MSA-1105355.6

CONTRACT NO. DE-AC06-09RL14728

ATTACHMENT 1

Contract Deliverable CD0182

FY 2017 SITEWIDE INSTITUTIONAL CONTROL ASSESSMENT
MISSION SUPPORT ALLIANCE

Consisting of 135 pages,
including this cover page

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CONTENTS

1.0 INTRODUCTION 9
1.1 Background 9
1.2 Purpose and Scope of this Report 9
1.3 Updates Since 2016 11
1.4 Organization of the Report 17
2.0 INSTITUTIONAL CONTROLS BY GEOGRAPHIC DECISION AREA 19
2.1 Institutional Controls within the 100-B/C Geographic Decision Area 19
2.1.1 Decision Documents for the 100-B/C Geographic Decision Area 20
2.1.2 Institutional Controls for the Waste Sites within the 100-B/C Geographic Decision Area 21
2.1.3 Warning Notices in the 100-B/C Geographic Decision Area 26
2.2 Institutional Controls within the 100-D/H Geographic Decision Area 27
2.2.1 Decision Documents for the 100-D/H Geographic Decision Area 28
2.2.2 Institutional Controls for Waste Sites within the 100-D/H Geographic Decision Area 30
2.2.3 Warning Notices in the 100-D/H Geographic Decision Area 36
2.3 Institutional Controls within the 100-F/IU-2/IU-6 Geographic Decision Area 38
2.3.1 Decision Documents for the 100-F/IU-2/IU-6 Geographic Decision Area 39
2.3.2 Institutional Controls for Waste Sites within the 100-F/IU-2/IU-6 Geographic Decision Area 40
2.3.3 Warning Notices in the 100-F/IU-2/IU-6 Decision Area 43
2.4 Institutional Controls within the 100-K Geographic Decision Area 44
2.4.1 Decision Documents for the 100-K Geographic Decision Area 45
2.4.2 Institutional Controls for Waste Sites within the 100-K Geographic Decision Area . 47
2.4.3 Warning Notices in the 100-K Geographic Decision Area 47
2.5 Institutional Controls within the 100-N Geographic Decision Area 48
2.5.1 Decision Documents for the 100-N Geographic Decision Area 50
2.5.2 Institutional Controls for Waste Sites within the 100-N Geographic Decision Area 51
2.5.3 Warning Notices in the 100-N Geographic Decision Area 52
2.6 Institutional Controls within the 300 Geographic Decision Area 53

2.6.1 Decision Documents for the 300 Geographic Decision Area 55

2.6.2 Institutional Controls for Waste Sites within the 300 Geographic Decision Area……56

2.6.3 Warning Notices in the 300 Decision Area 67

2.7 Institutional Controls within the 1100 Area..... 69

2.7.1 Decision Documents for the 1100 Area..... 71

2.7.2 Institutional Controls for Waste Sites within the 1100 Area 71

2.7.3 Warning Notices in the 1100 Area..... 72

3.0 SITEWIDE INSTITUTIONAL CONTROLS ASSESSMENT..... 73

3.1 Fences and Signage..... 73

3.2 Trespassing Incidents..... 74

4.0 DECISION DOCUMENTS THAT INCLUDE INSTITUTIONAL CONTROLS 75

4.1 Interim Action Record of Decision for 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units 75

4.2 Interim Action Record of Decision for 100-HR-3 and 100-KR-4 Operable Units..... 75

4.3 Admendment to the Interim Action Record of Decision for 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units 76

4.4 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..... 77

4.5 Interim Action Record of Decision for 100-NR-1 and 100-NR-2 Operable Units..... 78

4.6 Interim Action Record of Decision for 100-NR-1 Operable Unit (TSD)..... 80

4.7 Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR 2, 100-FR-2, 100-HR-2, and 100-KR-2, Operable Units, Hanford Site, Benton County, Washington (100 Area Burial Grounds) 81

4.8 Explanation of Significant Differences for the Interim Action Record of Decision for 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-2, 100-HR-2, and 100-KR-2 Operable Units (100 area burial grounds)..... 85

4.9 Record of Decision Hanford 100 Area Superfund Site 100-FR-1, 100-FR-2, 100-FR-3, 100-IU-2 and 100-IU-6 Operable Units 86

4.10 Record of Decision for the 300-FF-1 and 300-FF-5 Operable Units..... 89

4.11 Hanford Site 300 Area Record of Decision for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1 90

4.12 Record of Decision for the USDOE Hanford 1100 Area 93

4.13 Superfund Site Final Closeout Report, U.S. Department of Energy Hanford 1100 Area ……94

4.14 Explanation of Significant Differences, USDOE Hanford 1100 Area 95

5.0 SUMMARY 97

6.0 REFERENCES 99

APPENDIX

Appendix A Example of Completed Assessment Form 119

FIGURES

Figure 1-1. LTS Surveillance and Maintenance Geographic Decision Areas. 10

Figure 1-2. Example of WIDS Sites with a Similar IC that were Grouped Together for a Single Field Assessment (100-B/C Area). 13

Figure 1-3. Example of Imagery Used to Identify Potential Locations for Field Verifications Supporting the 300 Area Enhanced Recharge IC. 16

Figure 2-1. Areas Assessed in the 100-B/C Geographic Decision Area. 19

Figure 2-2. Warning Notices for 100-B/C Geographic Decision Area. 27

Figure 2-3. Areas Assessed in the 100-D/H Geographic Decision Area 28

Figure 2-4. Warning Notices for 100-D/H Geographic Decision Area. (sheet 1) 37

Figure 2-5. Areas Assessed in the 100-F/IU-2/IU-6 Geographic Decision Area 39

Figure 2-6. Warning Notices for 100-F/IU-2/IU-6 Geographic Decision Area. 44

Figure 2-7. Areas Assessed in the 100-K Geographic Decision Area. 45

Figure 2-8. Warning Notice at Main Entrance to 100K Reactor Area. 48

Figure 2-9. Areas Assessed in the 100-N Geographic Decision Area. 49

Figure 2-10. Warning Notices for the 100-N Geographic Decision Area. 53

Figure 2-11. IC Assessment Area in the 300 Area Industrial Complex. 54

Figure 2-12. Warning Notices for the 300 Geographic Decision Area. (2 sheets) 68

Figure 2-13. Area Assessed in the 1100 Area. 70

Figure 2-14. Example of a Warning Notice at the Horn Rapids Landfill. 72

Figure 3-1. No Trespassing Signs. 74

TABLES

Table 1-1. Objectives for Each Type of WIDS Site Institutional Control. 14

Table 2-1. Decision Documents Associated with the 100-B/C Geographic Decision Area. (2 sheets) 20

Table 2-2. 100-B/C Geographic Decision Area Waste Sites with Institutional Controls. (4 sheets) 22

Table 2-3. Warning Notices for 100-B/C Geographic Decision Area. 26

Table 2-4. Decision Documents Associated with the 100-D/H Geographic Decision Area (2 sheets). 29

Table 2-5. 100-D/H Geographic Decision Area Waste Sites with Institutional Controls (5 sheets). 31

Table 2-6. Warning Notices for 100-D/H Geographic Decision Area. 36

Table 2-7. Decision Documents Associated with the 100-F/IU-2/IU-6 Geographic Decision Area. 40

Table 2-8. 100-F/IU-2/IU-6 Geographic Decision Area Waste Sites with Institutional Controls. (2 sheets) 41

Table 2-9. Warning Notices for 100-F/IU-2/IU-6 Geographic Decision Area. 43

Table 2-10. Decision Documents Associated with the 100-K Geographic Decision Area. 46

Table 2-11. 100-K Geographic Decision Area Waste Sites with Institutional Controls. 47

Table 2-12. Warning Notices for 100-K Geographic Decision Area. 48

Table 2-13. Decision Documents Associated with the 100-N Decision Areas. 50

Table 2-14. 100-N Geographic Decision Area Waste Sites with Institutional Controls (2 sheets). 51

Table 2-15. Warning Notices for 100-N Geographic Decision Area. 52

Table 2-16. Decision Documents Associated with the 300 Geographic Decision Area. 55

Table 2-17. 300 Geographic Decision Area Waste Sites with Institutional Controls. (10 sheets) 57

Table 2-18. Warning Notices for 300 Geographic Decision Area. 67

Table 2-19. Decision Documents Associated with the 1100 Area. 71

Table 2-20. 1100 Area Waste Sites with Institutional Controls. 71

Table 4-1. Assessment of Institutional Controls Listed in *Interim Action Record of Decision for 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units Hanford Site, Benton County, Washington* (EPA, 1995). 75

