Explanation of Significant Differences

for the

100 Area Remaining Sites Interim Remedial Action Record of Decision

Hanford Site
Benton County, Washington

August 2009

SITE NAME AND LOCATION

U.S. Department of Energy 100 Areas and 200-CW-3
100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-HR-1, 100-HR-2, 100-KR-1, 100-KR-2, 100-IU-2, 100-IU-6, and 200-CW-3 Operable Units
Hanford Site
Benton County, Washington

INTRODUCTION TO THE SITE AND STATEMENT OF PURPOSE

Remediation of waste sites in the 100 Areas of the Hanford Site (Figure 1) is being conducted under the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) in accordance with Interim Action Records of Decision (ROD). The U.S. Environmental Protection Agency (EPA), the Washington State Department of Ecology (Ecology) (lead regulatory agencies), and the U.S. Department of Energy (DOE) (CERCLA lead agency), hereinafter referred to as the Tri-Parties, are issuing this Explanation of Significant Differences (ESD) to provide public notice on significant changes to the ROD issued for various operable units (OUs) located on the Hanford Site (Figure 1). The ROD is as follows:

> The *Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-HR-1, 100-HR-2, 100-KR-1, 100-KR-2, 100-IU-2, 100-IU-6, and 200-CW-3 Operable Units, Hanford Site, Benton County, Washington* (EPA 1999), referred to as the "Remaining Sites ROD." This Remaining Sites ROD was issued in July 1999 and revised via ESDs in 2000 and 2004 (EPA 2000, 2004).

Locations of OUs addressed in the Remaining Sites ROD are shown in Figures 1 and 2.

This ESD is required for the following reasons:

1. As provided by the Remaining Sites ROD and the 2004 ESD, when new waste sites in the 100 Area operable units covered by the Remaining Sites ROD are discovered that are similar to the waste sites in the Remaining Sites ROD and qualify to "plug in" to the remove/treat/dispose cleanup action because remedial action is needed, an ESD will be issued to notify the public of the additional waste sites to be addressed under the ROD. Since the issuance of the Remaining Sites ROD and the ESDs in 2000 and 2004, ongoing cleanup efforts in the 100 and 200 Areas have identified 99 additional waste sites in the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-HR-1, 100-KR-1, 100-KR-2, 100-IU-2, 100-IU-6, and 200-CW-3 OUs where remediation is necessary to protect human health and the environment. A review of these waste sites confirmed that these sites qualify to "plug in" to the Remaining Site ROD because they contain contaminated media, material and contaminants of concern similar to the sites included in the Remaining Sites ROD. These sites are being added to Table A-1 of the remaining sites ROD for remove/treat/dispose cleanup action.

2. Since the issuance of the Remaining Sites ROD and the ESDs in 2000 and 2004, ongoing cleanup efforts in the 100 Areas have identified 87 newly discovered waste sites in the

100-B/C, 100-D, 100-F, 100-H, and 100-K Areas and 100-IU-2 and 100-IU-6 OUs that pose a potentially unacceptable risk to human health and the environment and are candidates for remediation. These waste sites are similar to the waste sites in the Remaining Sites ROD in terms of contaminants, contaminated media and contaminated waste material; however additional characterization is required to determine if remedial action is required. These sites are being added to Table A-2 of the remaining sites ROD as "candidate sites." These waste sites will be remediated using the remove/treat/dispose remedy in accordance with the plug-in approach provided in the Remaining Sites ROD if it is determined that remedial action is necessary to be protective of human health and the environment.

3. The Remaining Sites ROD did not provide for the use of the "plug-in" approach for the 200-CW-3 OU, even though 200-CW-3 waste sites are included in the Remaining Sites ROD. Since the remaining Sites ROD was issued, additional 200-CW-3 sites have been identified that are similar to the waste sites in the Remaining Sites ROD in terms of contaminants, contaminated media and contaminated waste material. The Remaining Sites ROD is being revised to allow sites in the 200-CW-3 OU to be added as plug-in and candidate sites in accordance with ROD requirements.

4. This ESD is also being published to provide public notice of waste sites not previously identified in the Remaining Sites ROD or previous ESDs that have been remediated in accordance with the plug-in approach without prior public publication of an ESD because they were in areas where remediation activities were being conducted pursuant to the Remaining Sites ROD and the sites were similar to the Remaining Sites ROD waste sites in terms of contaminants, contaminated media and contaminated waste material.

5. The Tri Parties have determined that characterization and/or remediation of any newly discovered waste sites in OUs included in the Remaining Sites ROD that meet the ROD requirements for plug-in or candidate sites should proceed in accordance with the ROD, the 2000 ESD, the 2004 ESD, and this ESD as well as an approved RD/RA work plan, without publication of an ESD, provided the cumulative estimated cost of the additional work does not exceed +50% of the total estimate provided in the original ROD, the 2000 and 2004 ESDs, and this ESD ($128 million). The addition of these candidate and plug-in waste sites will not have a significant impact on the scope, performance, or cost of the remedy. Additions of plug-in and candidate sites will be documented in the Administrative Record, and a fact sheet will be published by DOE annually identifying the plug-in and candidate sites that have been added.

Statutory Citation for an Explanation of Significant Differences

The Tri-Parties are issuing this ESD in accordance with Sections 117(c) of CERCLA and Section 300.435(c)(2)(i) of the "National Oil and Hazardous Substances Pollution Contingency Plan" (NCP) (40 CFR 300). The purpose of this ESD is to provide public notice of the changes identified herein. DOE will publish notice of the availability and a brief description of this ESD, which includes the reasons for the differences, in the *Tri-City Herald*. This ESD will become

part of the Administrative Record for the 100 Area Remaining Sites ROD, which is available for review at the following location:

U.S. Department of Energy, Richland Operations Office
Administrative Record
2440 Stevens Center Place, Room 1101
Richland, Washington 99354
Telephone: (509) 376-2530
URL: http://www2.hanford.gov/arpir/

This ESD will also be available for review at the following information repositories:

Public Information Repositories

Public Access Room 2440 Stevens Center, Room 1101 P.O. Box 950, Mail Stop H6-08 Richland, WA 99354	Phone: (509) 376-2530 Fax: (509) 376-4989 POC: Heather Childers E-Mail: Heather_M_Childers@rl.gov
Suzzallo Library University of Washington P.O. Box 352900 Seattle, WA 98195-2900	Phone: (206) 543-4664 Fax: (206) 685-8049
DOE-RL Public Reading Room Washington State University Consolidated Information Center Room 101L 2770 University Drive Richland, WA 99354	Phone: (509) 372-7443 Fax: (509) 372-7444
Gonzaga University Foley Center East 502 Boone Spokane, WA 99258-0001	Phone: (509) 323-6110 Fax: (509) 324-5806
Portland State University Branford Price Millar Library 1875 SW Park Avenue Portland, OR 97207-1151	Phone: (503) 725-4709 Fax: (503) 725-4524

SITE HISTORY, CONTAMINATION, AND SELECTED REMEDY

The 100 Area of the Hanford Site is the location of nine retired plutonium production reactors and numerous associated facilities. Activities conducted in support of reactor operations resulted

in the creation of hundreds of waste sites and contamination of the soil and groundwater. Primary contaminants include radionuclides and inorganic constituents. In November 1989, the 100 Area was listed on the National Priorities List under CERCLA. Characterization and remediation activities at waste sites have been ongoing in the 100 Area.

Remaining Sites Record of Decision Selected Remedy

The Remaining Sites ROD addresses contaminated soil, structures, and debris in the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-HR-1, 100-HR-2, 100-KR-1, 100-KR-2, 100-IU-2, 100-IU-6, and 200-CW-3 OUs. In 1998, an extensive effort was conducted to evaluate more than 400 waste sites in order to determine which sites would require remedial action and which sites would not require remediation. This effort was performed in order to support development of the ROD. The sites were identified and documented in the update to Appendix C of the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 1989). Using the risk assessment process, sites identified as posing a potential risk (207 of the 400 waste sites) were evaluated in accordance with the CERCLA remedial investigation/feasibility study process, with remedy selection documented in the ROD. Of the 207 waste sites, 46 waste sites were determined to pose a risk requiring remediation. These sites are listed in Table A-1 of the ROD.

The selected remedy in the Remaining Sites ROD consists of removal, treatment, and disposal of contaminated materials, followed by waste site backfilling and revegetation. These components of the remedy can be summarized as follows:

- Excavation of contaminated soil, structures, and associated debris above cleanup standards in accordance with the Remaining Sites ROD. The Remaining Sites ROD requires removal of contamination but does allow for some amount of contamination to be left at depths greater than 15 feet based on a site-specific determination.
- Treatment of waste, as required, to meet Environmental Restoration Disposal Facility (ERDF) requirements. The ERDF is a Hanford Site disposal facility for CERCLA remediation waste (Figure 1).
- Disposal of contaminated materials at the ERDF.
- Backfill of excavated areas with clean material and revegetation of the excavated area.

The remaining 161 waste sites were identified as candidate waste sites that potentially required remediation pending results from additional characterization. These sites are listed in Table A-2 of the ROD. Because the 161 candidate waste sites shared common physical and contaminant characteristics with the 46 sites requiring remediation, they would plug in to the same remedy if remedial action was warranted. These characteristics were defined in the ROD and consist of similar types of the following:

- Contaminants (e.g., chemical and radiological)
- Contaminated environmental media (e.g., soil)
- Contaminated waste material (e.g., concrete, metal, and wood).

If a waste site does not share these three characteristics, remediating it is not within the scope of the Remaining Sites ROD and the waste site must be addressed as part of an amended ROD or another cleanup action (e.g., a separate ROD). If a waste site does share these characteristics and requires remediation, it can be added to the ROD and become subject to its remediation requirements. Depending on the adequacy of available information, sites are evaluated based on existing data or process knowledge and may also be sampled to determine if contaminant concentrations exceed cleanup levels established in the ROD, thereby showing that remedial actions are warranted.

Using the ESD process (EPA 2000, 2004), the Tri-Parties have previously notified the public of 30 waste sites in the 100 Areas that were similar to sites in Table A-1 of the Remaining Sites ROD and met the ROD site profile for plug in. These sites were plugged in and became subject to the Remaining Sites ROD remedy.

The 2004 ESD also provides that when any new waste sites are discovered in areas where remediation is being conducted pursuant to the Remaining Sites ROD and those sites meet the ROD requirements to be plugged in to the remedy, remediation of the new sites may proceed before an ESD is issued, provided an ESD is issued as soon as practicable. Remediation must be conducted in accordance with the ROD and an approved RD/RA work plan. Table 1 of this ESD identifies waste sites that were in areas where remediation was being conducted pursuant to the Remaining Sites ROD that qualified for "plug in" and were remediated without prior issuance of an ESD. They are identified as having been "Remediated under Remaining Sites ROD." This ESD provides public notice of the addition of those waste sites to the Remaining Sites ROD.

BASIS FOR THE DOCUMENT/DESCRIPTION OF SIGNIFICANT DIFFERENCES

Through this ESD, the Tri-Parties authorize the following significant changes to the Remaining Sites ROD.

Remaining Sites Record of Decision

- **Authorize Addition of 200-CW-3 Wastes Sites as Plug in and Candidate Sites**

  The Remaining Sites ROD did not provide for the use of the "plug-in" approach for the 200-CW-3 OU, even though 200-CW-3 waste sites are included in the Remaining Sites ROD. Since the remaining Sites ROD was issued, additional 200-CW-3 sites have been identified that are similar to the waste sites in the Remaining Sites ROD in terms of contaminants, contaminated media and contaminated waste material. The Remaining Sites ROD is being revised to allow sites in the 200-CW-3 OU that share common physical and contamination characteristics with sites listed in the Remaining Sites ROD to be added as plug-in and candidate sites in accordance with ROD requirements.

- **Add 99 Waste Sites for Remove, Treat, and Dispose**

  Using the plug-in approach described in the ROD, 99 newly discovered waste sites located in the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-HR-1, 100-KR-1, 100-KR-2, 100-IU-2, 100-IU-6, and 200-CW-3 OUs (see Figures 3 through 11) that fit the site profile in the ROD are added to Table A-1 of the Remaining Sites ROD for remediation in accordance with the selected remove/treat/dispose remedy and an approved RD/RA work plan. Details of the waste sites are provided in Table 1. These sites share common physical and contamination characteristics with sites listed in Table A-1 of the Remaining Sites ROD and have comparable contaminant concentrations that require remediation to address a risk to human health and the environment. This determination is based on historical information and records, as well as analogous data and observations from other similar waste sites. Total remediation costs for the sites are estimated at $48,078,152. Cost estimates for each individual site are listed in Table 1.

- **Add 87 Candidate Waste Sites**

  Eighty-seven additional waste sites in the 100-BC-1, 100-DR-1, 100-DR-2, 100-FR-1, 100-HR-1, 100-KR-2, 100-IU-2, and 100-IU-6 OUs (see Figures 3 through 10) requiring additional characterization are added to Table A-2 of the Remaining Sites ROD. These sites meet the "plug in" waste site profile in the ROD. If contamination levels above established cleanup levels are indicated, the waste sites will be remediated in accordance with the selected ROD remedy and an approved RD/RA work plan. Details of the sites are given in Table 2; these waste sites have been determined by the Tri-Parties to be candidate waste sites for remediation due to hazardous substances that may be present at concentrations that pose a threat to human health and the environment. The Tri-Parties also have determined that these sites are similar to the other candidate waste sites listed in Table A-2 of the Remaining Sites ROD because they have similar contaminants, similar waste characteristics, and similar contaminated media; this determination is based on historical information and records, as well as analogous data from other similar waste sites.

  Total estimated costs for characterization of the additional candidate sites listed in Table 2 of this ESD are $13,388,973.

  This characterization work will be performed in accordance with an approved sampling and analysis plan, as required by the 100 Area RD/RA work plan (DOE-RL 2005). It is anticipated that this work will be complete by 2012. Estimated costs for each individual site are provided in Table 2.

  It is anticipated that approximately 62% (based on historical data) of the candidate sites will require remediation. The additional estimated future cost for remediation of these sites is $19,891,270. The total estimated cost for work under this ESD is $61,467,125.

- **Addition of Annual Fact Sheet to Add Waste Sites**

  Characterization and/or remediation of any additional newly discovered waste sites in OUs included in the Remaining Sites ROD that meet the ROD requirements for plug-in or candidate sites can proceed in accordance with the ROD, the 2000 ESD, the 2004 ESD, and this ESD as well as an approved RD/RA work plan, without publication of an ESD provided the cumulative estimated cost of the additional work does not exceed +50% of the total estimate provided in the original ROD, the 2000 and 2004 ESDs, and this ESD ($128 million). The addition of these candidate and plug-in waste sites will not have a significant impact on the scope, performance or cost of the remedy. Additions of plug-in and candidate sites will be documented in the Administrative Record, and a fact sheet will be published by DOE annually identifying the plug-in and candidate sites that have been added.

