 2601, et seq.

WAC 173-160, "Minimum Standards for Construction and Maintenance of Wells," *Washington Administrative Code*, as amended.

WAC 173-200, "Water Quality Standards for Ground Waters of the State of Washington," *Washington Administrative Code*, as amended.

WAC 173-216, "State Waste Discharge Permit Program," *Washington Administrative Code*, as amended.

WAC 173-218, "Underground Injection Control Program," *Washington Administrative Code*, as amended.

WAC 173-303, "Dangerous Waste Regulations," *Washington Administrative Code*, as amended.

WAC 232-012-297, "Endangered, Threatened, and Sensitive Wildlife Species Classification," *Washington Administrative Code*, as amended.

WAC 246-247, "Radiation Protection -- Air Emissions," *Washington Administrative Code*, as amended.

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References

APPENDIX A
FACILITY STATUS CHANGE FORM

APPENDIX A

FACILITY STATUS CHANGE FORM

A.1 INTRODUCTION

The purpose of the form is to document the status of facility deactivation, decontamination, decommissioning, and demolition. The form provides the following information to document either completion or deferral of a removal action:

- Quantitative information about the removal action
- A justification for completion that includes a list of contaminants of concern for the facility, a synopsis of the data collected, and a listing of the samples collected (and associated sample numbers)
- Photographs of the demolition activity
- Document that the wastes have all been shipped to the appropriate disposal facility
- Provide for U.S. Department of Energy concurrence to the completion
- Provide for a standard distribution of the form including the Administrative Record.

A copy of the form is provided in Table A-1.

A.2 FORM COMPLETION INSTRUCTIONS

A.2.1 Top Portion

The top portion of the form should be filled out to identify the facility.

A.2.2 Section 1: Facility Status

Facility Status

The appropriate block will be marked to identify whether the facility removal action is complete or whether remaining actions are being deferred.

Description of Completed Activities and Current Conditions

This portion will identify the following:

1. Whether the facility removal actions were performed in accordance with the applicable action memorandum
2. Any applicable hazardous material removal prior to demolition
3. When the demolition was completed and whether the foundation and any other sub-surface structures were removed or left in place
4. Document final disposition of the demolition debris.

Description of Deferral (as applicable)

This portion would only be completed when deferral of any portion of the removal action is necessary. A justification for the deferral will be provided (e.g., underlying waste sites, active utilities).

A.2.3 Section 2: Underlying Soil Status**Underlying Soil Status**

The appropriate block will be marked to identify the relationship between the facility and waste sites, if any.

Description of Current/As-Left Condition

This portion of the form will identify the following:

1. Whether the underlying soils were a documented waste site
2. If soil contamination was found as a result of the removal action
3. Whether adjacent documented waste sites were affected
4. Whether below-grade structures were left in place.

Identification of Documented Waste Site(s) or Nature of Potential Waste Site Discovery (as applicable)

This portion will describe any waste sites or potential waste sites that were encountered as a result of the removal action.

A.2.4 Section 3: List of Attachments

Supplemental information includes the following:

1. Facility information: Building history; characterization information including a summary of the collected sample data; and a description of the deactivation, decontamination, decommissioning, and demolition activities that were performed
2. Underlying Soil: An assessment of the contaminants of concern that could be potentially released during facility demolition and the final radiological survey
3. Project photographs.

Appendix A – Facility Status Change Form**Table A-1. Facility Status Change Form.**

Date Submitted:	Area:	
Originator:	Facility ID:	Control #:
Phone:	Action Memorandum:	
This form documents agreement among the parties listed below on the status of facility D&D operations and the disposition of underlying soil in accordance with the applicable regulatory decision documents.		
<p><u>Section 1: Facility Status</u></p> <p><input type="checkbox"/> All D4 operations required by action memo complete.</p> <p><input type="checkbox"/> D4 operations required by action memo partially complete, remaining operations deferred.</p> <p>Description of Completed Activities and Current Conditions:</p> <p>Description of Deferral (as applicable):</p> <hr/> <p><u>Section 2: Underlying Soil Status</u></p> <p><input type="checkbox"/> No waste site(s) present. No additional actions anticipated.</p> <p><input type="checkbox"/> Documented waste site(s) present. Cleanup and closeout to be addressed under Record of Decision.</p> <p><input type="checkbox"/> Potential waste site discovered during D4 operations. Waste site identification number <to be> assigned. Cleanup and closeout to be addressed under Record of Decision.</p> <p>Description of Current/As-Left Conditions:</p> <p>Identification of Documented Waste Site(s) or Nature of Potential Waste Site Discovery (as applicable):</p> <hr/> <p><u>Section 3: List of Attachments</u></p> 		
_____	_____	_____
DOE-RL		Date
_____	_____	_____
Lead Regulator	<input type="checkbox"/> EPA <input type="checkbox"/> Ecology	Date

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