Table 4-2. Assessment of Institutional Controls Listed in *Interim Action Record of Decision Hanford 100-HR-3 and 100-KR-4 Operable Units, Hanford Site, Benton County, Washington* (EPA, 1996a). 76

Table 4-3. Assessment of Institutional Controls Listed in *Amendment to the Interim Action Record of Decision for the 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units, Hanford Site, Benton County, Washington* (EPA, 1997). 77

Table 4-4. Assessment of Institutional Controls Listed in *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, (100 Area Remaining Sites ROD)* (EPA, 1999a). (2 sheets) 77

Table 4-5. Assessment of Institutional Controls Listed *Interim Action Record of Decision for the 100-NR-1 and 100-NR-2 Operable Units, Hanford Site 100 Area, Benton County, Washington* (EPA, 1999c). (2 sheets) 79

Table 4-6. Assessment of Institutional Controls Listed in *Interim Action Record of Decision for the DOE Hanford 100-NR-1 Operable Unit (TSD), Hanford Site, Benton County, Washington* (EPA 2000b). (2 sheets) 80

Table 4-7. Assessment of Institutional Controls listed in *Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-2, 100-HR-2, and 100-KR-2, Operable Units, Hanford Site, Benton County, Washington (100 Area Burial Grounds)* (EPA, 2000a). (4 sheets) 82

Table 4-8. Assessment of Institutional Controls Listed in *Explanation of Significant Differences for the 100 Area Interim Action Record of Decision for 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-2, 100-HR-2, and 100-KR-2 Operable Units (100 Area Burial Grounds), Hanford Site, Benton County, Washington* (EPA, 2007). (2 sheets) 85

Table 4-9. Assessment of Institutional Controls Listed in *Record of Decision for 100-FR-1, 100-FR-2, 100-FR-3, 100-IU-2, and 100-IU-6* (EPA, 2014). (4 sheets) 86

Table 4-10. Assessment of Institutional Controls Listed in R*ecord of Decision for the 300-FF-1 and 300-FF-5 Operable Units, Hanford Site, Benton County, Washington* (EPA, 1996b). (2 sheets) 89

Table 4-11. Assessment of Institutional Controls Listed in *Hanford Site 300 Area Record of Decision for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1* (EPA, 2013b). (3 sheets) 91

Table 4-12. Assessment of Institutional Controls Listed in R*ecord of Decision for the USDOE Hanford 1100 Area* (EPA, 1993). 94

Table 4-13. Assessment of Institutional Controls Listed in *Superfund Site Final Closeout Report, U.S. Department of Energy Hanford 1100 Area, Richland, Washington* (DOE 1996)[a]. 95

Table 4-14. Assessment of Institutional Controls Listed in *Explanation of Significant Differences, USDOE Hanford 1100 Area, Hanford Site, Benton County, Washington* (EPA, 2010b). (2 sheets) 95

TERMS

bgs	below ground surface
CERCLA	*Comprehensive Environmental Response, Compensation, and Liability Act of 1980*
CFR	*Code of Federal Regulations*
CHPRC	CH2M Hill Plateau Remediation Company, LLC
CLUP	Comprehensive Land Use Plan
CN	change notice
CUL	clean up level
CVP	closure verification package
DOE	U.S. Department of Energy
ECO	Environmental Compliance Officer
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
FY	fiscal year
GDA	geographic decision area
GIS	Geographic Information System
HCP EIS	DOE/EIS-0222-F, *Final Hanford Comprehensive Land-Use Plan-Environmental Impact Statement*
HGIS	Hanford Geographic Information System
HRD	Horn Rapids Landfill
IC	institutional control
LTS	long-term stewardship
MSA	Mission Support Alliance, LLC
NPL	National Priorities List
OU	operable unit
PNNL	Pacific Northwest National Laboratory
RCRA	*Resource Conservation and Recovery Act of 1976*
RDR/RAWP	remedial design report/remedial action work plan
RI/FS	remedial investigation/feasibility study
ROD	record of decision
TCE	Trichloroethylene
TPA	Tri-Party Agreement
Tri-Party Agreement	*Hanford Federal Facility Agreement and Consent Order*
UIC	underground injection control (well)
UMM	unit manager meeting
WIDS	Waste Information Data System
WSRF	waste site reclassification form

1.0 INTRODUCTION

This document presents the results of the institutional control (IC) assessment conducted by the Mission Support Alliance, LLC (MSA) Long-Term Stewardship (LTS) Program in fiscal year (FY) 2017 as required by the Mission Support Contract,[1] and as described in HNF-54166, *LTS Surveillance and Maintenance Plan* and DOE/RL-2001-41, *Sitewide Institutional Controls Plan for Hanford CERCLA Response Actions and RCRA Corrective Actions*, Rev. 8. The MSA LTS Program is responsible for assessing the ICs for Waste Information Data System (WIDS) sites and Sitewide ICs, as well as other ICs assigned to MSA within the outlined area of the River Corridor Boundary shown in Figure 1-1.

1.1 BACKGROUND

The Columbia River Corridor spans approximately 50 miles of the Columbia River, and occupies approximately 220 square miles of the Hanford Site. It includes nine former plutonium production reactors and former fuel fabrication facilities. In 2007, the River Corridor was divided into six geographic areas, commonly referred to as geographic decision areas (GDA), to organize the remedial investigation/feasibility study (RI/FS) process and support the development of six records of decision (ROD) to define the final remedial actions. The GDAs encompass both the 100 Area and 300 Area National Priorities List (NPL) sites, as shown in Figure 1-1.

River Corridor Geographic Decision Areas

- **100-B/C**
- **100-D/H**
- **100-F/IU-2/IU-6**
- **100-K**
- **100-N**
- **300**

1.2 PURPOSE AND SCOPE OF THIS REPORT

The purpose of this report is to present the statuses and observations resulting from assessing the ICs. The ICs are defined in decision documents and are designed to help minimize the potential for human exposure to residual contamination.

[1]The *Mission Support Contract*, Attachment J-11, Contract Deliverables, requires CD0182, Site-Wide Assessment of Institutional Controls, which is due annually by November 15.