AGENCY COMMENTS

By issuance of this ESD, the Tri-Parties agree with the significant differences identified above.

Ecology is the supporting regulatory agency for 100 AREA ESD interim action.

Under Washington's *Resource Conservation and Recovery Act of 1976* (RCRA)-authorized *Hazardous Waste Management Act* (HWMA) (RCW 70.105) and Dangerous Waste Regulations, Ecology has corrective action jurisdiction over the 100 Area Remaining Site OUs concurrent with CERCLA. Under the Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion (Sitewide Permit), issued under the HWMA, Ecology allows for work under other cleanup authorities or programs to be used to satisfy corrective action requirements, provided such work protects human health and the environment: Sitewide Permit Condition II.Y.2. Ecology specifically accepts work under the Tri-Party Agreement and the CERCLA program as satisfying corrective action requirements, subject to certain reservations (Sitewide Permit Condition II.Y.2.a). These reservations include a qualification that "a final decision about satisfaction of corrective action requirements will be made in the context of issuance of a final ROD." Sitewide Permit Condition II.Y.2.a.ii.

In addition to jurisdiction asserted under the permit, certain HWMA corrective action requirements are "applicable or relevant and appropriate requirements" (ARARs) under CERCLA. Ecology has evaluated protection of human health and the environment by considering how the selected remedy will address state corrective action requirements under *Washington Administrative Code* (WAC) 173-303-64620(4). This regulation provides that corrective action must, at a minimum, be consistent with certain provisions of Washington's Model Toxics Control Act (MTCA) regulations, including the remedy selection requirements of WAC 173-340-360.

Ecology accepts the use of interim actions as a means to accelerate physical cleanup. The interim action RODs include as ARARs the MTCA regulations (as amended in 1996). Ecology anticipates that when DOE proposes final remedial actions, the DOE proposals will address the most current promulgated regulation of WAC 173-340. Ecology concurs with the interim proposed action.

STATUTORY DETERMINATIONS

This remedy satisfies the statutory requirements of CERCLA and, to the extent practicable, the NCP. The interim action remedy selected in the Remaining Sites ROD, as modified by this ESD, remains protective of human health and the environment, complies with federal and state requirements identified in the ROD and ESDs that are applicable or relevant and appropriate to remedial actions, is cost effective, and uses permanent solutions and alternative treatment technologies to the maximum extent practicable.

The response action, as modified by this ESD, is necessary to protect the public health, welfare, or environment from actual or threatened releases of hazardous substances into the environment. Such a release or threat of release may present an imminent and substantial endangerment to the public health, welfare, or the environment.

PUBLIC PARTICIPATION

To satisfy the public notice requirements set forth in Section 300.435(c)(2)(i) of the NCP, DOE will publish notice of the availability and a brief description of this ESD, which includes the reasons for the differences, in the Tri-City Herald. The ESD will be made available to the public in the administrative record and information repositories identified above in accordance with the Hanford Site Tri-Party Agreement Public Involvement Community Relations Plan (DOE et al. 2002). In addition, DOE will distribute a fact sheet via email to the Hanford Site listserve distribution list. Additions of plug-in and candidate sites will be documented in the Administrative Record, and a fact sheet will be published by DOE annually identifying the plug-in and candidate sites that have been added.

REFERENCES

40 CFR 300, "National Oil and Hazardous Substances Pollution Contingency Plan," *Code of Federal Regulations*, as amended.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9601, et seq.

DOE, EPA, and Ecology, 2002, *Hanford Site Tri-Party Agreement Public Involvement Community Relations Plan*, U.S. Department of Energy, U.S. Environmental Protection Agency, Washington State Department of Ecology, Richland, Washington.

DOE-RL, 2005, *Remedial Design Report/Remedial Action Work Plan for the 100 Area*, DOE/RL-96-17, Rev. 5, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Ecology, EPA, and DOE, 1989, *Hanford Federal Facility Agreement and Consent Order*, 2 vols., as amended, Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy, Olympia, Washington.

EPA, 1999, *Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-HR-1, 100-HR-2, 100-KR-1, 100-KR-2, 100-IU-2, 100-IU-6, and 200-CW-3 Operable Units, Hanford Site, Benton County, Washington,* U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2000, *Explanation of Significant Differences for the 100 Area Remaining Sites ROD, 100-IU-6 Operable Unit, Hanford Area, Benton County, Washington,* U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2004, *Explanation of Significant Differences for the 100 Area Remaining Sites Interim Remedial Action Record of Decision, 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-HR-1, 100-HR-2, 100-KR-1, 100-KR-2, 100-IU-2, 100-IU-6, and 200-CW-3 Operable Units, Hanford Site, Benton County, Washington,* U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

RCW 70.105, "Hazardous Waste Management Act," *Revised Code of Washington*, as amended.

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

WAC 173-340, "Model Toxics Control Act – Cleanup," *Washington Administrative Code*, as amended.

Figure 1. Location of 100 Area Reactor Areas, 200 Areas, and the Environmental Restoration Disposal Facility.

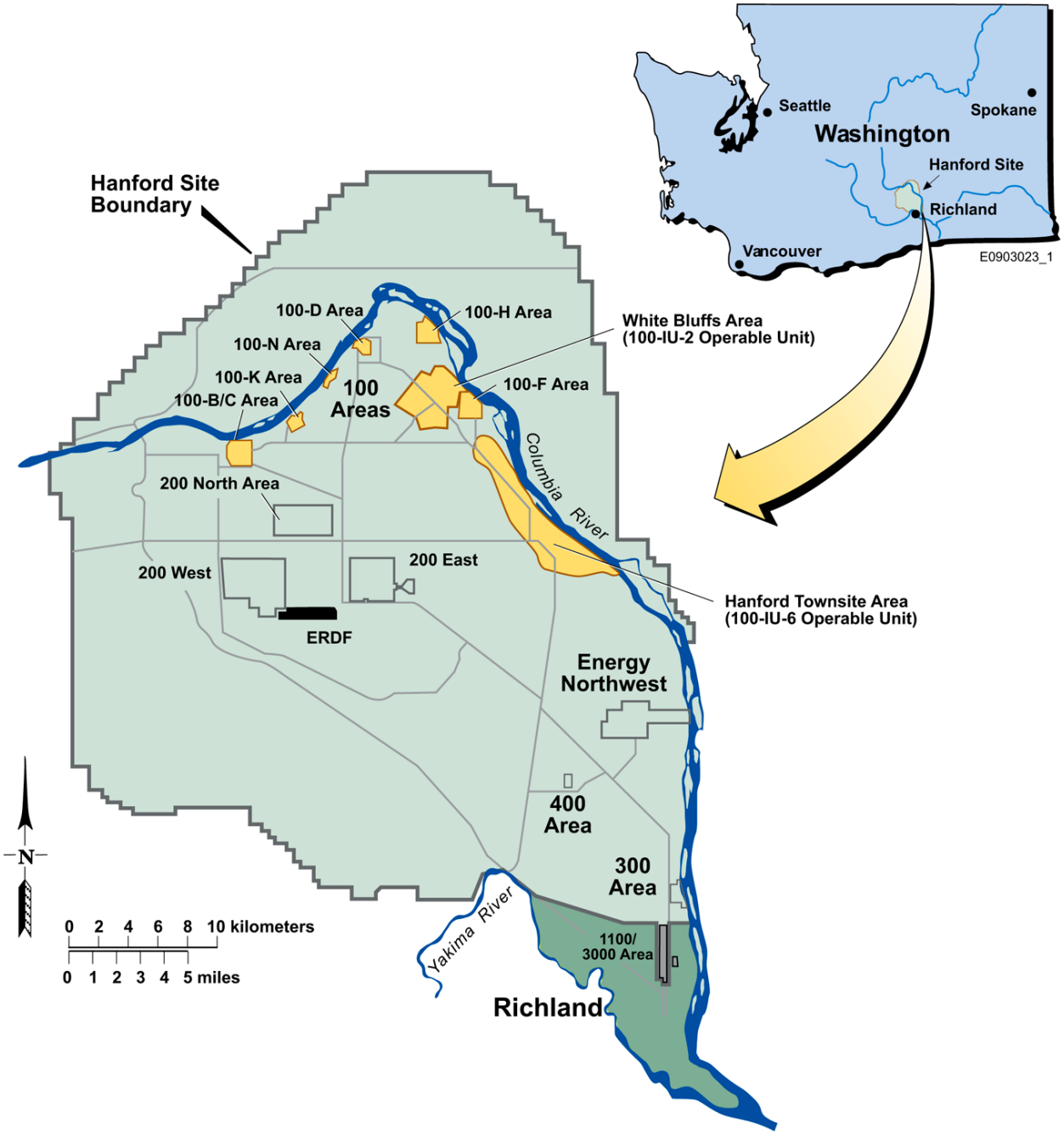
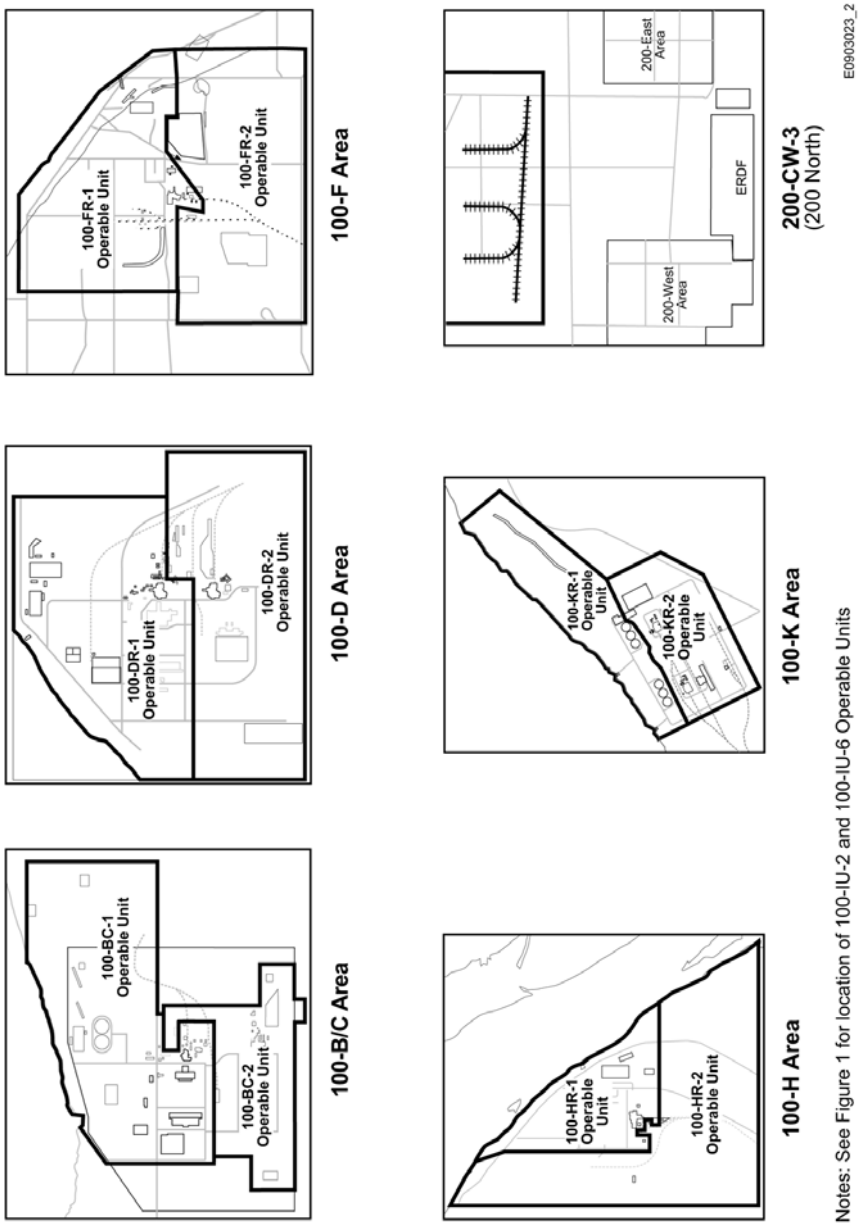
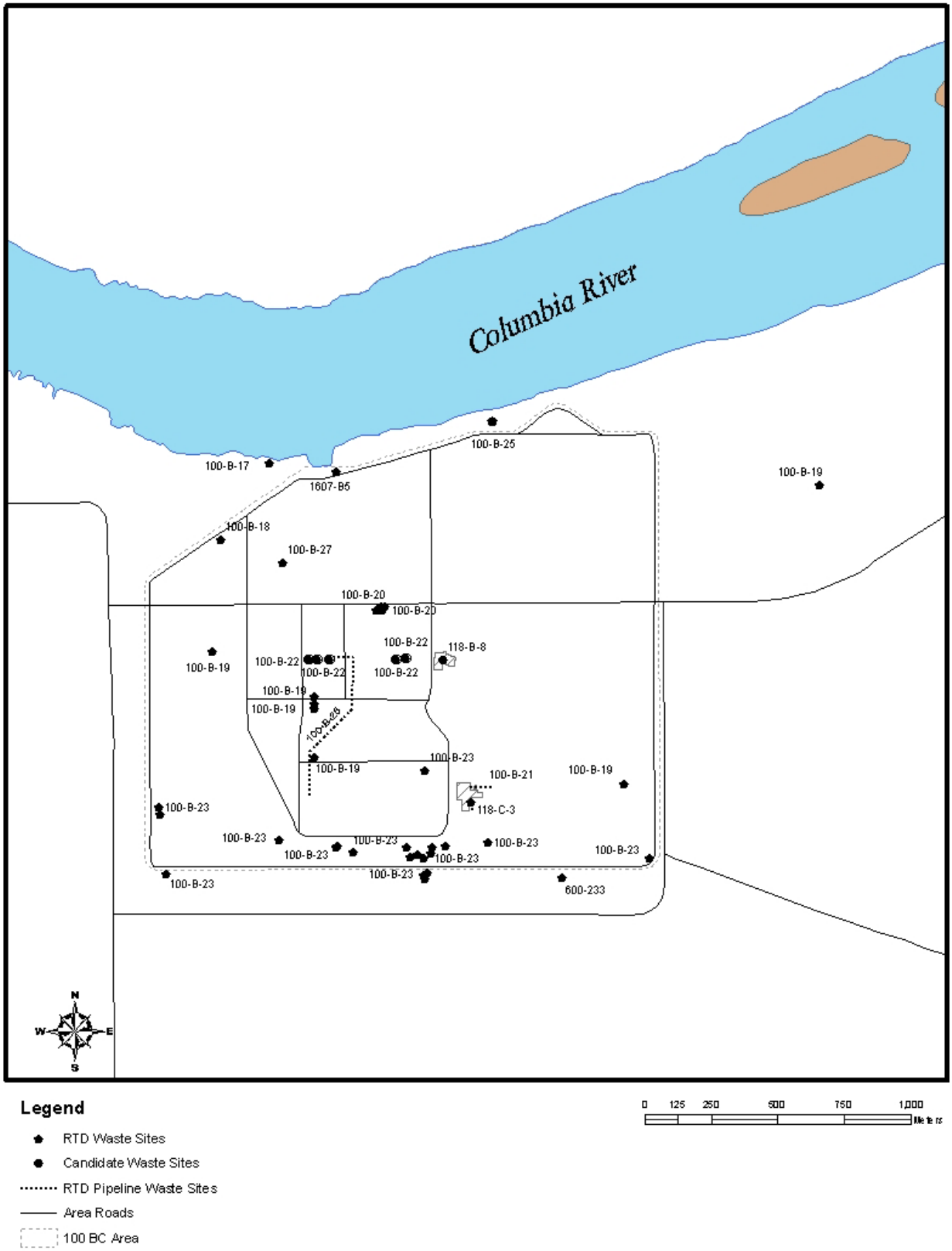


Figure 2. Location of Source Operable Units in the 100 Areas and 200 North Area.



Notes: See Figure 1 for location of 100-IU-2 and 100-IU-6 Operable Units

Figure 3. Waste Sites in the 100-B/C Area to Be Added to Tables A-1 and A-2 of the Remaining Sites ROD.

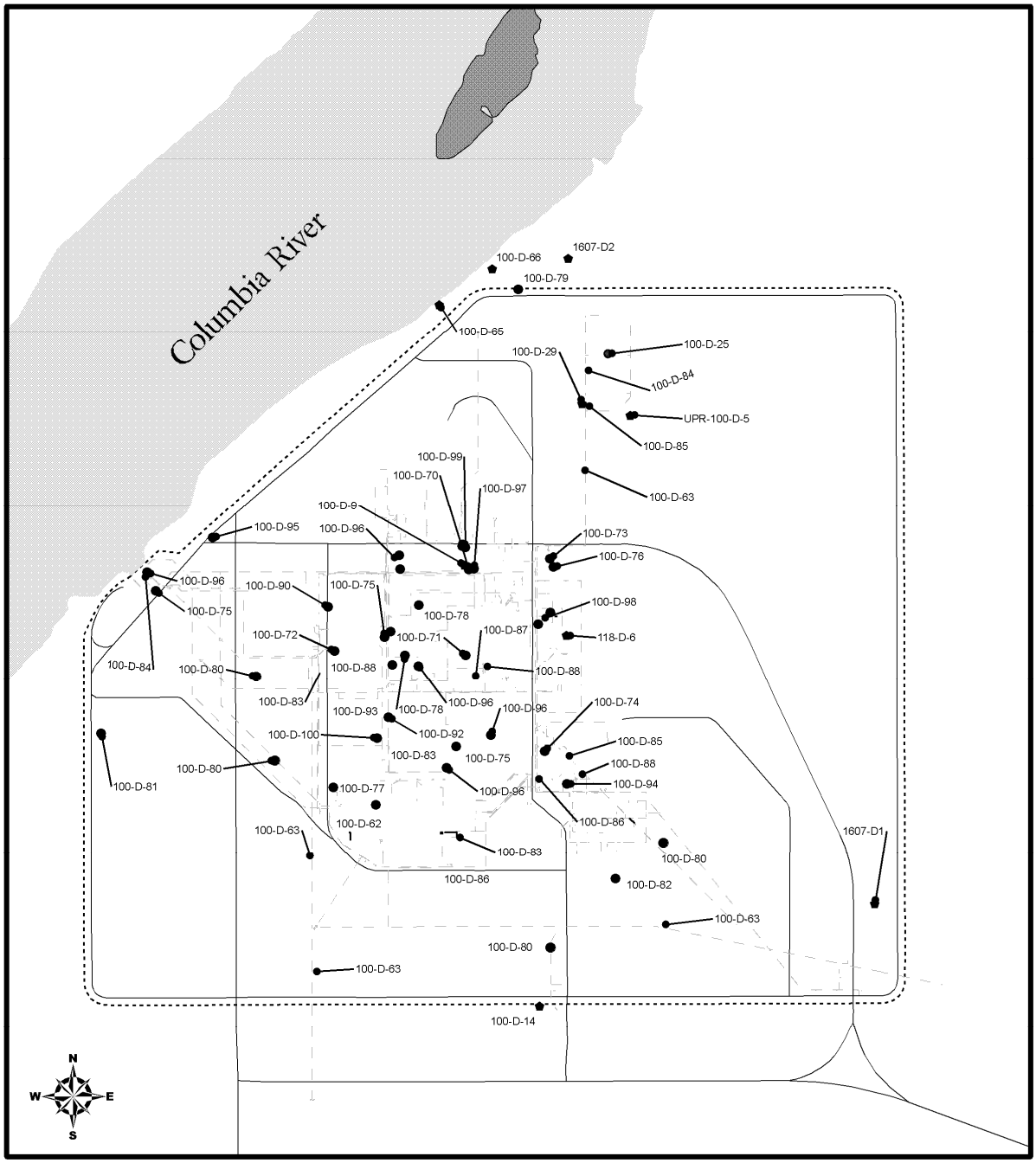


Legend

- RTD Waste Sites
- Candidate Waste Sites
- RTD Pipeline Waste Sites
- Area Roads
- 100 BC Area

0 125 250 500 750 1,000 Meters

Figure 4. Waste Sites in the 100-D Area to Be Added to Tables A-1 and A-2 of the Remaining Sites ROD.



Legend

- Candidate Waste Sites
- RTD Pipeline Waste Site
- RTD Waste Sites
- Candidate Pipeline Waste Sites
- 100-D/DR Area
- Area Roads

0 50 100 200 300 400 500 Meters

Figure 5. Waste Sites in the 100-F Area to Be Added to Tables A-1 and A-2 of the Remaining Sites ROD.

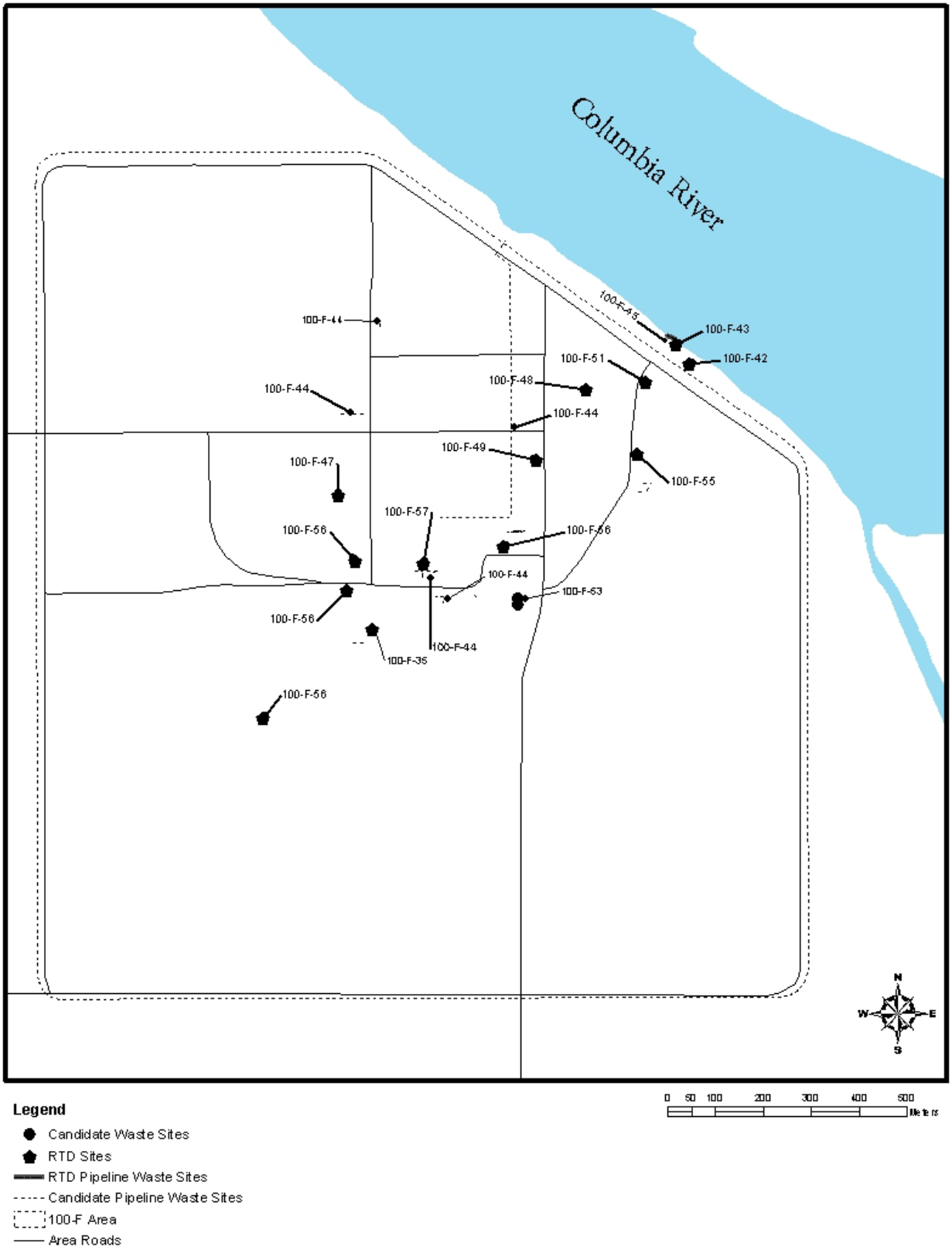


Figure 6. Waste Sites in the 100-H Area to Be Added to Tables A-1 and A-2 of the Remaining Sites ROD.

Figure 7. Waste Sites in the 100-K East Area to Be Added to Tables A-1 and A-2 of the Remaining Sites ROD.

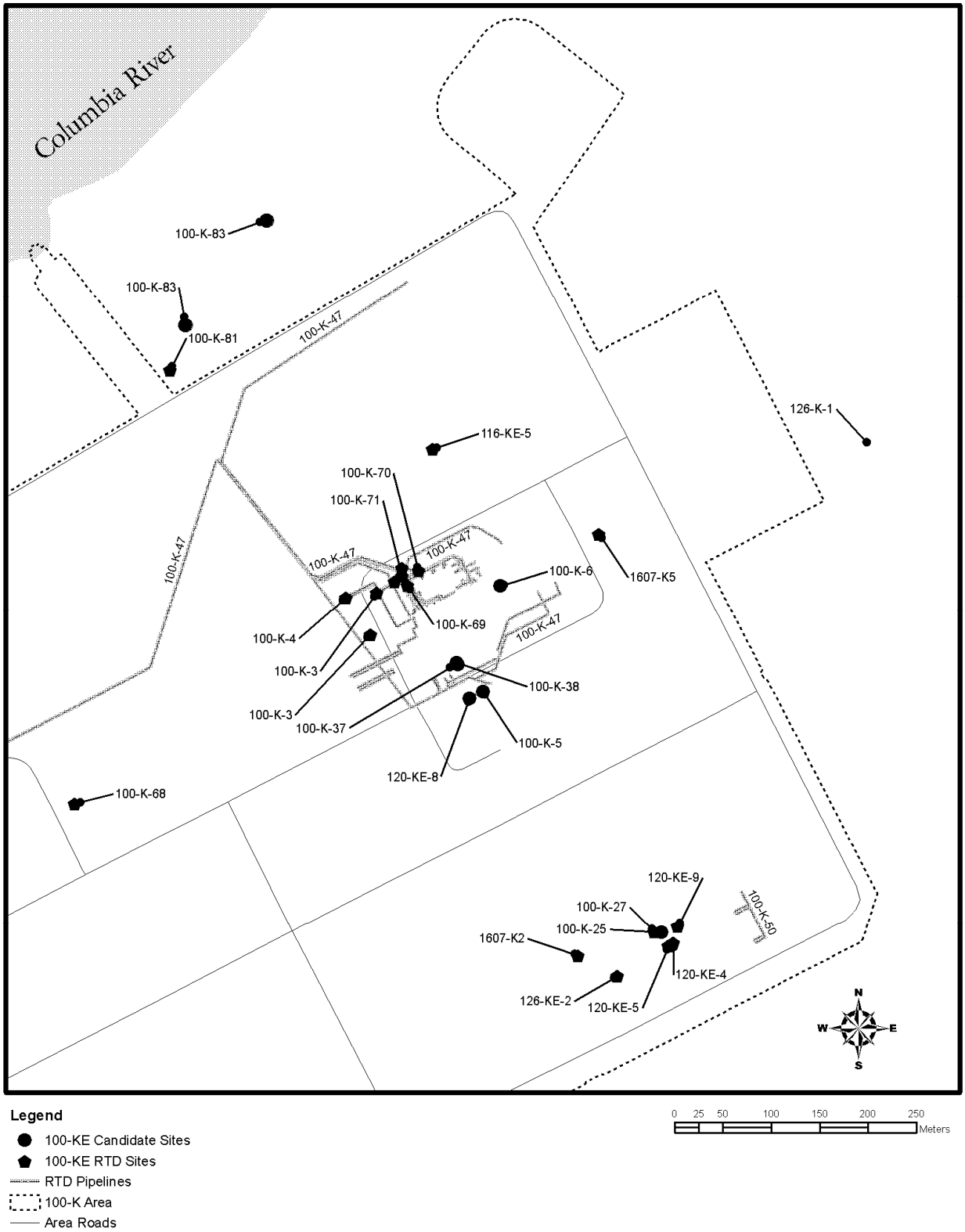


Figure 8. Waste Sites in the 100-K West Area to Be Added to Tables A-1 and A-2 of the Remaining Sites ROD.