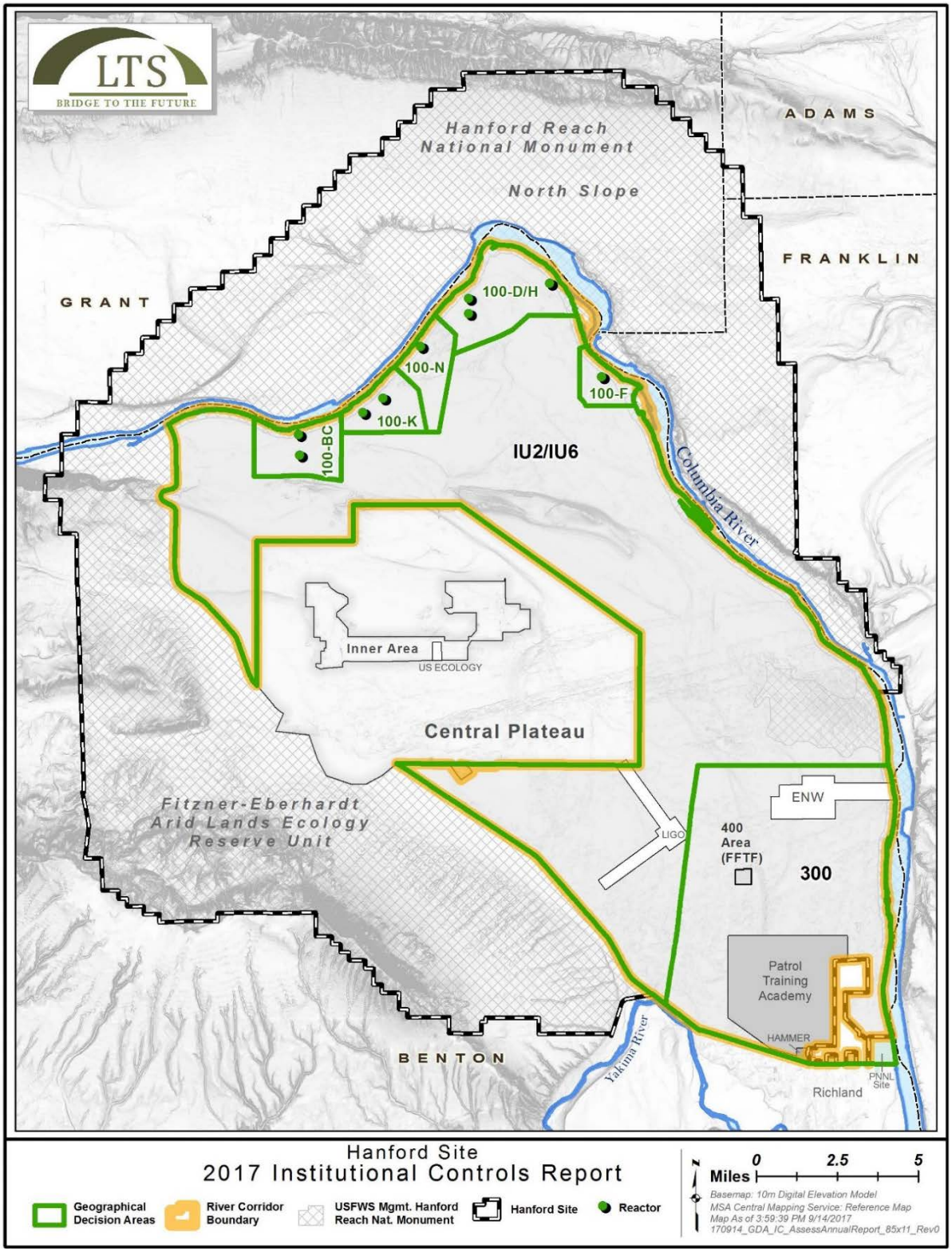

Figure 1-1. LTS Surveillance and Maintenance Geographic Decision Areas.

The scope of this report is the set of ICs for which responsibility is assigned to MSA. MSA assessed the following types of ICs:

- ICs at WIDS sites. Within the GDAs, 1,510 WIDS sites currently are assigned to the MSA LTS Program. Of these WIDS sites, 228 have ICs defined in *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) decision documents, as described in DOE/RL-2001-41. These ICs often are defined in their respective waste site reclassification forms (WSRF). The MSA LTS Program also is responsible for maintaining ICs at the Horn Rapids Landfill (HRD), which is the WIDS HRD Site (one of the 228 WIDS sites).[2]
- ICs requiring warning notices (i.e., signs) to be in place at each of the GDA reactor areas. The reactor areas are the areas around the former production reactors where the Hanford Manhattan Project and subsequent Hanford Cold War-era primary support activities occurred.
- Sitewide ICs, including fences, warning notices, and reporting of trespassing incidents, which help minimize the potential for human exposure to residual contamination while helping meet Hanford Site operational requirements to protect government property.
- ICs defined in the CERCLA decision documents that may apply to one or more GDAs and within each GDA, applicable to one or more operable units (OU).

CH2M HILL Plateau Remediation Company, LLC (CHPRC), and the Pacific Northwest National Laboratory (PNNL) assess the WIDS sites and areas for which they are responsible.

1.3 UPDATES SINCE 2016

The assessment for FY 2017 was conducted in a manner similar to the assessment conducted in FY 2016, as documented in MSA-1105355.6, *2016 Annual Sitewide Institutional Control Assessment Mission Support Alliance*. The following updates to the assessment were made in 2017, based on lessons learned in 2016 and the assignment of additional WIDS sites to the MSA LTS Program in 2017:

- This year's assessment covers 228 WIDS sites with ICs, 92 more than the 136 covered in 2016. The number of WIDS sites increased because WIDS sites in two additional areas were transitioned to the MSA LTS Program during FY 2017: the 100-N Area and the 300 Area.
- This is the first IC assessment conducted by MSA that includes the entire River Corridor. (The only portions of the River Corridor not included in MSA's assessment are the areas excluded from transition to the MSA LTS Program because of ongoing cleanup activities and/or other Site operations). Because this is the first year in which the entire River Corridor is being assessed by MSA, the assessment process will be evaluated for lessons learned and used as a basis to develop, refine, and improve future assessments.

[2]The Horn Rapids Landfill was in the 1100 Area NPL site, which was deleted from the NPL in 1996 after the landfill was capped and revegetated.

The information gathered during this year's assessments, particularly during the field assessments, was at a greater level of detail than in the previous year to serve as a basis of comparison for the future. The additional information gathered included geo-tagged photographs, maps of the sites assessed, and other observational elements. (Appendix A contains an example of the documentation developed for a completed field assessment.)

- Methods to help support an accurate and complete assessment while increasing efficiency were identified and evaluated during this year's assessment. It was determined that the field assessments would be conducted more efficiently if WIDS sites located in the same geographic area and with the same ICs were evaluated during the same field assessment, even if the WIDS sites are addressed by different CERCLA decision documents.

  Thus, where a combined field assessment was possible for a grouping of WIDS sites, the assessment results for those WIDS sites are presented together in this report. This method reduced the number of field assessments needed, while supporting a complete assessment. For example, 11 WIDS sites located near each other in the 100-B/C Area have the same IC, which was to prevent excavation in the deep zone, defined similarly in their respective CERCLA decision documents. Therefore, these 11 WIDS sites could be assessed at the same time, during one field assessment, as shown in Figure 1-2.

- The 2017 assessment includes a refinement in identifying the IC assessment area boundaries. The boundaries for the remedial action excavations at WIDS sites, which are identified in the associated closure verification package (CVP), were used in conjunction with boundaries defined in the WIDS Hanford Geographic Information System (HGIS). (The 2016 assessment generally used only the boundaries defined in the WIDS HGIS.)

- To support a consistent assessment throughout the River Corridor, the assessment included observing the ICs against pre-established objectives for each type of WIDS site IC. The objectives used in this year's assessment, shown in Table 1-1, were developed based on the objectives used in 2016 and incorporated lessons learned.

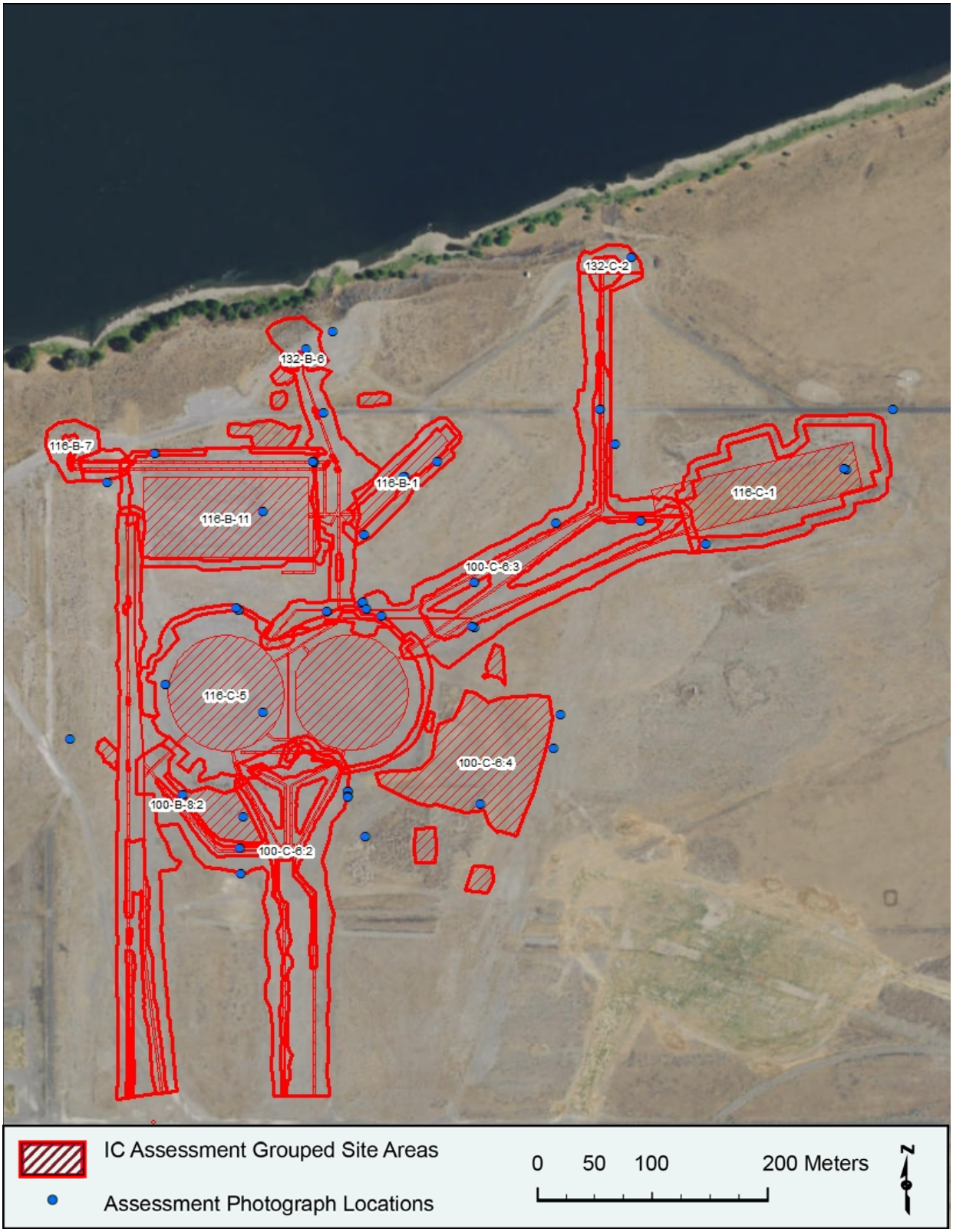

Figure 1-2. Example of WIDS Sites with a Similar IC that were Grouped Together for a Single Field Assessment (100-B/C Area).

Table 1-1. Objectives for Each Type of WIDS Site Institutional Control.

Institutional Control	Objectives
Prevent uncontrolled drilling or excavations into the deep zone (below 4.6 m/15 feet).	• No excavation permit was issued for excavation into the deep zone (more than 4.6 m [15 ft]). • No unauthorized excavation is observed in the deep zone.
Access to the site is controlled.	• Signage, badging, fencing, and/or other controls are used to control access to the site. • The signage, fencing, and/or other access control is in good repair. • The signage and/or fencing meet any specific requirements in place for this site. • No unauthorized access to the site is observed or known.
Prohibit irrigation (for areas other than the 300 Area Fire Station).	• No periodic or repetitive water or other liquids discharges were requested, as confirmed by the environmental compliance officer (ECO). • No inadvertent long-term releases were made in the vicinity of the site, as confirmed by the ECO. • No constructed drainage systems exist that would discharge to the site, as confirmed by appropriate data systems/documentation. • No constructed drainage systems that would discharge to the site is observed. • No unauthorized irrigation is observed.
Prevent an inhalation exposure pathway.	• No breaching of underground structures (e.g., pipes) is observed. • Access to the system entrances for the underground structures is controlled.
Control access to the Horn Rapids Landfill and maintain the integrity of the cap.	• Land use and the land use designation for the Horn Rapids Landfill (HRD) remains unchanged. • Access is controlled with a perimeter fence for the HRD per *Explanation of Significant Differences for the USDOE 1100 Area* (EPA, 2010b). • Any gates are locked when unattended. • Warning signs are displayed at all entrances and at intervals of 330 feet or less along the property line. • The signs include the statement, "Asbestos Waste Disposal Site Breathing Asbestos Dust May Cause Lung Disease and Cancer." • The integrity of the landfill cap, as described in the 1100 Area Final Closeout Report, is maintained at the HRD.
Limited to industrial use only	• All land use requests in this area are limited to industrial uses only. • No non-industrial uses are observed.
Prevent enhanced recharge control	• No irrigation. • Stormwater drainage is controlled.

ECO = environmental compliance officer. HRD = Horn Rapids Landfill.

- The process to assess WIDS sites with ICs to prevent excavation in the deep zone was further refined in the 2017 assessment. In 2016, the excavation permits were reviewed to confirm that no excavation permit for the deep zone was issued for areas associated with WIDS sites with ICs with excavation restrictions. In 2017, this process was expanded to

also include a Geographic Information System (GIS) spatial analysis. The GIS spatial analysis included the use of GIS software to compare the boundaries of the WIDS sites with the boundaries of the excavation permits issued in 2017 to confirm the results.

- Because of the increase in the number of WIDS sites in 2017, the field verification activities were refined to help support the consistent assessment of an even greater portion of the Hanford Site. Thus, for field assessment activities associated with the WIDS sites, the entire area of each WIDS site was systematically walked down in 15 meter intervals.
- The systematic walk down of the WIDS site during the field assessments resulted in the possibility of identifying housekeeping-related issues, such as the presence of deep-rooted vegetation, evidence of burrowing insects and animals, observed ground subsidence or erosion, maintenance issues regarding site-specific signage, and potential safety hazards. Although these observations typically were not directly related to ICs, immediate responses were implemented to address any imminent safety hazards, and observations were then photographed, mapped, logged, and tracked to support overall land management.
- Analytical processes and tools were added to the 2017 assessment process, as needed. In particular, one of the ICs for the 300 GDA, the enhanced recharge control[3], is a type of IC that MSA has not previously assessed. In addition, the WIDS sites to which the IC applies were not all specifically identified in a decision document. Therefore, this year's assessment process included analytical processes and tools to evaluate and identify the WIDS sites to which the enhanced recharge IC applies. The closed-out waste sites where this IC applies were identified by comparing their close-out verification sampling results to the applicable CULs. The Accepted waste sites where this IC applies were identified based on DOE/RL-2014-13-ADD1, *Remedial Design Report/Remedial Action Work Plan for 300-FF-2 Soils*, which requires temporary surface barriers to be installed and maintained at waste sites that exceed applicable cleanup levels and that are adjacent to the long-term retained facilities to support implementing the enhanced recharge control.
- To assess WIDS sites regarding the prevention of enhanced recharge, MSA found it useful to collect and analyze geo-referenced low-altitude vertical aerial imagery (1 × 500 raster resolution). The imagery was used to identify potential locations, such as locations that transition from low-permeability areas to bare-ground areas, for field verification to evaluate the possibility of enhanced recharge at the identified sites. Figure 1-3 is an example of the imagery used in this spatial analysis.

[3]Enhanced recharge control is implemented to prevent enhanced aquifer recharge for WIDS sites in the 300 Area Industrial Complex where contamination levels are above the residential groundwater/surface water protection clean-up levels (CUL) specified in the 300 Area FF-2 ROD.