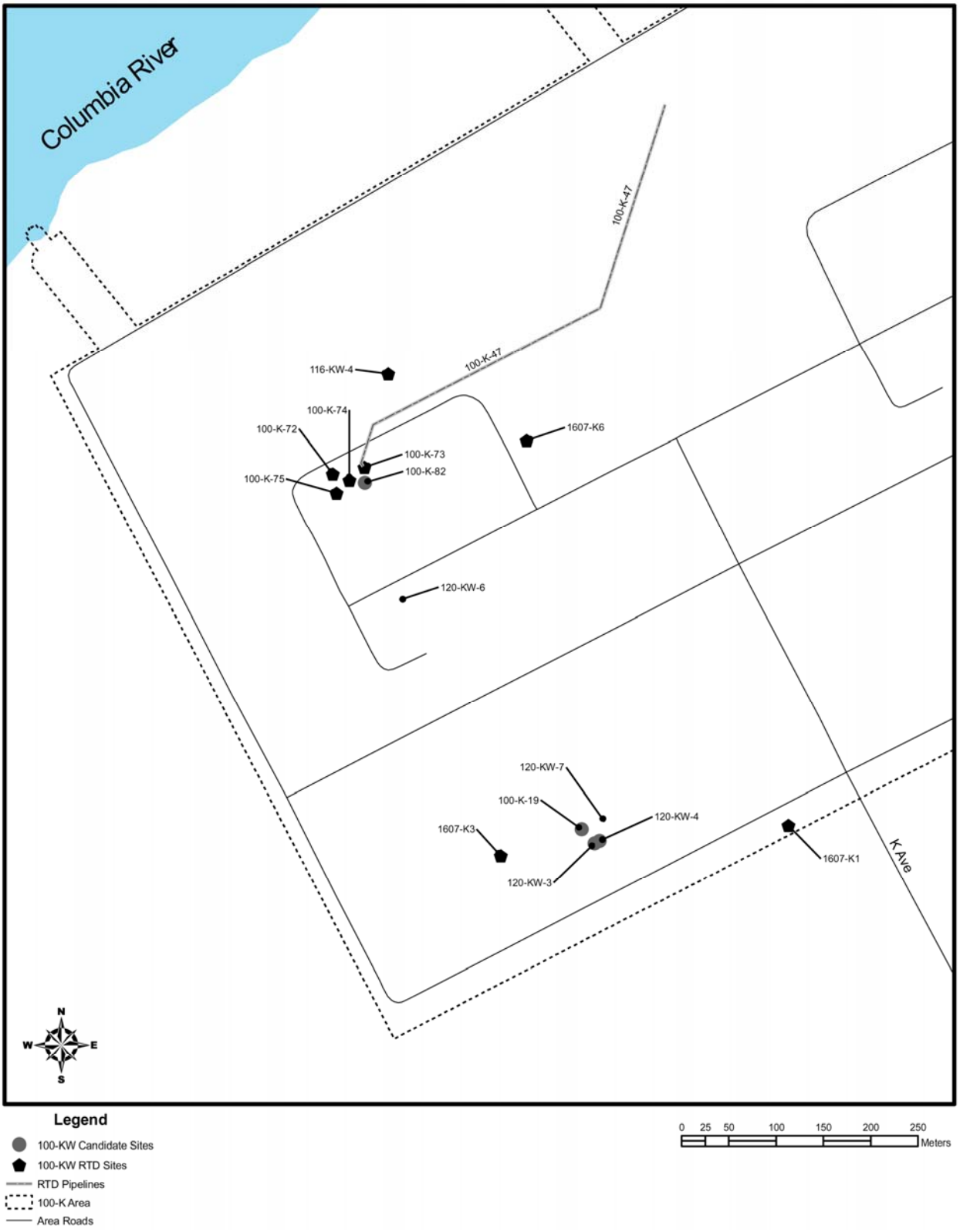
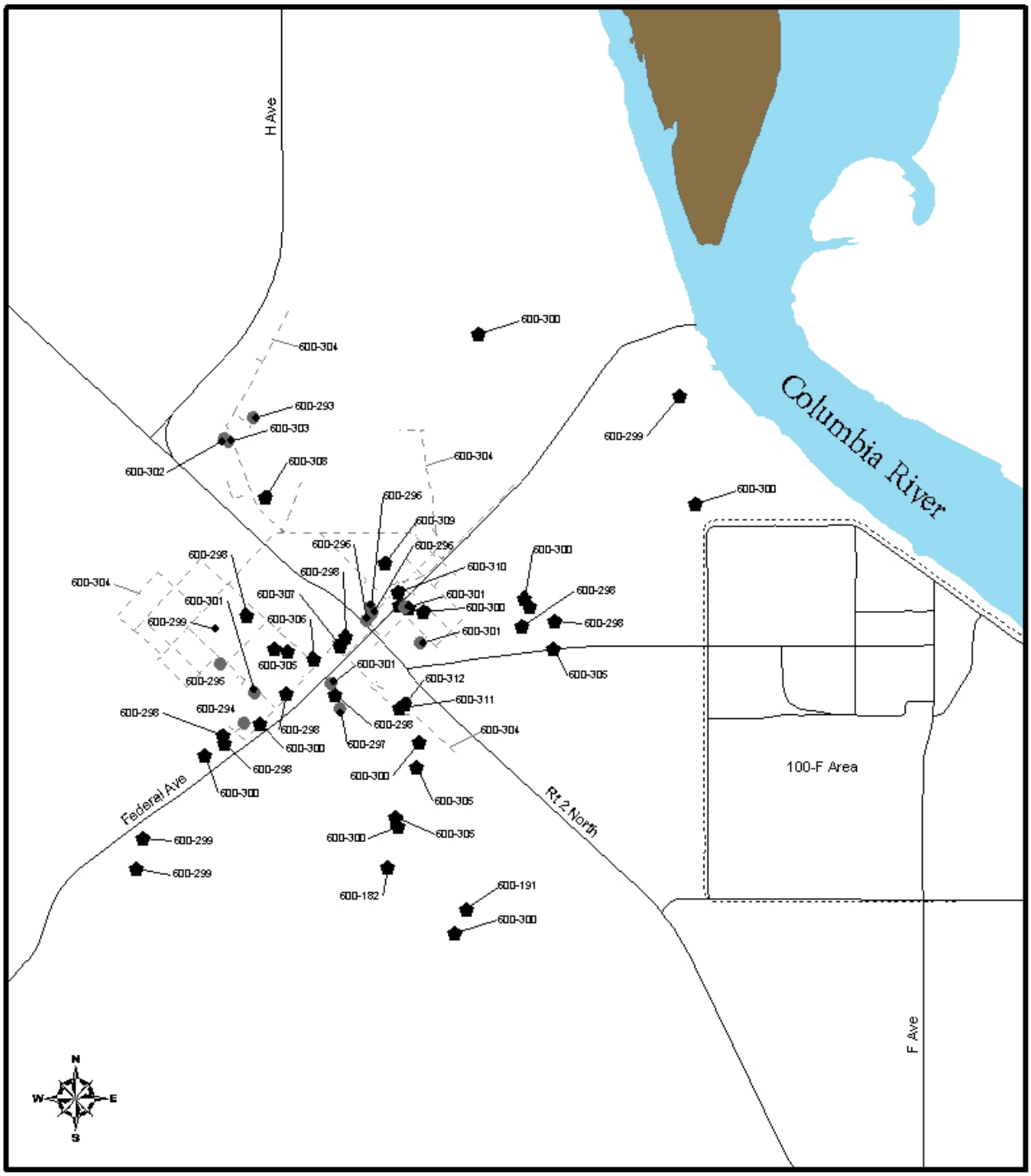


Figure 9. Waste Sites in the 100-IU-2 Area to Be Added to Tables A-1 and A-2 of the Remaining Sites ROD.



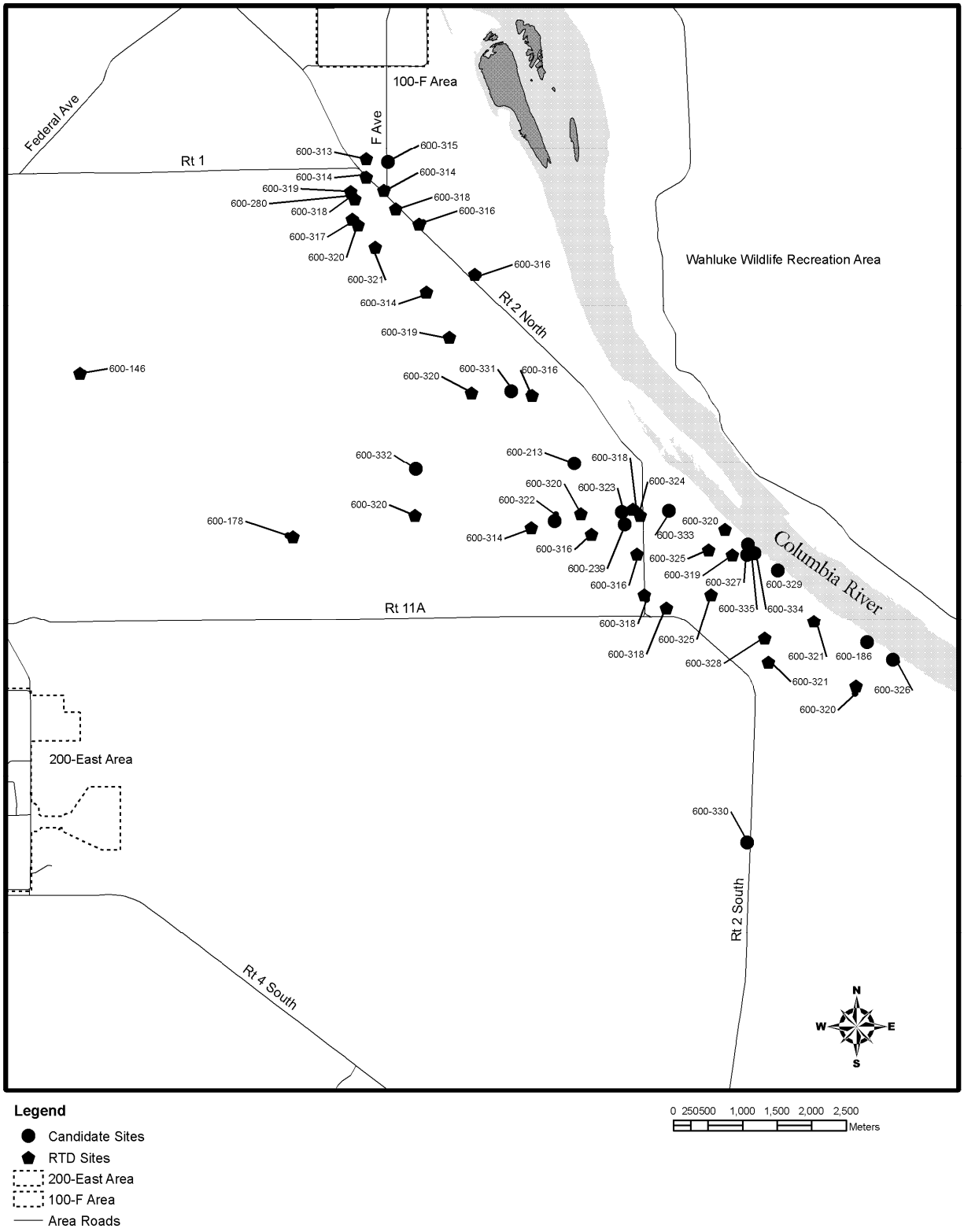
Legend

- Candidate Sites
- RTD Sites
- Candidate Pipeline Waste Site
- 100-F Area
- Area Roads

Note:
1) Sites may have multiple locations.
2) The 600-178 RTD waste site is located to the south and shown on Figure 10.

0 125 250 500 750 1,000 Meters

Figure 10. Waste Sites in the 100-IU-6 Area to Be Added to Tables A-1 and A-2 of the Remaining Sites ROD.



Legend

- Candidate Sites
- RTD Sites
- 200-East Area
- 100-F Area
- Area Roads

0 250500 1,000 1,500 2,000 2,500 Meters

Figure 11. Waste Sites in the 200-CW-3 Area to Be Added to Tables A-1 and A-2 of the Remaining Sites ROD.

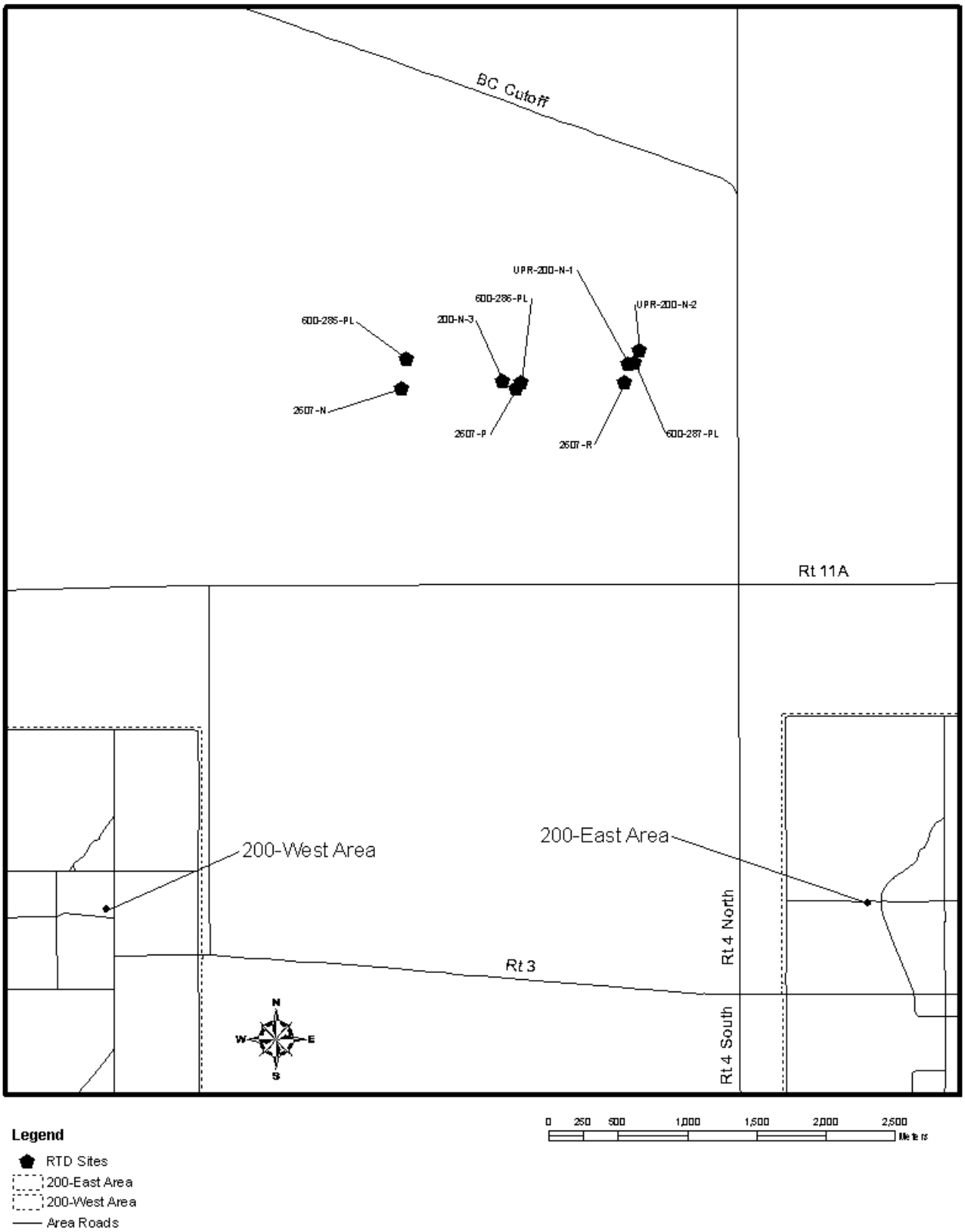


Table 1. Additional Remove, Treat, and Dispose Sites for the Remaining Sites ROD. (11 Pages)

Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Known or Potential Contamination	Estimated or Actual Cost of Site Remediation
100-BC-1	1607-B5 Septic Tank System	The site consists of an underground septic tank that received sanitary sewage from the 181-BC Pump House. In January 2001, residue in the septic tank was sampled and low levels of radionuclides were identified. Based on analogous data from similar septic systems, the site is selected for remediation because of expected concentrations of contaminants above cleanup levels.	Sanitary sewage, concrete	Radiological and chemical contaminants	$201,620
100-BC-1	100-B-17, Transite on the Columbia River Shoreline	Transite on the shoreline.	Debris	Asbestos	$106,529
100-BC-1	100-B-18, 184-B Powerhouse Debris Pile	**Remediated Under Interim Remaining Sites ROD.** The site consisted of a debris pile containing miscellaneous demolition waste from the decommissioning activities of the 184-B Building and the 184-B Power House. Material included numerous concrete blocks mixed aggregate/concrete slabs, stone rubble, rusted metal piping and plumbing, traces of tar/coal and paint, broken fluorescent lights, creosote timbers, brick chimney remnants, and rubber hoses. Debris also included fragments of corrugated asbestos-containing material, siding, and remnants of an asbestos-cloth fire hose.	Miscellaneous trash and debris	Metals, mercury, hexavalent chromium, PCBs, and asbestos	$83,388
100-BC-1	100-B-19, 100 B/C Stained Soil Sites	The waste site consists of several areas of disturbed soil with little or no vegetation. The soil sites have a visible yellow or red to purple surface color seen at analogous sites in the 100 Area.	Soil	Hexavalent chromium, mercury, and lead	$151,857
100-BC-1	100-B-20, 1716-B Maintenance Garage Underground Tank	**Remediated Under Interim Remaining Sites ROD.** The site consisted of an underground gas and/or oil tanks near the garage. The garage was used for maintenance of 100-B Area vehicles. The facility and tanks have been removed.	Concrete, soil, debris	Radiological and chemical contaminants	$67,653
100-BC-1	100-B-21, Miscellaneous Pipelines	Underground pipelines uncovered during excavation.	Soil and debris	Chemical contaminants	$644,056
100-BC-1	100-B-25 Spillway	The site consists of a spillway (also referred to as a flume). The spillway is constructed of concrete and led from the 132-B-6 outfall structure, via a heavy riprap extension on the end of the concrete spillway, to the river shoreline. During decommissioning projects in the 1980s, the spillway walls were collapsed and the structure was covered with clean soil.	Soil and debris	Radiological and metals	$120,159
100-BC-1	100-B-27, Sodium Dichromate Spill	This site is an unplanned release of sodium dichromate in the soil adjacent to the 126-B-3 waste site. This past release was discovered during remedial action at the 126-B-3 waste site.	Soil	Hexavalent chromium	$181,112

Table 1. Additional Remove, Treat, and Dispose Sites for the Remaining Sites ROD. (11 Pages)

Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Known or Potential Contamination	Estimated or Actual Cost of Site Remediation
100-BC-1	100-B-28, Sodium Dichromate Pipeline	This site is a sodium dichromate transfer pipeline. The pipeline is a 7.6 cm (3-in.) steel line for supplying soft water from the 184-B Power House to the 183-C Head House. However, in 1962 the line from the 184-B Power House was removed from service and blanked (capped off) and a new line was run to the 183-B Filter Plant to allow the use of the southern extent of the 7.6 cm (3-in.) line as a sodium dichromate transfer line from the 183-C Head House to the 183-B Filter Plant.	Metal debris, soil	Hexavalent chromium	$2,794,395
100-BC-2	100-B-23, 100-B/C Surface Debris	**Remediated Under Interim Remaining Sites ROD.** The site consists of various sizes and forms of surface debris in the 100-B/C Area created during construction, operation, decontamination and decommissioning including suspected asbestos-containing material, lead, oil and oil filters, and treated wood.	Wood and metal debris, soil	Asbestos, lead, oil, and creosote	$168,464
100-BC-2	600-233	**Remediated Under Interim Remaining Sties ROD.** This site was a steel pipe near the 100-B electrical laydown area that is 6.4 cm (2.5 in.) in diameter and extended 1.7 m (4.92 ft) vertically above the ground surface with an elbow and valve at the top.	Pipe, equipment	Metals, PCBs, TPH	$64,906
100-BC-2	118-C-3:3, 105-C French Drains	**Remediated Under Interim Remaining Sites ROD.** This included the four french drains identified as collective drain pipelines and french drains that drained condensate from various rooms in the 105-C Reactor. Each french drain was approximately 40.6 cm to 61 cm (16 in. to 24 in.) in diameter and had a 3.8 cm (1.5-in.) pipeline that ran to the french drain.	Concrete, soil	Radionuclides, hexavalent chromium, other metals, PCBs	$63,531
100-DR-1	100-D-9, 184-DA Boiler Oil Tank	**Remediated Under Interim Remaining Sites ROD.** This site consisted of an underground fuel storage tank that was believed to have been removed during general demolition efforts of the 100-D/DR Area during 1985 and 1986. It now appears as a cobble-covered field with vegetation on the surface.	Soil and debris	Radiological/ hazardous	$52,838
100-DR-1	UPR-100-D-5	This site is an unplanned release of effluent water from the reactor cooling water (effluent line leak #4) and is located southeast of 116-DR-9.	Soil	Radiological	$210,631
100-DR-1	1607-D2, Septic System	**Subsites 1, 3, and 4 were Remediated Under Interim Remaining Sites ROD**. The 1607-D2 Septic System has been divided into four subsites: (1) 1607-D2:1 Abandoned Tile Field; (2) 1607-D2:2 Replacement Tile Field; (3) 1607-D2:3 Septic Pipelines; and 4() 1607-D2:4 Septic Tank. Only 1607-D2:2 and :5 remain to be remediated under the Interim ROD.	Soil and debris	Radiological and chemical contaminants	$1,993,691
100-DR-1	100-D-25, Unplanned Release: 107-DR Basin Leaks	**Remediated Under Interim Remaining Sites ROD**. This site was from leakage from the 107-DR Basin and was confined to the south end and beneath the basin.	Soil and debris	Radiological	$100,495

Table 1. Additional Remove, Treat, and Dispose Sites for the Remaining Sites ROD. (11 Pages)

Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Known or Potential Contamination	Estimated or Actual Cost of Site Remediation
100-DR-1	100-D-29	This site is from an unplanned release of effluent water from the reactor cooling water (effluent line leak #2) and is located southeast of 116-DR-9.	Soil	Radiological and chemical contaminants	$776,167
100-DR-1	100-D-66, 116-DR-5 Outfall Spillway, 100-D-60:1	The site consists of a portion of a concrete spillway (also referred to as a flume) similar to 100-D-65 from the 116-DR-5 outfall to the Columbia River OHWM.	Soil, concrete, debris	Radiological and metals	$855,003
100-DR-1	100-D-65, Outfall Spillway, 100-D-60:1	The site is the portion of a concrete spillway (also referred to as a "flume") from the 116-D-5 outfall structure to the Columbia River ordinary high water mark (OHWM). The spillway was attached to the outfall and could have received reactor coolant effluent when the river effluent pipelines were blocked, damaged, or undergoing maintenance.	Concrete, soil	Radiological and metals	$855,003
100-DR-1	118-D-6:4	Contaminated D Reactor building soils deferred during interim safe storage activities.	Soil	Radiological and chemical contaminants	$107,609
100-DR-2	100-D-14, Unnumbered Septic Tank #2,	The site appears as a vegetation-covered field containing subsurface remnants of a former partially abandoned septic system.	Soil, concrete, debris	Radiological and chemical contaminants	$519,518
100-DR-2	100-D-62, 183-DR Headhouse Septic Tank	The site is a septic tank, tile field and related piping. This system was designed for the use of six people with a 2,271 L (600-gal) capacity.	Soil and debris	Chemical contaminants	$519,518
100-DR-2	1607-D1, Septic System	The site is a septic tank and associated drain field. The site provided sanitary service for patrol and fire personnel located at the entrance to the 100-D/DR Reactor Area.	Soil and debris	Chemical contaminants	$519,518
100-FR-1	100-F-42, 1904-F Spillway	**Remediated Under Interim Remaining Sites ROD.** The site was the concrete spillway (also referred to as a "flume") that led from the 116-F-8 outfall structure to the river OHWM.	Concrete, soil	Radiological and metals	$855,616
100-FR-1	100-F-43, Spillway for 116-F-16 PNL Outfall	**Remediated Under Interim Remaining Sites ROD.** The 100-F-43 spillway (also referred to as a "flume") was constructed of reinforced concrete, and extended from the 116-F-16 PNL Outfall to the Columbia River shoreline. The site was the flume from the outfall to the OHWM.	Concrete, soil	Radiological and metals	$400,901
100-FR-1	100-F-45, Buried Effluent Pipelines	The site consists of a piece of pipeline that was buried in the river bank after it floated loose from the river effluent pipeline.	Soil and debris	Chemical and radiological	$109,823

Table 1. Additional Remove, Treat, and Dispose Sites for the Remaining Sites ROD. (11 Pages)

Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Known or Potential Contamination	Estimated or Actual Cost of Site Remediation
100-FR-1	100-F-47, 151-F Substation	The substation consisted of a fenced gravel-bed yard measuring 92.4 m (303 ft) by 137.2 m (450 ft), with the 151-F Switch House footprint along the eastern fence line. A railroad spur entered the yard from the south and paralleled the east fence line.	Soil and debris	PCBs/asbestos	$109,823
100-FR-1	100-F-48, 184-F Coal Pit Debris	The site consists of an area of debris that was identified in an aerial photograph and a historical literature search.	Soil and debris	Chemical contaminants	$109,823
100-FR-1	100-F-49, 1716-F Maintenance Garage Lubrication Pit	The site consists of components of the 1716-F Maintenance Garage, including the foundation, the lubrication pit, and the contaminated drain(s).	Soil and debris	Chemical contaminants	$109,823
100-FR-1	100-F-51, 146-F Fish Laboratory Soil	The site is the soil under and around the former 146-F Fish Laboratory.	Soil and debris	Chemical contaminants	$109,823
100-FR-1	100-F-55	Contaminated ash layer near the former 1607-F7 septic site.	Soil	Chemical contaminants	$109,823
100-FR-1	100-F-56, 100-F Surface Debris/Stains	The site consists of scattered surface debris located throughout the 100-F Area.	Soil and debris	Chemical contaminants	$109,823
100-FR-1	100-F-57, 190-F Process Water Pump House Debris	The site consists of the remaining foundation of the demolished 190-F Process Water Pump House.	Soil and debris	Chemical contaminants	$109,823
100-FR-2	100-F-35, Soil Contamination Area Inside the 105-F Exclusion Area	**Remediated Under Interim Remaining Sites ROD.** The site consisted of contaminated soil inside the 105-F exclusion area associated with the 116-F-4 Crib.	Soil	Radiological contaminants	$68,250.
100-HR-1	100-H-37	Mud dauber site.	Soil	Radiological contaminants	$2,539,088
100-HR-1	1607-H3 Septic Tank and Drain Field	The site is a septic tank and drain field.	Soil and debris	Radiological and chemical contaminants	$492,518
100-HR-1	118-H-6:4 and :5	Contaminated H Reactor building soils deferred during interim safe storage activities.	Soil	Radiological and metals	$120,159
100-HR-1	600-152, Military Septic Tank	Three separate inline concrete covers and two manholes identify the site. As a result of sampling results, the site was posted with Underground Radioactive Material signs.	Soil, concrete, and steel	Radiological	$61,470

Table 1. Additional Remove, Treat, and Dispose Sites for the Remaining Sites ROD. (11 Pages)

Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Known or Potential Contamination	Estimated or Actual Cost of Site Remediation
100-KR-1	100-K-27, Caustic Soda Tank	The site was originally an above-ground, cylindrical, vertical steel storage tank on a concrete base. The above-ground tank was 7.8 m (25.5 ft) in diameter with a 287,660 L (76,000-gal) capacity. Some time in the past (date unknown) the tank was removed. Today, the site is the 9.1 m (30-ft)-diameter grade-level concrete tank base and the soil surrounding the base.	Soil, concrete, and steel	Chemical contaminants	$91,513
100-KR-1	100-K-3, 1706-KE Fish Pond Heat Exchanger Pit and Pump Pit	This site includes two concrete pits, two concrete manholes, concrete-encased pipelines, and nonencased pipelines. This site includes those pipelines that were specific to the 1706-KE Water Studies Semi-Works, and does not include the large 0.9 m (36-in.) or 1.8 m (72-in.) 105-KE Reactor effluent pipelines.	Soil, concrete, and steel	Radiological and chemical contaminants	$83,395
100-KR-1	100-K-4, 1706-KE Wet Fish Studies Ponds and Valve Pit	The site is currently identified by two 9.1 m (30-ft)-diameter circular ponds separated by a 2.7 by 9.1 m (9 by 30-ft) rectangular pond and valve pit. All ponds contain drains that presumably discharge to the process sewer that is located in the vicinity.	Soil, concrete, and steel	Radiological and chemical contaminants	$602,937
100-KR-1	100-K-47, 1904-K Process Sewer	This site includes those underground process sewer pipelines that begin at the 105-KE Reactor, 105-KW Reactor, 165-KE, 190-KE, 1706-KE, and terminate at either the 116-K-3 Outfall or join the 100-K-56 pipeline south of the outfall.	Soil, concrete, and steel	Radiological and chemical contaminants	$10,261,216
100-KR-1	100-K-50, 1725-K & 1726-K Sanitary Sewer System Holding Tank	The site is a sanitary sewage holding tank that services 1725-K and 1726-K. The site is marked by eight red concrete posts. The tank is constructed of concrete and has three manholes on top and one hinged hatch cover. A 20.3 cm (8-in.) sanitary sewer pipeline runs in a north-south direction 9.1 m (30 ft) east of the 1725-K (MO-293) and 1726-K (MO-442) Buildings into the south side of the holding tank. The tank is divided into two chambers. The normal operating volume is 11,355 L (3,000 gal), and the total reserve volume is 17,032 L (4,500 gal).	Soil, concrete, and steel	Radiological contaminants	$67,769
100-KR-1	100-K-68, 105-KE Pump Gallery and Catch Tank, D Sump	The structure is constructed of a 2.44 m (8-ft)-diameter corrugated steel caisson. A vinyl-lined concrete catch tank is located at the bottom of the caisson. Located above the catch tank is a pump gallery containing two sump pumps and a ladder for access. The total length of the caisson is 10.87 m (35.67 ft) and extends from just above grade level at elevation 141.58 m (464.50 ft) to elevation 131.32 m (430.83 ft). The top of the caisson is covered with a conical 12 gauge sheet metal roof with a hatch for access.	Soil, concrete, and steel	Radiological contaminants	$1,240,873
100-KR-1	100-K-69, 105-KE Sump C	The structure is a concrete sump that receives water from the 105-KE fuel storage basin floor drains in the transfer area. Two electric-powered sump pumps return the drain water to the basin.	Soil, concrete, and steel	Radiological and chemical contaminants	$1,319,894