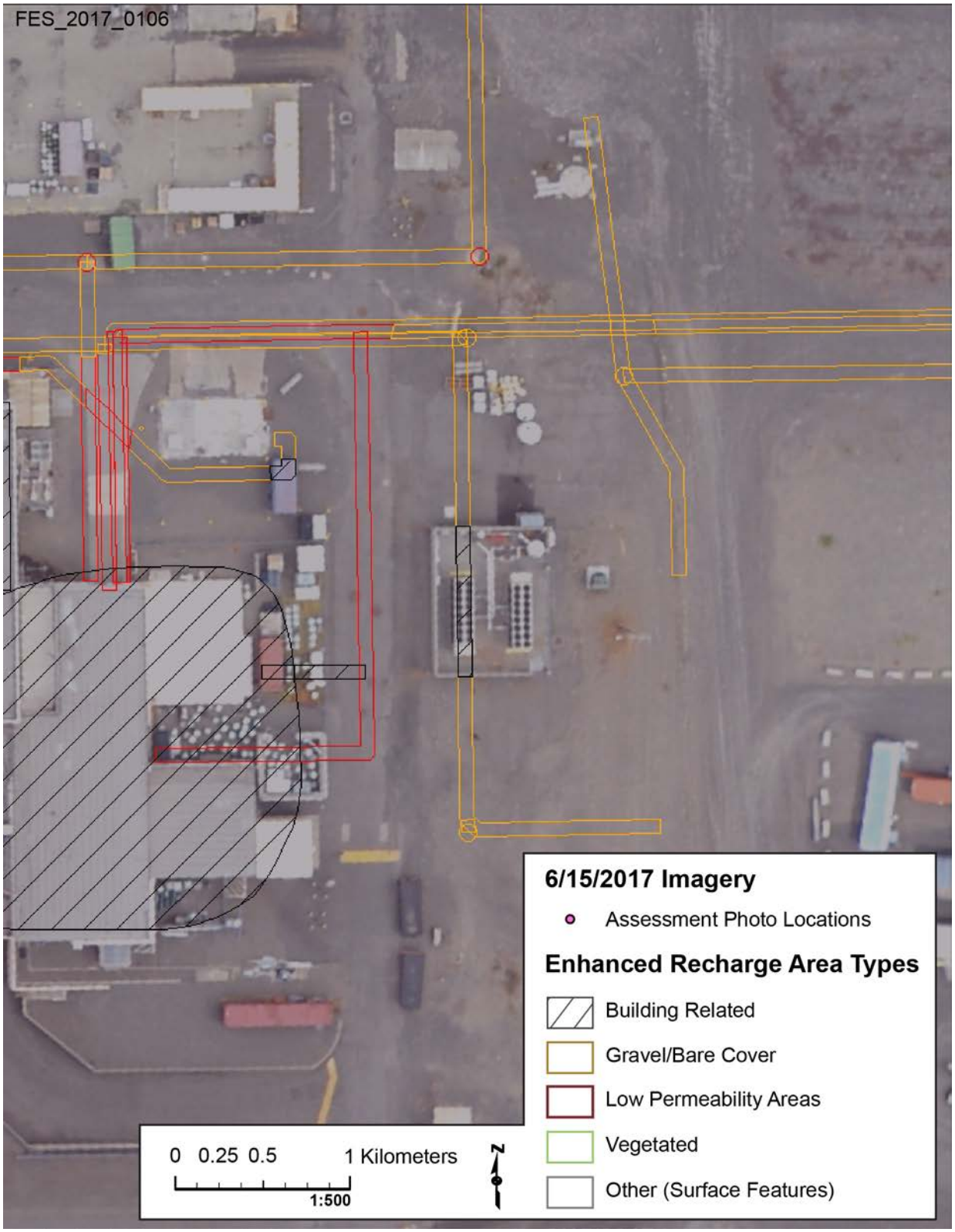

Figure 1-3. Example of Imagery Used to Identify Potential Locations for Field Verifications Supporting the 300 Area Enhanced Recharge IC.

1.4 ORGANIZATION OF THE REPORT

This report is organized into the following sections:

- Section 2.0 provides an overview of each GDA, including its boundaries, OUs, and associated CERCLA decision documents. It also provides the status and observations regarding WIDS site–specific ICs and warning notices in each GDA.
- Section 3.0 presents the Sitewide ICs and the observations made regarding these ICs during the 2017 IC assessment.
- Section 4.0 discusses the ICs that are defined in each CERCLA decision document, along with the observations resulting from the IC assessment. The ICs defined in the decision documents may apply to one or more GDAs and one or more OUs within a GDA.
- Section 5.0 summarizes the findings and observations of MSA's 2017 IC assessment that are presented in Sections 2.0 through 4.0. Section 5.0 also includes a description of follow-on actions identified during the assessment.

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2.0 INSTITUTIONAL CONTROLS BY GEOGRAPHIC DECISION AREA

The assessment results for ICs maintained by MSA are presented in this section by GDA.

2.1 INSTITUTIONAL CONTROLS WITHIN THE 100-B/C GEOGRAPHIC DECISION AREA

This section presents the statuses and observations resulting from the IC assessments for the 100-B/C GDA. The 100-B/C GDA encompasses the 100-BC-1 and 100-BC-2 soil OUs, as well as the 100-BC-5 groundwater OU. Figure 2-1 shows the boundaries of the 100-B/C GDA and the IC assessment areas. Assessments of the WIDS sites for the 100-B/C GDA found that the appropriate ICs were in place and objectives for the ICs were met.

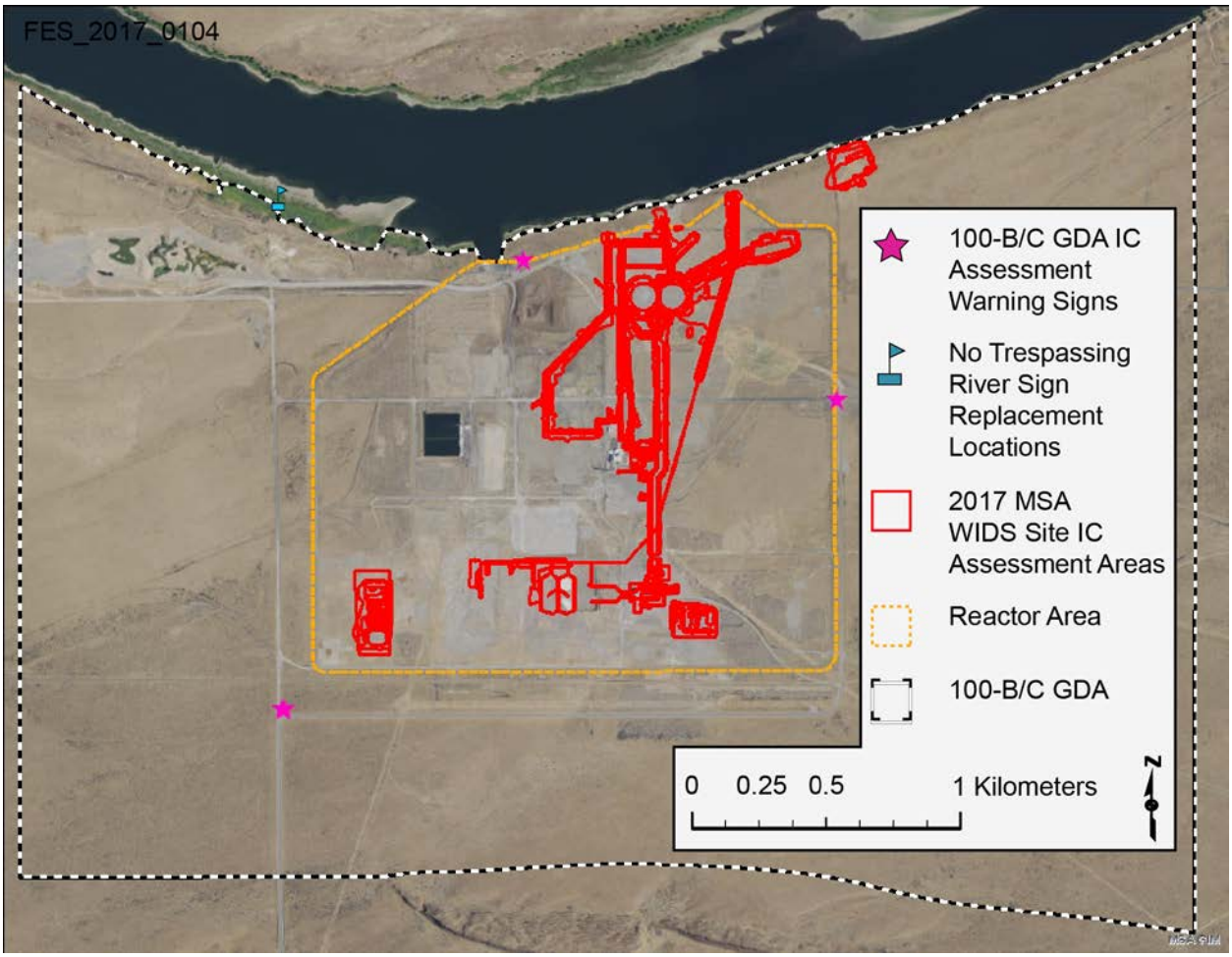


Figure 2-1. Areas Assessed in the 100-B/C Geographic Decision Area.

Section 2.1.1 identifies the CERCLA decision documents associated with the 100-B/C GDA. Section 2.1.2 presents the results of the assessments of the WIDS site-specific ICs in the 100-B/C GDA. Warning notices are ICs addressed in some of the decision documents, and section 2.1.3 presents the results of this assessment. The results of the assessments for other ICs listed in the decision documents are provided in Section 4.0.

2.1.1 DECISION DOCUMENTS FOR THE 100-B/C GEOGRAPHIC DECISION AREA

Decision documents associated with the 100-B/C GDA are listed in Table 2-1. These documents serve as the bases for the WIDS site-specific ICs, as well as other ICs for the 100-B/C GDA. However, some of the decision documents do not have IC requirements; those documents are also noted in Table 2-1.

Table 2-1. Decision Documents Associated with the 100-B/C Geographic Decision Area. (2 sheets)

Document	Decision Area-Wide IC Assessment Results [a]	
	Warning Notices	Other ICs
Interim Action Record of Decision for the 100-BC-1, 100-DR-1 and 100-HR-1 Operable Units, Hanford Site, Benton County, Washington (EPA, 1995).	N/A	Section 4.1
Amendment to the Interim Action Record of Decision for the 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units, Hanford Site, Benton County, Washington (EPA, 1997).	N/A	Section 4.3
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, 1999a). This is also known as the "100 Area Remaining Sites ROD."	Section 2.1.3	Section 4.4
Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1,100-DR-2,100-FR-2, 100-HR-2, and 100-KR-2, Operable Units, Hanford Site, Benton County, Washington (100 Area Burial Grounds) (EPA, 2000a).	Section 2.1.3	Section 4.7
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 (EPA, 2004a).	N/A	This document revised the due date for the IC report from March 30 to September 30 of each year. The annual IC assessment is reported every September at the unit managers meeting.