Table 1. Additional Remove, Treat, and Dispose Sites for the Remaining Sites ROD. (11 Pages)

Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Known or Potential Contamination	Estimated or Actual Cost of Site Remediation
100-KR-1	100-K-70, Storage Tank	The site is a steel storage tank for the 105-KE Spent Fuel Storage Basin radioactive drains. The tank is buried under a 1.8 m (6-ft)-deep earth berm. An absolute filter is located on the east end of the tank, and a tank level gauge is located on the west end of the tank.	Soil, concrete, and steel	Radiological and chemical contaminants	$87,820
100-KR-1	100-K-71, 105-KE Collection Box	The 105-KE Collection Box collects effluent from nine underground process sewer lines that originate in the 105-KE Reactor Building. The effluent exits the Collection Box via 30 cm (12-in.) cast iron and a 41 cm (16-in.) cast iron process sewer pipelines. Sewer pipelines entering the "collection box" include the following: 15 cm (6-in.) clean drain, 25 cm (10-in.) contaminated drain, 25 cm (10-in.) potentially contaminated drain, 15 cm (6-in.) rod cooling water, 15 cm (6-in.) drain to pluto crib, 30 cm (12-in.) basin drain line, 20 cm (8-in.) basin overflow line, 15 cm (6-in.) vent line, and 10 cm (4-in.) vitrified clay tile decon drain to filter.	Soil, concrete, and steel	Radiological contaminants	$966,601
100-KR-1	100-K-72, 105-KW Pump Gallery and Catch Tank, D Sump	The structure is constructed of a 2.4 m (8-ft)-diameter corrugated steel caisson. A vinyl-lined concrete catch tank is located at the bottom of the caisson. Located above the catch tank is a pump gallery containing two sump pumps and a ladder for access. The total length of the caisson is 11 m (35 ft 8 in.) and extends from just above grade level at elevation 464.50 ft to elevation 430.83 ft.	Steel, concrete, debris, and soil	Radiological contaminants	$1,258,724
100-KR-1	100-K-73, 105-KW Collection Box	The 105-KW Collection Box collects effluent from nine underground process sewer lines that originate in the 105-KW Reactor Building. The effluent exits the collection box via 30 cm (12-in.) cast iron and 41 cm (16-in.) cast iron process sewer pipelines. Sewer pipelines entering the "collection box" include the following: 15 cm (6-in.) clean drain, 25 cm (10-in.) contaminated drain, 25 cm (10-in.) potentially contaminated drain, 15 cm (6-in.) rod cooling water, 15 cm (6-in.) drain to pluto crib, 30 cm (12-in.) basin drain line, 20 cm (8-in.) basin overflow line, 15 cm (6-in.) vent line, and 10 cm (4-in.) vitrified clay tile decon drain to filter.	Steel, concrete, debris, and soil	Radiological contaminants	$978,737
100-KR-1	100-K-74, 105-KW Waste Storage Tank, Holding Tank	The site is a steel storage tank for the 105-KW Spent Fuel Storage Basin radioactive drains. The tank is buried under a 1.8 m (6-ft)-deep earthen berm. An absolute filter is located on the east end of the tank, and a tank level gauge is located on the west end of the tank.	Steel and soil	Radiological and chemical contaminants	$87,820
100-KR-1	100-K-75, 105-KW Sump C	The structure is a concrete sump that receives water from the 105-KW fuel storage basin floor drains in the transfer area. Two electric-powered sump pumps return the drain water to the basin and/or the underground holding tank.	Concrete and soil	Radiological and chemical contaminants	$2,648,505

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Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Known or Potential Contamination	Estimated or Actual Cost of Site Remediation
100-KR-1	100-K-81, Contamination Area west of 116-K-3	The site consists of a large cylindrical piece of equipment surrounded by a rope and posted as Soil Contamination Area.	Steel and soil	Radiological contaminants.	$622,254
100-KR-2	116-KE-5, 150-KE Heat Recovery Station.	**Remediated Under Interim Remaining Sites ROD.** The facility was constructed on a concrete pad and consisted of heat exchangers and associated piping and was removed with associated reactor cooling water effluent pipelines.	Debris and soil	Radiological/ Hazardous	$91,939
100-KR-2	116-KW-4, 150-KW Heat Recovery Station	**Remediated Under Interim Remaining Sites ROD.** The facility was constructed on a concrete pad and consisted of heat exchangers and associated piping and was removed with associated reactor cooling water effluent pipelines.	Debris and soil	Radiological/ hazardous	$91,939
100-KR-1	120-KE-4, 183-KE1 Sulfuric Acid Storage Tank	The unit is located above ground and has a storage capacity of 38,267 L (10,109 gal).	Steel and soil	Radiological and chemical contaminants.	$76,680
100-KR-1	120-KE-5, 183-KE2 Sulfuric Acid Storage Tank	The site is the westernmost of the two original sulfuric acid tanks at the 183-KE Headhouse. The tank is a horizontal, cylindrical-shaped steel tank supported above ground on concrete saddles. The tank has a capacity of 38,267 L (10,109 gal).	Steel and concrete	Radiological and chemical contaminants	$53,323
100-KR-1	120-KE-9, 183-KE Brine Pit, 183-KE Salt Dissolving Pits and Brine Pump Pit	The Salt Dissolving Pits and Brine Pump Pit are part of a single below-grade concrete structure that provided brine for the 183-KE Water Treatment Facility. Four wooden covers and one metal cover were visible at the surface. The wooden covers were in poor condition. In August 1998 the ceiling structures were demolished and the open chambers were backfilled to grade.	Debris	Radiological and chemical contaminants	$1,319,598
100-KR-1	126-KE-2, 183-KE Liquid Alum Storage Tank #2	The site is an above-ground vertical stainless steel storage tank mounted on a concrete base. The tank was part of a system called The Liquid Alum System, which supplied liquid alum for water treatment. The liquid was supplied either by rail car or tank truck, as both connections are shown on the Liquid Alum System diagram in HW-24800-103. The piping and instrument identification diagram, H-1-16552, shows the pipelines, valves, and instrumentation related to the tank. During the winter, the liquid alum was pumped through heat exchangers for purpose of heating and agitating the chemicals.	Steel, concrete, and soil	Radiological and chemical contaminants	$91,957
100-KR-2	1607-K1 Septic Tank and Drain Field	The sanitary sewer system includes a septic tank, leaching trench, and associated piping.	Soil and debris	Radiological and chemical contaminants	$520,042
100-KR-2	1607-K2, Septic Tank and Associated Drain Field, 124-KE-1	The sanitary sewer system is composed of a septic tank, leaching trench, and associated piping. The septic tank is composed of steel per Hanford Standard E-5-11. There is a maximum of 1.5 m (5 ft) of fill on the cover slab.	Soil, debris, sanitary waste	Radiological and chemical contaminants	$520,042

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Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Known or Potential Contamination	Estimated or Actual Cost of Site Remediation
100-KR-2	1607-K3, Septic Tank and Associated Drain Field, 124-KW-2	The sanitary sewer system is composed of a septic tank, leaching trench, and associated piping. The 1,900 L (500-gal) septic tank is constructed of steel per Hanford Standard E-5-11.	Sanitary waste	Radiological and chemical contaminants	$520,042
100-KR-2	1607-K5, Septic Tank and Associated Drain Field, 124-KE-2	The septic tank and drain field are east of the 105-KE Reactor and west of the 118-K-1 Burial Ground.	Sanitary waste	Radiological and chemical contaminants	$520,042
100-KR-2	1607-K6, Septic Tank and Associated Drain Field	The unit includes a tile field and the piping from the facilities to the tile field.	Sanitary waste	Radiological and chemical contaminants	$520,042
100-IU-2	600-178, 213-J and 213-K guard house toilet pit	The site is a toilet pit opening within a 4.3 m by 4.9 m (14-ft by 16-ft) concrete pad that is the remains from the guard house. Apparently the opening is to a sanitary sewage pit located beneath the pad. No evidence of a sewage distribution system (septic tank) is apparent.	Sanitary sewage	Radiological and chemical contaminants	$2,713,010
100-IU-2	600-182, White Bluffs asbestos pipe and lagging	The site is excess piping materials and an area of highly degraded piping insulation that is made of asbestos or a similar material.	Asbestos insulation, steel, etc.	Asbestos	$60,117
100-IU-2	600-191, Premedical community dump site	**Remediated Under Interim Remaining Sites ROD.** Site contained miscellaneous trash and debris. The site has been remediated.	Soil and debris	Hazardous materials	$61,239
100-IU-2	600-298, Stained/ burned soil areas	Multiple surface stained and burned soil areas. The site is orphan site item areas IU2-055, IU2-056, IU2-074, IU2-085, IU2-094, IU2-216, IU2-290, and IU2-298.	Soil	Chemical contaminants	$120,159
100-IU-2	600-299, Battery areas	Multiple areas with batteries at the ground surface. The site is orphan site item areas IU2-012, IU2-166, IU2-194, IU2-196, IU2-198, and IU2-294.	Batteries, debris, soil	Chemical contaminants	$120,159
100-IU-2	600-300, Miscellaneous debris	Miscellaneous Debris areas. This site is orphan site item areas IU2-043, IU2-081, IU2-147, IU2-167, IU2-243, IU2-250, IU2-256, IU2-275, IU2-276, IU2-278, IU2-291, and IU2-293.	Soil and debris	Chemical contaminants	$120,159
100-IU-2	600-305, Areas with suspect asbestos-containing material	Suspect asbestos containing material areas. The site is orphan site item areas IU2-084, IU2-088, IU2-244, IU2-251, and IU2-297.	Soil and debris	Asbestos	$120,159
100-IU-2	600-306, Burn site #1	Burned surface debris area, approximately 9 m by 9 m in dimension. Orphan site item IU2-091.	Soil and debris	Chemical contaminants including PAHs	$120,159

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Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Known or Potential Contamination	Estimated or Actual Cost of Site Remediation
100-IU-2	600-307, Burn site #2	Burned surface debris area, approximately 4 m by 4 m in dimension. Orphan site item IU2-093.	Soil and debris	Chemical contaminants including PAHs	$120,159
100-IU-2	600-308, Garnet sand	Surface garnet sand area, approximately 6 m by 6 m in dimension. Orphan site item IU2-113.	Soil	Chemical contaminants including metals	$120,159
100-IU-2	600-309, Burn site #3	Burned and dumped debris area from pre-Hanford and Hanford disposal activities. Area is approximately 30 m by 20 m in dimension. Orphan site item IU2-135.	Soil and debris	Chemical contaminants	$120,159
100-IU-2	600-310, Burn site #4	Burned area of glass cinders and metal slag, approximately 7 m by 17 m in dimension. Orphan site item IU2-139.	Soil and debris	Chemical contaminants	$120,159
100-IU-2	600-311, Burn site #5	Burned surface debris area, approximately 2 m by 2 m in dimension. Orphan site item IU2-246.	Soil and debris	Chemical contaminants including PAHs	$120,159
100-IU-2	600-312, Burn site #6	Burned surface debris area, approximately 2 m by 2 m in dimension. Orphan site item IU2-247.	Soil and debris	Chemical contaminants including PAHs	$120,159
100-IU-6	600-146, Steel Structure on Northwest Side of Gable Mountain	The site includes a steel structure constructed of steel “I” beam and “L” beams. The interior of the structure contains stainless steel piping running throughout. Metal grating is located on three levels of the structure. The structure appears to be lying in a horizontal position. Debris observed lying around the structure includes stainless steel pipe, metal rings, metal boxes, empty cans, and wood.	Debris	Radiological and chemical contaminants	$172,949
100-IU-6	600-280, Hardened Tar site	The site is a 10 m by 6 m area where tar was dumped.	Soil/ petroleum products	Radiological and chemical contaminants	$225,593
100-IU-6	600-313, Oil stained or burn area	Oil stained or burned area approximately 3 m in diameter. Orphan site item IU6-003.	Soil	Chemical contaminants	$120,159
100-IU-6	600-314, Telecommunication components	Multiple areas with single components of telecommunication equipment with dimensions of 41 cm by 23 cm. Also includes a single 3 m in diameter area with battery debris. Orphan site items IU6-005, IU6-009, IU6-037, IU6-038, IU6-108.	Soil and debris	Chemical contaminants	$120,159
100-IU-6	600-316, Dry cell batteries	Multiple areas with dry cell battery debris. This site is orphan site items IU6-016, IU6-157, IU6-169, IU6-182, IU6-469, and IU6-087.	Soil and debris	Chemical contaminants	$120,159
100-IU-6	600-317, Batteries/burn area	Scattered debris area with battery debris and burned debris, approximately 15 m by 7 m in dimension. Orphan site item IU6-024.	Soil and debris	Chemical contaminants	$120,159

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Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Known or Potential Contamination	Estimated or Actual Cost of Site Remediation
100-IU-6	600-318, Wet cell battery areas	Multiple areas with battery debris. The site is orphan site items IU6-025, IU6-032, IU6-185, IU6-191, and IU6-200.	Soil and debris	Chemical contaminants	$120,159
100-IU-6	600-319, Miscellaneous debris areas	Multiple areas with debris, including areas with potential paint and solvent related waste. The site is orphan site items IU6-026, IU6-044, and IU6-266.	Soil and debris	Chemical contaminants including VOCs and SVOCs	$120,159
100-IU-6	600-320, Oil stain areas	Multiple oil surface stains oil dump areas with oil filters. The site is orphan site items IU6-027, IU6-048, IU6-146, IU6-147, IU6-148, IU6-151, IU6-267, and IU6-417.	Soil and debris	Chemical contaminants	$120,159
100-IU-6	600-321, Suspect asbestos containing material areas	Multiple areas with suspect asbestos containing material on the ground surface. The site is orphan site items IU6-030, IU6-329, IU6-333, and IU6-378.	Soil and debris	Asbestos	$120,159
100-IU-6	600-324, Burned debris area	Area of burned debris on a 7 m by 9 m concrete pad. Orphan item IU6-184.	Soil and debris	Chemical contaminants	$120,159
100-IU-6	600-325, Areas of burned roofing	Two areas with dimensions of approximately 5 m in diameter and 5 m by 20 m with burned roofing material. The site is orphan site items IU6-250 and IU6-253.	Soil and debris	Chemical contaminants	$120,159
100-IU-6	600-328, Lead slag area	1 m by 2 m area with suspect lead slag. Orphan site item IU6-330.	Soil	Metals	$120,159
200-CW-3	200-N-3, Ballast Pits	Several pits are located southwest of the 212-P building. Each pit is approximately 12 m across. The soil contains a large amount of gravel sized rock. Some metal pipes, wood, electrical insulators, metals cans and rusted drums were noted inside the pit.	Soil and debris	Chemical contaminants	$134,731
200-CW-3	UPR-200-N-1, Unplanned Release at the 212-R Railroad Spur	The site is from unplanned releases from railcars stored on rails extending south from the 212-R Building.	Wood and metal debris, soil	Radiological/chemicals	$198,806
200-CW-3	UPR-200-N-2, 200-N-2, Unplanned Release Near Well Pumphouse No.2, Well Pumphouse East of 212-R	The site is from an unplanned release near the remains of Well Pumphouse #2 East of 212-R.	Wood and soil	Radiological	$132,858