Table 2-1. Decision Documents Associated with the 100-B/C Geographic Decision Area. (2 sheets)

Document	Decision Area-Wide IC Assessment Results [a]	
	Warning Notices	**Other ICs**
Explanation of Significant Difference for the Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-2, 100-HR-2, and 100-KR-2 Operable Units (100 Area Burial Grounds), Hanford Site, Benton County, Washington (EPA, 2007).	N/A	Section 4.8
Explanation of Significant Differences for the 100 Area Remaining Sites Record of Decision, Hanford Site, Benton County, Washington (EPA, 2009a).	N/A	No other ICs are identified in this document.
100 Area "Plug-In" and Candidate Waste Sites for Fiscal Year 2010 – Annual Listing of Waste Sites Plugged into the Remove, Treat and Dispose Remedy in the 1999 Interim Action Record of Decision for the 100 Area (DOE-RL, 2011a).	N/A	No other ICs are identified in this document.
100 Area "Plug-In" and Candidate Waste Sites for Calendar Year 2012 – Annual Listing of Waste Sites Plugged into the Remove, Treat Dispose Remedy in the 1999 Interim Action Record of Decision for the 100 Area Remaining Sites (DOE-RL, 2013).	N/A	No other ICs are identified in this document.

[a] The results of the assessments for WIDS site ICs are presented in Section 2.1.2.
IC = institutional control. ROD = record of decision.
N/A = not applicable.

2.1.2 INSTITUTIONAL CONTROLS FOR THE WASTE SITES WITHIN THE 100-B/C GEOGRAPHIC DECISION AREA

This section presents the assessment results for the WIDS site-specific ICs in the 100-B/C GDA. Table 2-2 lists each assessment completed by waste site assessment group, identifies the associated waste sites and their respective WSRFs, the ICs being assessed, and the observations resulting from the assessment.

Table 2-2. 100-B/C Geographic Decision Area Waste Sites with Institutional Controls. (4 sheets)

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
100-B-8:2 100-C-6:2 100-C-6:3 100-C-6:4 116-B-1 116-B-7 116-B-11 116-C-1 116-C-5 132-B-6 132-C-2	Interim Closed Out	2003-050 2003-050 2003-050 2003-050 99-048 2002-046 99-033 98-012 99-036 2002-046 2002-046	4/20/2017	ICs are required to prevent uncontrolled drilling or excavation into the deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
100-B-5 100-B-8:1 100-C-6:1 116-B-2 116-B-3 116-B-4 116-B-6A 116-B-12 116-B-16 118-B-6	Interim Closed Out	2003-030 2004-020 2004-020 99-097 99-101 99-082 99-055 99-052 99-055a 2006-005	4/27/2017	ICs are required to prevent uncontrolled drilling or excavation into the deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
100-B-21:4 100-C-6:1 116-C-2A 116-C-2B 116-C-2C 116-C-3 118-C-3:2	Interim Closed Out	2009-041 2004-020 99-098 99-099 99-100 2008-002 2000-099	4/20/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.

Table 2-2. 100-B/C Geographic Decision Area Waste Sites with Institutional Controls. (4 sheets)

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
118-B-1	Interim Closed Out	2007-032	4/25/2017	The IC requirements for this site include deed restrictions to prohibit irrigation and prevent uncontrolled drilling or excavation into the deep zone (4.6 m/15 ft below ground surface).	• No excavation permits were issued in FY 2017 at the location of the site assessed. • No unauthorized excavation was observed in the deep zone. • There were no known period/ repetitive water or other liquid discharges to the WIDS site as confirmed by the ECO. • There were no known inadvertent long-term or significant discharges at or near the WIDS site. • No constructed drainage systems exist that would discharge to the site, as confirmed by appropriate data systems/documentation. • No constructed drainage systems that would discharge to the site were observed during the systematic walk of the WIDS area. • No evidence of unauthorized irrigation or water marks were observed during the systematic walk down of the WIDS area.
100-C-9:4	Interim No Action	2004-015	4/25/2017	Given the demonstrated maximum residual concentration of hexavalent chromium in the feedwater pipes, ICs are required to prevent an inhalation exposure pathway.	• No breaching of the below-grade underground features is apparent from the surface. • Access beyond the Wye Barricade is controlled. Also, “Radiation Warning” and “Confined Space” signs are posted.

Table 2-2. 100-B/C Geographic Decision Area Waste Sites with Institutional Controls. (4 sheets)

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
128-B-3	Interim Closed Out	2006-058	4/20/2017	An interim closure reclassification is supported for the 128-B-3 waste site, with imposition of ICs on the river embankment area to prevent activities that would mobilize residual contaminants to travel to groundwater or the river. ICs will be maintained until the results of a baseline risk assessment can be considered (for a final site remedy or closure). The remainder of the site does not have a deep zone or residual contaminant concentrations that would require any ICs.	• No excavation permits were issued in FY 2017. • No unauthorized excavation was observed in the shallow zone. • There were no known period/repetitive water or other liquid discharges to the WIDS site as confirmed by the ECO. • There were no known inadvertent long-term or significant releases that were reported at the mentioned sites or near the WIDS site. • No constructed drainage systems exist that would discharge to the site, as confirmed by appropriate data systems/documentation. • No constructed drainage systems that would discharge to the site were observed. • No unauthorized irrigation was observed.
100-C-9:3	Interim No Action	2004-014	4/25/2017	The 100-C-9:3 site is comprised exclusively of a deep zone (i.e., greater than 4.6 m [15 ft] below ground surface). ICs will be required because the evaluation of compliance with direct exposure standards failed for some of the semi-volatiles.	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
118-C-1	Interim Closed Out	2006-063	4/25/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
100-B-14:1	Interim Closed Out	2004-005	4/25/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.

Table 2-2. 100-B/C Geographic Decision Area Waste Sites with Institutional Controls. (4 sheets)

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
100-C-9:1	Interim Closed Out	2004-012	4/25/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.

ECO = environmental compliance officer.
FY = fiscal year.
IC = institutional control.
WIDS = Waste Information Data System.
WSRF = Waste Site Reclassification Form.

2.1.3 WARNING NOTICES IN THE 100-B/C GEOGRAPHIC DECISION AREA

Two of the decision documents have the same requirement to maintain warning notices in the 100-B/C GDA along access roads and the Columbia River to warn visitors and workers of potential hazards associated with the area (see Section 2.1.1). Detailed requirements for the notices, including their locations, verbiage, and language (the signs are to be in English, with one sign along the river also provided in Spanish) are defined in Section 3.8 of DOE/RL-96-17, *Remedial Design Report/Remedial Action Work Plan for the 100 Area*.

Table 2-3 presents the observations resulting from the assessments of these signs, which serve as the warning notices. Table 2-3 also describes the location of each sign, the language that is used for the verbiage on the sign, and the observations. The signs for the 100-B/C GDA were found to be in place at the correct locations (see Figure 2-1) with the proper text. Photographs of the signs are provided in Figure 2-2.

Table 2-3. Warning Notices for 100-B/C Geographic Decision Area.

Location	Number of Signs	Language	Observations
East Entrance to 100B/C Reactor Area	1	English	In Place
Southwest Entrance to 100B/C Reactor Area	1	English	In Place
North Fence Near River in 100B/C Reactor Area	2	English & Spanish	In Place

East Entrance to 100B/C Reactor Area

North Fence Near River in 100B/C Reactor Area

Southwest Entrance to 100B/C Reactor Area

Figure 2-2. Warning Notices for 100-B/C Geographic Decision Area.

2.2 INSTITUTIONAL CONTROLS WITHIN THE 100-D/H GEOGRAPHIC DECISION AREA

This section presents the statuses and observations resulting from the IC assessments in the 100-D/H GDA. The 100-D/H GDA encompasses the 100-DR-1, 100-DR-2, 100-HR-1, and 100-HR-2 soil OUs, as well as the 100-HR-3 groundwater OU. Figure 2-3 shows the boundaries of the 100-D/H GDA and the IC assessment areas. Assessments of the WIDS sites for the 100-D/H GDA found that the appropriate ICs were in place and objectives for the ICs were met.

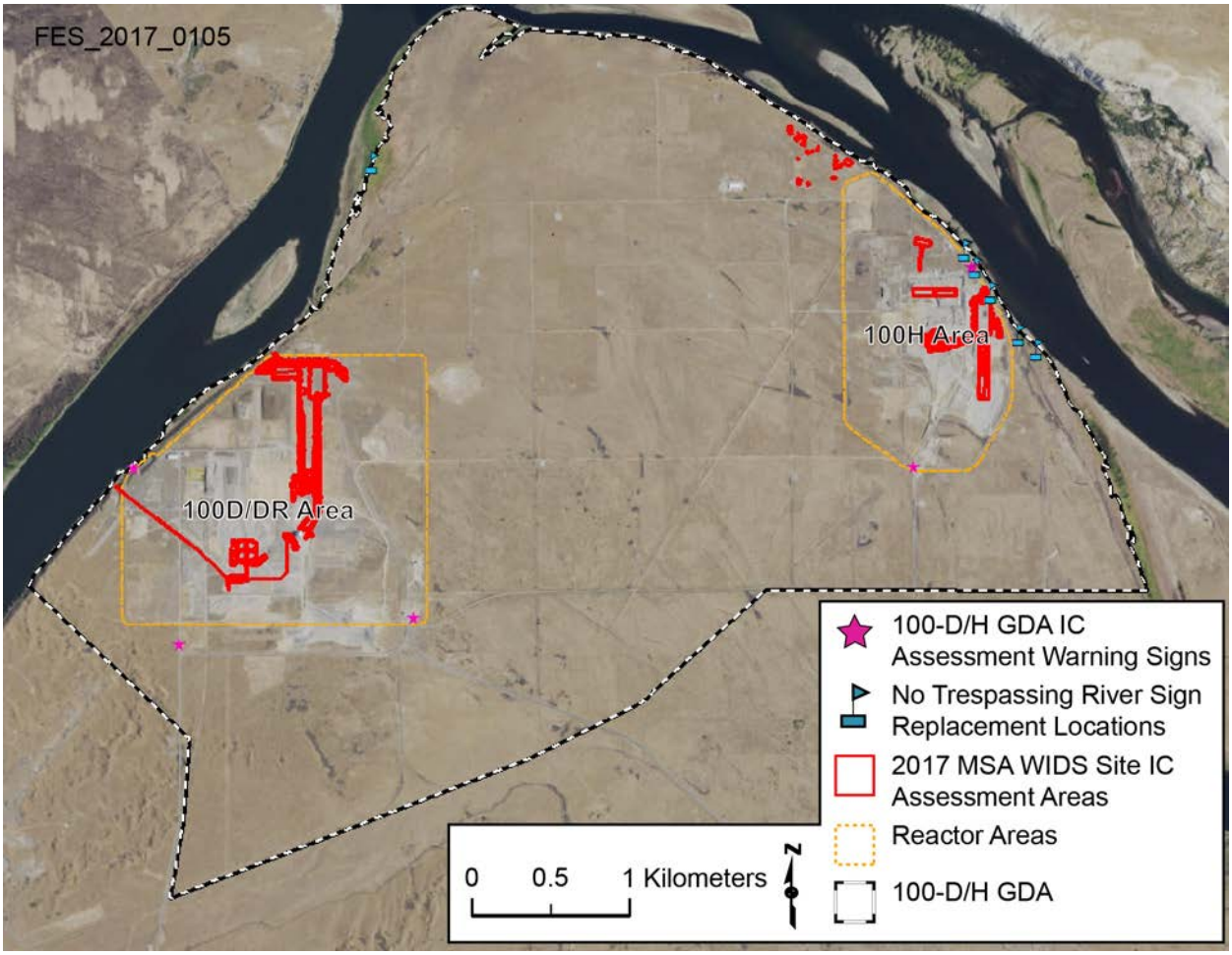


Figure 2-3. Areas Assessed in the 100-D/H Geographic Decision Area

Section 2.2.1 identifies the decision documents associated with the 100–D/H GDA. Section 2.2.2 presents the results of the assessments of the WIDS site-specific ICs in the 100-D/H GDA. Warning notices are ICs addressed in some of the decision documents, and Section 2.2.3 presents the results of this assessment. The results of the assessments for other ICs listed in the decision documents are provided in Section 4.0.

2.2.1 DECISION DOCUMENTS FOR THE 100-D/H GEOGRAPHIC DECISION AREA

Decision documents associated with the 100-D/H GDA are listed in Table 2-4. These documents serve as the bases for the WIDS site-specific ICs, as well as other ICs for the 100-D/H GDA. However, some of the decision documents do not have IC requirements; those documents are also noted in Table 2-4.

Table 2-4. Decision Documents Associated with the 100-D/H Geographic Decision Area (2 sheets).

Document	Decision Area-Wide IC Assessment Results [a]	
	Warning Notices	**Other ICs**
Interim Action Record of Decision for the 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units, Hanford Site, Benton County, Washington (EPA, 1995).	N/A	Section 4.1
Interim Action Record of Decision for the 100-HR-3 and 100-KR-4 Operable Units, Hanford Site, Benton County, Washington (EPA, 1996a).	N/A	Section 4.2
Amendment to the Interim Action Record of Decision for the 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units, Hanford Site, Benton County, Washington (EPA, 1997).	N/A	Section 4.3
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, 1999a). This is also known as the "100 Area Remaining Sites ROD."	Section 2.2.3	Section 4.4
Amendment to the Interim Action Record of Decision for the 100-HR-3 Operable Unit, Hanford Site, Benton County, Washington (EPA, 1999b).	N/A	No other ICs are identified in this document.
Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2,100-FR-2, 100-HR-2, and 100-KR-2 Operable Units, Hanford Site, Benton County, Washington (100 Area Burial Grounds) (EPA, 2000a).	Section 2.2.3	Section 4.7
Explanation of Significant Difference for the 100-HR-3 Operable Unit Interim Action Record of Decision, Benton County, Washington (EPA, 2003a).	N/A	No other ICs are identified in this document.
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 (EPA, 2004a).	N/A	The IC requirement revised the reporting date from March 30 to September 30. The annual IC assessment is reported every September at the unit managers meeting.
Explanation of Significant Difference for the Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-2, 100-HR-2, and 100-KR-2 Operable Units (100 Area Burial Grounds), Hanford Site, Benton County, Washington (EPA, 2007).	N/A	Section 4.8
Explanation of Significant Differences for the 100 Area Remaining Sites Record of Decision, Hanford Site, Benton County, Washington (EPA, 2009a).	N/A	No other ICs are identified in this document.
Explanation of Significant Differences for the 100-HR-3 and 100-KR-4 Operable Units Interim Record of Decision, Benton County, Washington (EPA, 2009b).	N/A	No other ICs are identified in this document.

Table 2-4. Decision Documents Associated with the 100-D/H Geographic Decision Area (2 sheets).

Document	Decision Area-Wide IC Assessment Results [a]	
	Warning Notices	**Other ICs**
100 Area "Plug In" and Candidate Waste Sites for Fiscal Year 2010 – Annual Listing of Waste Sites Plugged into the Remove, Treat and Dispose Remedy in the 1999 Interim Action Record of Decision for the 100 Area (DOE-RL, 2011a).	N/A	No other ICs are identified in this document.
100 Area "Plug In" and Candidate Waste Sites for Calendar Year 2011 – Annual Listing of Waste Sites Plugged into the Remove, Treat and Dispose Remedy in the 1999 Interim Action Record of Decision for the 100 Area Remaining Sites (DOE-RL, 2012a).	N/A	No other ICs are identified in this document.
100 Area "Plug In" and Candidate Waste Sites for Calendar Year 2012 – Annual Listing of Waste Sites Plugged into the Remove, Treat and Dispose Remedy in the 1999 Interim Action Record of Decision for the 100 Area Remaining Sites (DOE-RL, 2013).	N/A	No other ICs are identified in this document.

[a] The results of the assessments for WIDS site ICs are presented in Section 2.2.2.
IC = institutional control. ROD = record of decision.
N/A = not applicable.

2.2.2 INSTITUTIONAL CONTROLS FOR WASTE SITES WITHIN THE 100-D/H GEOGRAPHIC DECISION AREA

This section presents the assessment results for the WIDS site-specific ICs in the 100-D/H GDA. Table 2-5 lists each assessment completed by waste site assessment group, identifies the associated waste sites and their respective WSRFs, assessment dates, the ICs being assessed, and the observations resulting from the assessment.