Table 1. Additional Remove, Treat, and Dispose Sites for the Remaining Sites ROD. (11 Pages)

Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Known or Potential Contamination	Estimated or Actual Cost of Site Remediation
200-CW-3	2607-N, 2743-N Guard House Septic Tank and Tile Field	The site is a septic tank and drain field. The tank is a rectangular, open-topped, concrete tank buried to grade level 6 m south of the 2743-N Guard House foundation south of the 212-N Building.	Soil and debris	Chemical contaminants	$82,470
200-CW-3	2607-P, 2743-P Guard House Septic Tank and Tile field	The site is a septic tank and drain field. The tank is a rectangular, open-topped, concrete tank buried to grade level located south of the 2743-P Guard House foundation south of the 212-P Building.	Soil and debris	Chemical contaminants	$82,470
200-CW-3	2607-R, 2743-R Guard House Septic Tank and Tile Field	The site is a septic tank and drain field. The tank is a rectangular, open-topped, concrete tank buried to grade level south of the 2743-R Guard House foundation south of the 212-R Building.	Soil and debris	Chemical contaminants	$82,470
200-CW-3	600-285 PL, Pipeline from 212-N to 216-N-1 Pond	The waste site is an underground 46 cm (18-in.)-diameter vitrified clay pipe that fed the 216-N-1 pond.	Soil and debris	Radiological	$90,000
200-CW-3	600-286-PL, Pipeline from 212-P to 216-N-4 Pond	The waste site is an underground 46 cm (18-in.)-diameter vitrified clay pipe that fed the 216-N-4 pond.	Soil and debris	Radiological	$90,000
200-CW-3	600-287-PL, Pipeline from 212-R to 216-N-6 Pond	The waste site is an underground 46 cm (18-in.)-diameter vitrified clay pipe that fed the 216-N-6 pond.	Soil and debris	Radiological	$90,000

Table 2. Candidate Waste Sites for the Remaining Sites ROD. (9 Pages)

Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Potential Contamination	Estimated Sampling Cost[a]
100-BC-1	100-B-22, 100-B Water Treatment Facilities and Surrounding Soils	This site consists of the 190-B Pump House, the 183-B Filter Plant, underground transfer piping that interconnected the facilities, as well as any associated contaminated soil. The facilities were demolished during the 1980s and 1990s to 1 m (3 ft) below grade. Chromium contamination is suspected in associated soils. The underground lines are up to 600 m (1,968 ft) long and include reinforced concrete, cast iron, and steel pipes up to 137 cm (54 in.) in diameter.	Soil, concrete, piping, equipment	Lead, mercury, hexavalent chromium, PCBs	$104,191
100-BC-1	118-B-8:2 and :3, 105-B French Drains and Miscellaneous Pipelines	This listing is for two subsites. Subsite 2 consists of french drains around the 105-B facility. Subsite 3 consists of miscellaneous piping segments associated with the reactor.	Concrete, clay, metal, and soil	Radionuclides, hexavalent chromium, metals, PCBs	$74,948
100-DR-1	100-D-63, 100-D/DR Service Water Pipelines, Clean Water Pipelines	The site consists of water supply pipelines upstream of the 100-D and 100-DR Reactors, including underground pipelines used to transport raw, fire, export, and sanitary water from the river pump house (181-D), to the water treatment facilities and to the 100-D Area office facilities and fire hydrants.	Piping	Radiological contaminants and chromium	$639,080
100-DR-1	100-D-70, 184DA Steam Generating Plant Dry Well	The site consists of a 1.2 m (4-ft)-diameter drywell located on the south side of the 184-DA Building. It received steam separator discharge from equipment within the former 184-DA Building. The pipeline from the building to the drywell is part of the 100-D-88 site.	Soil and debris	Chemical contaminants	$82,590
100-DR-1	100-D-71, Vertical Safety Rod Tower Components	The site is a 1.2 m (4-ft)-diameter 2.1 m (7-ft)-deep concrete drywell, a 30 cm (12-in.) square below-grade pit, an underground cast iron pipe at the bottom of the towers elevator shaft, and potentially contaminated soil. Wastes from the tower would have collected in the pit and drained to the drywell through the pipe. It is unknown if the components are currently present at the site.	Soil and debris	Radiological and chemical contaminants	$82,590
100-DR-1	100-D-72, 183D Acid Facility	The site consists of multiple components on the south side of the 183-D Head House. Components include a concrete drainage trench, a french drain, two vitrified clay pipe sumps a drywell, and a sump located in a pipe trench north of the acid tanks.	Soil and debris	Chemical contaminants	$82,590
100-DR-1	100-D-73, 108-D Chemical Pump House	The site is the soil and possibly the demolition debris under the former 108-D Building. The 108-D Building is a former sodium dichromate mixing location.	Soil and debris	Chemical contaminants	$82,590
100-DR-1	100-D-74, Drywell	The site is a drywell located north of the northwest side of the original 105-DR Reactor footprint. The drywell likely received steam condensate from the heaters inside the 105-DR Building and may have been connected to floor drains from 105-DR.	Soil and debris	Radiological and chemical contaminants	$82,590

[a] Based on additional ongoing site evaluation, additional sampling may not be necessary to determine that a site requires remediation or that a site be rejected.

Table 2. Candidate Waste Sites for the Remaining Sites ROD. (9 Pages)

Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Potential Contamination	Estimated Sampling Cost[a]
100-DR-1	100-D-75, 100-D Primary and 152-C1-D and 152-E1-D Electrical Substations	The site consists of three components: the area within the fence at the 151-D Primary Substation, and two Secondary Electrical Substations, the 152-C1-D near the 183-D Filter Building and 152-E1-D near the 181-D Pump House.	Soil	Chemical contaminants	$74,844
100-DR-1	100-D-76, Potential Crib Next to 108D	The site is a possible crib or french drain located near the former 108D Building.	Soil/debris	Radiological and chemical contaminants	$82,590
100-DR-1	100-D-77, DR Reactor Water Treatment Facility	The site includes the locations of the sodium dichromate systems located in the 183-DR Head House and the 183-DR Filter Building. The site also includes the Acid Facility, the six 183-DR Flocculation Basins, and the six 183-DR Sedimentation Basins.	Soil/debris	Chemical contaminants	$82,590
100-DR-1	100-D-78, Yellow Stained Soil	The site consists of patches of yellow stained soil and remnants of a subsurface acid trench in the 100-D Area.	Soil	Chemical contaminants	$74,844
100-DR-1	100-D-79, Posted Soil Contaminated Area, SCA 1, SCA 2	The site consists of two posted radiological soil contamination areas (SCAs).	Soil	Radiological and chemical contaminants	$74,844
100-DR-1	100-D-80, 100D Tar Stained Soils and Miscellaneous Debris	The site consists of four areas of scattered debris and patches of tar-stained soil.	Soil	Chemical contaminants	$74,844
100-DR-1	100-D-81, 100D Burn Areas and Other Stained Areas	Includes seven areas with soil staining or evidence of burning.	Soil	Chemical contaminants	$74,844
100-DR-1	100-D-82, Garnet Sand Sites	This site consists of three areas of garnet sand.	Soil	Chemical contaminants	$74,844
100-DR-1	100-D-83, Treated Water Pipelines	This site consists of underground pipelines that transported treated water with chemical additions associated with pre-reactor cooling water and does not include post-reactor effluent or pre-cooling water chemical addition transfer pipelines. In addition the site includes the 108-D Acid Neutralization Pit and Sump located underground beneath the sulfuric acid storage tanks on the west side of the 108-D Building and two inlet lines connected to the sewer drain line.	Soil/debris	Chemical contaminants	$718,185
100-DR-1	100-D-84, Sanitary Sewer Pipelines	The site consists of 37 sanitary sewer pipeline segments and service connections that supported ancillary and temporary construction facilities that discharged to associated septic systems.	Soil/debris	Chemical contaminants	$718,185

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Table 2. Candidate Waste Sites for the Remaining Sites ROD. (9 Pages)

Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Potential Contamination	Estimated Sampling Cost[a]
100-DR-1	100-D-85, Pipelines	Reactor effluent (RE) pipeline segments. A total of 15 pipeline segments that transported radioactive treated and untreated waste water from the 105-DR Reactor Building and the 132-DR-1 Building.	Soil/debris	Radiological and chemical contaminants	$718,185
100-DR-1	100-D-86, Process Sewer Pipelines	The site consists of reactor effluent piping from and in the vicinity of the 105D and 105DR Reactors that were not included in WIDS sites 100-D-48 and 100-D-49.	Soil/debris	Radiological and chemical contaminants	$718,185
100-DR-1	100-D-87, Spill Near Railroad Car Spot	The site is the location of surface liquid spill near the acid railroad car spot. The area was identified on a photograph from 1945.	Soil	Chemical contaminants	$74,844
100-DR-1	100-D-88, Miscellaneous Pipelines	The site consists of 27 underground miscellaneous pipeline segments.	Soil/debris	Radiological and chemical contaminants	$718,185
100-DR-1	100-D-90, Out of Service Transformers	The site consists of the soil located below two transformers sitting on railroad ties.	Soil	Chemical contaminants	$74,844
100-DR-1	100-D-92, Second Potential UST Near Dichromate Station	This site consists of an underground concrete utility encasement for freshwater pipelines and the underlying soil located below a rail line. The site was originally reported as a potential underground storage tank. Additional analysis determined the feature to be known 100-D-56 piping encasement beneath railroad tracks.	Soil and debris	Chemical contaminants	$68,689
100-DR-1	100-D-93, Potential UST Near Dichromate Station	The site consists of an underground concrete utility encasement for freshwater pipelines and the underlying soil located below a rail line. The site was originally reported, in a geophysical investigation, as a potential underground storage tank (UST). The feature was however determined to be a known piping encasement located below the railroad tracks.	Soil and debris	Chemical contaminants	$68,689
100-DR-1	100-D-94, Dichromate Contaminated Pit Associated with 187-DR	The site consists of an area of chromium observed in a pit under the DR water tower.	Soil and debris	Chemical contaminants	$74,844
100-DR-1	100-D-95, Unnumbered Septic Tanks and Tile Field	The site is believed to consist of two septic tanks and a tile field.	Soil and debris	Chemical contaminants	$52,991
100-DR-1	100-D-96, Additional French Drains	The site consists of eight components (seven 100-D and 100-DR Area french drains and one dry well) and underlying soil. These components received steam condensate from nonradioactive buildings.	Soil and debris	Chemical contaminants	$82,590
100-DR-1	100-D-97, 184-DA 500-Gallon Fuel Tank	This site consisted of an underground storage tank associated with fuel oil supply, fuel oil return piping, and underlying soil. These items are believed to have been removed in 1985 or 19986 during demolition activities.	Soil and debris	Chemical contaminants	$68,689

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Table 2. Candidate Waste Sites for the Remaining Sites ROD. (9 Pages)

Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Potential Contamination	Estimated Sampling Cost[a]
100-DR-1	100-D-98, 152D Substations	The site consists of two active (C4S17 and 152-D1-D) and nine former electrical substations and underlying soil.	Soil and debris	Chemical contaminants	$74,844
100-DR-1	100-D-99, Two Suspect Features Identified by Ground Penetrating Radar	The site consists of a septic system and the underlying soils.	Soil and debris	Chemical contaminants	$52,991
100-DR-2	100-D-100, Sodium Dichromate Near Southern Portion of 100-D-56	The site consists of chromate-contaminated stained soil near the former sodium dichromate / acid railcar and truck unloading station.	Soil	Chromium	$74,844
100-FR-1	100-F-44, Miscellaneous Pipelines-Sewers	The site consists of a compilation of pipeline segments, not previously addressed in any closure documents that may require remedial action.	Soil/debris	Radiological and chemical contaminants	$751,332
100-FR-1	100-F-53, 108-F Septic System	The site consists of pipelines, an abandoned septic tank, the drain field, and any contaminated soil around them.	Soil/debris	Chemical contaminants	$55,436
100-HR-1	100-H-35, Clean Water Pipelines	The site encompasses the water supply pipelines for the 100-H Area, including underground pipelines used to transport raw water from the river pumphouse to the water treatment facilities and to 100-H Area facilities and fire hydrants.	Debris	Radiological contaminants and chromium	$751,332
100-HR-1	100-H-36 Spillway	The 100-H-36 Spillway (also referred to as a flume) is an underground concrete sluiceway. The site is the spillway from the 116-H-5 Outfall Structure to the river OHWM.	Concrete, soil	Radiological and metals	$76,568
100-HR-1	100-H-39, Thimble Pit	Four potential locations of buried reactor thimbles.	Soil and debris	Radiological	$78,298
100-HR-1	100-H-40, Disposal Pit	Potential location of a disposal pit for maintenance shop waste.	Soil and debris	Chemical contaminants	$78,298
100-HR-1	100-H-41, Radiological Posted Area	Radiologically posted area with a 36 cm (14-in.)-diameter concrete structure that is possibly associated with a former cooling water supply facility.	Soil and debris	Radiological and chemical	$78,298
100-HR-1	100-H-42, 1906-H Drainage Lift Station	An underground reinforced concrete flume/reservoir filled with building rubble and soil. This site also includes a 183 cm (72-in.)-diameter, 37 m (121-ft)-long, reinforced concrete pipeline exiting the east side of the underground structure and connecting to the 1904-H diversion box (outfall structure).	Soil and debris	Radiological and chemical	$71,860
100-HR-1	100-H-43, 1716-H Maintenance Garage, Repair Shop	This site contains the below-grade remnants of the 1716-H Maintenance Garage, following its demolition and site leveling in 1974. The facility was used to service the area vehicles.	Soil and debris	Chemical contaminants	$78,298

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Table 2. Candidate Waste Sites for the Remaining Sites ROD. (9 Pages)

Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Potential Contamination	Estimated Sampling Cost[a]
100-HR-1	100-H-44, 183-H Neutralization Pit	This site consists of potentially contaminated soils, and possibly a concrete structure, acid brick, and piping that may contain contamination associated with the 183-H Neutralization Pit.	Soil and debris	Chemical contaminants	$78,298
100-HR-1	100-H-45, 1717-H Underground Propane Tank	The site includes a suspect propane underground storage tank (UST) location, any associated below-grade piping or features, and any potentially contaminated soil.	Soil and debris	Chemical contaminants	$71,860
100-HR-1	100-H-46, 190-H Soil	This site consists of potentially contaminated soils, concrete structures, and drain pipes that were beneath the sodium dichromate process equipment, piping, unloading dock and railroad spur.	Soil and debris	Chemical contaminants	$71,860
100-HR-1	100-H-47, 1717-H Underground Storage Tank	The site is a potential underground storage tank.	Soil and debris	Chemical contaminants	$71,860
100-HR-1	100-H-48, 184-HA Underground Fuel Oil Tank Piping	The site consists of potentially remaining fuel oil piping that was associated with two former fuel oil underground storage tanks (USTs) that supported the 184-HA Boiler House Building. The USTs were removed in 1974.	Soil and debris	Chemical contaminants	$71,860
100-HR-1	100-H-49, French Drains	This site consists of 19 discrete locations for french drains, the underlying soil of the potentially contaminated french drains, and their associated below-grade piping components.	Soil and debris	Radiological and chemical	$86,402
100-HR-1	100-H-50, French Drains	This site consists of 15 discrete locations, underlying soil, and their associated below-grade piping components for anticipated clean “proposed not accepted” french drains.	Soil and debris	Chemical contaminants	$86,402
100-HR-1	100-H-51, Pipelines	This site encompasses the additional 52 potentially contaminated pipelines, totaling 633.3 m (2,080 ft), of underground miscellaneous pipelines segments discovered during the Orphan Site Evaluation (OSE) that were not previously identified within existing waste sites.	Soil and debris	Radiological and chemical	$751,332
100-HR-1	100-H-52, 184-HA Drain Field and Piping	The site consists of a drain field and associated piping that supported the 184-HA boiler annex.	Soil and debris	Chemical contaminants	$55,436
100-HR-1	100-H-53, Carbon Steel Pipe	This site is a 25 cm (10-in.)-diameter and 1.8 m (6-ft)-long (exposed portion) carbon steel pipe that runs northeast toward the river shore.	Soil and debris	Radiological and chemical	$78,298
100-KR-2	100-K-5, 1705-KE French Drain	The site is a french drain consisting of a 0.9 m (3-ft)-diameter vitrified clay pipe which protrudes approximately 0.3 m (1 ft) above grade and has a heavy wooden cover.	Soil and debris	Radiological/ hazardous contaminants	$63,344

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Table 2. Candidate Waste Sites for the Remaining Sites ROD. (9 Pages)

Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Potential Contamination	Estimated Sampling Cost[a]
100-KR-2	100-K-6, Vacuum Pit, Cyclone Separator, 105-KE Vacuum Pit	The vacuum pit contains a cyclone separator in a vertically oriented 3 m (10-ft)-diameter culvert that extends from grade level to 9.2 m (30 ft) below grade.	Soil	Radiological/ hazardous contaminants	$63,344
100-KR-2	100-K-19, 183-KW Caustic Soda Storage Tank Site	The site was originally an above-ground, cylindrical, vertical steel storage tank on a concrete base. The above-ground tank was 7.8 m (25.5 ft) in diameter with a 287,660 L (76,000-gal) capacity. Some time in the past (date unknown) the tank was removed. Today, the site is the 9.1 m (30-ft)-diameter grade-level concrete tank base and the soil surrounding the base.	Soil	Hazardous/ dangerous contaminants	$62,456
100-KR-2	100-K-25, 183-KE Caustic Neutralization Pit	The pit received, neutralized, and disposed of caustic waste from overflow and transfers associated with water treatment at 183-KE. The method of caustic neutralization is not known.	Concrete, soil	Hazardous/ dangerous contaminants	$63,048
100-KR-2	100-K-37, 1706-KE Sulfuric Acid Tank	The site is an above-ground, vertical stainless steel storage tank. The chemical storage facility at 1706-KE was installed in 1963 to provide bulk quantities of 93% by weight sulfuric acid and 50% by weight sodium hydroxide. The chemicals were used to regenerate the ion columns in the 1706-KE demineralizer plant.	Steel/ construction debris	Radiological/ hazardous contaminants	$63,048
100-KR-2	100-K-38, 1706-KE Caustic Soda Tank	The site is contaminated soil from spills related to a caustic soda storage tank. The tank is above ground, vertical, and constructed of stainless steel. The tank rests on a redwood timber deck above a 1.4 m (4.45-ft) service space (at grade) that is protected by guard posts. A 5.1 cm (2-in.) fill line for tank truck usage is also located in the same area. Two 5.1 cm (2-in.) drain lines, one for vent and overflow and the other for valve leakage, enter a french drain (Site: 100-K-36) that is located (in the service area) between the caustic soda tank and the sulfuric acid tank (Site: 100-K-37).	Soil	Radiological/ hazardous contaminants	$63,048
100-KR-2	120-KE-8, 165-KE Brine Pit, 165-KE Brine Mixing Tank	The unit is a below-grade concrete structure the provided brine for the 165-KE Powerhouse. The brine pit has inner dimensions of 4.3 m (14 ft) long by 2.4 m (8 ft) wide by 2.7 m (9 ft) tall. The bottom of each pit is filled with a 12.7 cm (7-in.) layer of 1.3 to 2.6 cm (1/2 to 1 in.) gravel topped by a 17.8 cm (7-in.) layer of 0.3 to 0.6 cm (1/8 to 1/4 in.) gravel. The pit has a 1.2 m (4-ft) by 1.1 m (3.5-ft) opening for receiving salt.	Soil and debris	Radiological and chemical contaminants	$63,344

[a] Based on additional ongoing site evaluation, additional sampling may not be necessary to determine that a site requires remediation or that a site be rejected.

Table 2. Candidate Waste Sites for the Remaining Sites ROD. (9 Pages)

Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Potential Contamination	Estimated Sampling Cost[a]
100-KR-2	120-KW-3, 183-KW1 Sulfuric Acid Storage Tank	The site is the westernmost of the two original sulfuric acid tanks at the 183-KW Headhouse. The tank is a horizontal, cylindrical-shaped steel tank supported above ground on concrete saddles. The tank has a capacity of 38,267 L (10,109 gal). The sulfuric acid was used to activate sodium silicate. During seasons of high turbidity, activated silica solution was fed into the raw water to aid in coagulation.	Steel, debris, and soil	Hazardous/ dangerous	$67,340
100-KR-2	120-KW-4, 183-KW2 Sulfuric Acid Storage Tank	The unit is an above-ground sulfuric acid storage tank and has a capacity of 38,000 L (10,109 gal). The site is the easternmost of the two original sulfuric acid tanks at the 183-KW Headhouse. The tank is a horizontal, cylindrical-shaped steel tank supported above ground on concrete saddles.	Soil	Radiological/ hazardous	$63,344
100-KR-2	120-KW-6, 165-KW Brine Pit, 165-KW Brine Mixing Tank	The unit is a below-grade concrete structure that provided brine for the 165-KW Powerhouse. The roof of the structure was approximately 0.3 m (1 ft) above ground level. The opening into the pit was covered by a wooden cover. Just south of the brine pit is a valve pit located within a vertical section of 1.2 m (4-ft)-diameter corrugated galvanized pipe. This valve pit contains residue and apparently was part of the brine operation. In August 1998, remaining liquid was removed and the open pit was backfilled to grade.	Soil and debris	Radiological/ hazardous	$63,344
100-KR-2	120-KW-7, 183-KW Brine Pit, 183-KW Salt Dissolving Pits and Brine Pump Pit	The Salt Dissolving Pits and Brine Pump Pit were part of a single below-grade concrete structure that provided brine for the 183-KW Water Treatment Facility. Four wooden covers and one metal cover were visible at the surface. The wooden covers are in poor condition. The unit contained salt cake and brine. In August 1998, remaining liquid was removed and the unit was backfilled to grade.	Soil and debris	Radiological/ hazardous	$63,344
100-KR-2	126-K-1, 100-K Gravel Pit	This unit is a gravel borrow pit that resulted from 100-K Area construction. The slope of the southwest corner contains demolition waste. This area is covered with pit run backfill material.	Soil and debris	Radiological/ hazardous	$105,080
100-KR-2	100-K-82, 105-KW Fuel Storage Basin leak	The storage basin extends from the north wall of the 105-KW Reactor Building to the open area behind the reactor, with its longitudinal axis running parallel to the north wall of the building. Its east-west location is roughly in the center of the building. The leak occurred on the north side of the 105-KW Basin. The release is not marked or posted.	Soil	Radiological	$63,344
100-KR-2	100-K-83 Spillway	The site is the concrete spillway (also referred to as a "flume") that is associated with the 116-K-3 outfall structure. The spillway was attached to the outfall and could have received reactor coolant effluent when the 100-K-80 river pipelines were blocked, damaged, or undergoing maintenance. Decommissioning projects in the 1980s collapsed the above-grade portion and backfilled the site with soil.	Concrete, soil	Radiological	$78,440

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Table 2. Candidate Waste Sites for the Remaining Sites ROD. (9 Pages)

Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Potential Contamination	Estimated Sampling Cost[a]
100-IU-2	600-293, Service Station #1	Former service station used to support the White Bluffs Central Shops. It is orphan site item IU2-003.	Soil and debris	Chemical contaminants	$94,418
100-IU-2	600-294, Service Station #2	Former service station north of Federal Avenue and west of Gasoline Alley. It is orphan site item IU2-004.	Soil and debris	Chemical contaminants	$94,418
100-IU-2	600-295, Paint Shop	Location of a former paint shop building. Orphan site item IU2-005.	Soil and debris	Chemical contaminants	$94,418
100-IU-2	600-296, Fire Department Septic System	Multiple locations of former fire station septic systems. Includes orphan site items IU2-007, IU2-029, and IU2-130.	Soil and debris	Chemical contaminants	$66,850
100-IU-2	600-297, Imhoff Tank	Imhoff tank located south of Federal Avenue, and west of the Chicago Milwaukee Railroad that supported former facilities in the vicinity and is associated with the 600-106 filter bed. Orphan site item IU2-008.	Soil and debris	Chemical contaminants	$86,654
100-IU-2	600-301, White Bluffs Sanitary Sewer Pipelines	Miles of sanitary sewer pipelines associated with the White Bluffs townsite. It is orphan site items IU2-021, IU2-030, IU2-069, IU2-213, and IU2-277.	Soil and debris	Chemical contaminants	$906,018
100-IU-2	600-302, French Drain and Vent Pipe	1 m diameter drain with associated vent pipe. Orphan site item IU2-025.	Soil and debris	Chemical contaminants	$104,191
100-IU-2	600-303, Vertical Pipes	Site is four vertical pipes sticking out of the ground in a 3 m by 3 m area adjacent to a concrete foundation of a former building. Orphan site item IU2-026.	Soil and debris	Chemical contaminants	$94,418
100-IU-6	600-186, Hanford construction camp septic tanks and sewage treatment plant	The waste site consists of all the septic tanks as well as the sewage treatment plants at the Hanford Construction Camp.	Soil and debris	Chemical contaminants	$66,850
100-IU-6	600-213, Hanford Airstrip UST's	The site is underground fuel storage tanks that were associated with the Hanford Airport. The airstrip runways are still viable. A windsock pole is visible just off the southeast corner of the airstrip intersection.	Soil/petroleum products	Chemical contaminants	$86,654
100-IU-6	600-315, Black Granular Stain	4 m diameter black granular stain. Orphan site item IU6-010.	Soil	Chemical contaminants	$94,418
100-IU-6	600-322, Rail Spur Pipe	8-in.-diameter carbon steel drain pipe with cover under a railroad spur. Orphan site item IU6-113.	Soil and debris	Chemical contaminants	$94,418
100-IU-6	600-323, Bermed Area	Area of bermed cinders with dimensions of approximately 30 m by 30 m and 0.5 m high. Orphan site item IU6-166.	Soil and debris	Chemical contaminants	$94,418

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Table 2. Candidate Waste Sites for the Remaining Sites ROD. (9 Pages)

Operable Unit	Site Name	Current Site Knowledge	Media/ Material	Potential Contamination	Estimated Sampling Cost[a]
100-IU-6	600-326, Black Material	Surface stained areas. 2 m by 4 m area with gray suspect insulation material. 6 m diameter area with black material. Orphan site items IU6-279 and IU6-432.	Soil	Chemical contaminants	$94,418
100-IU-6	600-327, Suspect Dichromate Facility	6 m by 10 m depression with water pipe stub at north end. Orphan item IU6-280.	Soil and debris	Chemical contaminants	$94,418
100-IU-6	600-329, Concrete Outfall Structure	Concrete structure, possibly an outfall. Orphan item IU6-343.	Soil and debris	Chemical contaminants	$104,191
100-IU-6	600-330, Division Street Service Station	Former location of a Hanford Construction Camp service station. Orphan item IU6-444.	Soil and debris	Chemical contaminants	$86,654
100-IU-6	600-331, Lime Sulfur Barrel Site	Lime Sulfur Barrel site, approximately 3 m in diameter. Orphan item IU6-445.	Soil	Metals	$94,418
100-IU-6	600-332, Gable Mt. Firing Range Septic System	Firing range septic system, septic tank is approximately 1.2 m by 2.1 m by 0.9 m. Orphan item IU6-446.	Soil and debris	Chemical contaminants	$66,850
100-IU-6	600-333, Underground Concrete Structure	Below grade concrete structure with dimensions of 3 m by 0.5 m by 0.5 m. Use of the structure is undetermined. Orphan item IU6-453.	Soil and debris	Chemical contaminants	$94,418
100-IU-6	600-334, CMX Building	Former location of the 145 Building/CMX/Process Water Development Semi-Works. Site dimensions of approximately 57 m by 96 m. Orphan items IU6-455 and IU6-281.	Soil and debris	Chemical contaminants	$94,418
100-IU-6	600-335, Service Station and UST	Former location of two fuel pumps with potential for underground storage tanks. Orphan item IU6-470.	Soil and debris	Chemical contaminants	$86,654

[a] Based on additional ongoing site evaluation, additional sampling may not be necessary to determine that a site requires remediation or that a site be rejected.

Signature sheet for the *Explanation of Significant Differences for the Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-HR-1, 100-HR-2, 100-KR-1, 100-KR-2, 100-IU-2, 100-IU-6, and 200-CW-3 Operable Units* between the U.S. Department of Energy and U.S. Environmental Protection Agency, with concurrence by the Washington State Department of Ecology.

Daniel D. Opalski
Director, Office of Environmental Cleanup
U.S. Environmental Protection Agency, Region 10

11 August 2009
Date

Signature sheet for the *Explanation of Significant Differences for the Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-HR-1, 100-HR-2, 100-KR-1, 100-KR-2, 100-IU-2, 100-IU-6, and 200-CW-3 Operable Units* between the U.S. Department of Energy and U.S. Environmental Protection Agency, with concurrence by the Washington State Department of Ecology.

Joe R. Franco

Joe R. Franco
Assistant Manager for the River Corridor
Richland Operations, U.S. Department of Energy

08/10/09
Date

Signature sheet for the *Explanation of Significant Differences for the Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-HR-1, 100-HR-2, 100-KR-1, 100-KR-2, 100-IU-2, 100-IU-6, and 200-CW-3 Operable Units* between the U.S. Department of Energy and U.S. Environmental Protection Agency, with concurrence by the Washington State Department of Ecology.

Jane A. Hedges
Program Manager, Nuclear Waste Program
Washington State Department of Ecology

8/11/09
Date