Table 2-5. 100-D/H Geographic Decision Area Waste Sites with Institutional Controls (5 sheets).

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
100-D-18 100-D-19 100-D-25 100-D-48:1 100-D-49:1 116-D-7 116-DR-1&2 116-DR-9 UPR-100-D-2 UPR-100-D-3 UPR-100-D-4	Interim Closed Out	2000-040 2000-128 99-106 2000-126 2000-127 2000-007 2000-068 99-046 2000-062 2000-063 2000-034	5/4/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
100-D-23 100-D-53 100-D-54 100-D-64 132-DR-2	Interim Closed Out	2003-053	5/16/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
116-D-8	Interim Closed Out	2009-015	5/16/2017	The direct exposure cleanup criterion for Cs-137 was exceeded in sample results from this location. However, no further remediation can be conducted without significantly adversely affecting bat colonies. The preferred alternative to eliminate or mitigate impacts to the bat colony is to leave the structure intact and add perimeter fencing and signage to deter human entry. Therefore, ICs are required at the location of Cs-137 contamination south of the 116-D-8, 100-D cask storage pad.	• Access to the site is generally controlled through overall Site access controls, including badging requirements north of the Wye-Barricade and “No Trespassing” warning notices along the roads and Columbia River. • No excavation permits were issued in FY 2017 at the location of the 116-D-8 WIDS site. • No unauthorized excavation in the shallow zone was observed at the 116-D-8 site.

Table 2-5. 100-D/H Geographic Decision Area Waste Sites with Institutional Controls (5 sheets).

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
100-D-86:3	Interim Closed Out	2015-016	5/16/2017	Site contamination above direct exposure RAGs extended into deep-zone soils on the north side of the excavation; therefore, ICs to prevent uncontrolled drilling or excavation into the deep zone are required. Because residual contamination remains in the deep zone, this waste site will be evaluated for additional remediation in the final ROD for the 100-D Area, and additional measures to ensure long-term viability of ICs will be identified if necessary, as explained in the interim action ROD.	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
100-D-6 132-DR-1 116-DR-6	Interim Closed Out	2001-005 2005-035 2000-104	5/16/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
100-D-5 100-D-46 100-D-48:4 116-D-1A 116-D-1B 116-D-6 118-D-6:2 118-D-6:3 118-D-6:4 132-D-2 132-D-3 132-D-4	Interim Closed Out	2001-022 2000-115 2000-133 2000-115 2000-115 2000-106 2005-021 2005-021 2010-071 2005-024 2005-033 2005-022	5/16/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.

Table 2-5. 100-D/H Geographic Decision Area Waste Sites with Institutional Controls (5 sheets).

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
100-D-48:3 100-D-49:3	Interim Closed Out	2001-004 2001-004		ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
100-D-48:2	Interim Closed Out	2000-064	5/2/2019, 5/9/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
100-D-49:2	Interim Closed Out	2000-065	5/2/2019, 5/9/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
100-D-50:1	Interim Closed Out	2012-101	5/18/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
100-D-50:6	Interim Closed Out	2013-011	5/4/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
100-H-1 116-H-3 118-H-6:2 118-H-6:3 118-H-6:6 132-H-2	Interim Closed Out	2001-007 2000-135 2006-008 2006-009 2006-022 2006-049	5/25/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.

Table 2-5. 100-D/H Geographic Decision Area Waste Sites with Institutional Controls (5 sheets).

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
100-H-21 100-H-22	Interim Closed Out	2001-006 2001-006	5/23/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• Hanford Site Excavation Permit in 100-H Area, DAN17-0105, was issued in the 100-H-21 waste site to install a groundwater well approved by DOE and Ecology. This excavation into the deep zone is authorized and the IC has been maintained. • No unauthorized excavation was observed in the deep zone.
100-H-5	Interim Closed Out	2000-117	5/23/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
116-H-1	Interim Closed Out	2001-013	5/23/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
116-H-7	Interim Closed Out	2001-026	5/23/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
126-H-2	Interim Closed Out	2006-006	5/25/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
1607-H-2	Interim Closed Out	2000-118	5/25/2017	ICs are required to prevent uncontrolled drilling excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.

Table 2-5. 100-D/H Geographic Decision Area Waste Sites with Institutional Controls (5 sheets).

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
600-151	Interim Closed Out	2011-053	5/25/2017	The approved WSRF documents that "because arsenic and lead contamination is present in surface soil, an administrative control will be documented in the WIDS until a final decision concerning historic orchard pesticide use is made."	• Administrative controls are still in place until a final decision concerning historic orchard pesticide use is made.

DOE = U.S. Department of Energy.
Ecology = Washington State Department of Ecology.
FY = fiscal year.
IC = institutional control.
RAG = remedial action goal.
WIDS = Waste Information Data System.
WSRF = waste site reclassification form.

2.2.3 WARNING NOTICES IN THE 100-D/H GEOGRAPHIC DECISION AREA

Two of the decision documents have the same requirement to maintain warning notices in the 100-D/H GDA along access roads and the Columbia River to warn visitors and workers of potential hazards associated with the area (see Section 2.2.1). Detailed requirements for the notices, including their locations, verbiage, and language (the signs are to be in English, with one sign along the river also provided in Spanish), are defined in Section 3.8 of DOE/RL-96-17.

Table 2-5 presents the observations resulting from the assessments of these signs, which serve as the warning notices. Table 2-5 describes the location of each sign, the language used for the verbiage on the sign, and the observations. A sign near the east entrance to the 100D Area was observed to have fallen. The sign will be repaired in FY 2018. The remaining signs for the 100-D/H Area were found to be in place at the correct locations (see Figure 2-3) with the proper text. Figure 2-4 shows the signs.

Table 2-6. Warning Notices for 100-D/H Geographic Decision Area.

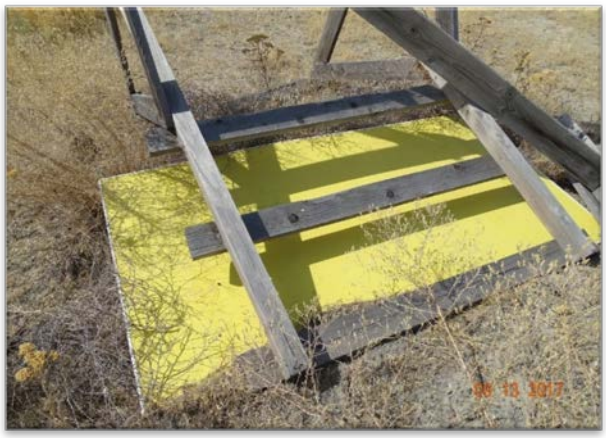
Location	Number of Signs	Language	Observations
West Entrance to 100D Reactor Area	1	English	In Place
East Entrance to 100D Reactor Area	1	English	Needs replacement. To be repaired in FY 2018
Near Columbia River in 100D Reactor Area	2	English & Spanish	In Place
Main Entrance to 100H Reactor Area	1	English	In Place
Near Columbia River in 100H Reactor Area	2	English & Spanish	In Place

FY = fiscal year.

Sign Near Columbia River in 100D Reactor Area (English)

Sign Near Columbia River in 100D Reactor Area (Spanish)

West Entrance to 100D Reactor Area



East Entrance to 100D Reactor Area

Main Entrance to 100H Reactor Area

Figure 2-4. Warning Notices for 100-D/H Geographic Decision Area. (sheet 1)

100H Area River Sign in Spanish and English

Figure 2-4. The Warning Notices for 100-D/H Geographic Decision Area. (Sheet 2)

2.3 INSTITUTIONAL CONTROLS WITHIN THE 100-F/IU-2/IU-6 GEOGRAPHIC DECISION AREA

Within the 100-F/IU-2/IU-6 GDA, only the 100F Operational Area contains sites with ICs managed by MSA

This section presents the statuses and observations resulting from the IC assessments for the 100-F/IU-2/IU-6 GDA.

The 100-F/IU-2/IU-6 GDA encompasses the 100-FR-1, 100-FR-2, 100-IU-2, and 100-IU-6 soil OUs, as well as the 100-FR-3 groundwater OU. The ROD with the final action decisions for this area, *Record of Decision, Hanford 100 Area Superfund Site 100-FR-1, 100-FR-2, 100 FR-3, 100-IU-2, and 100-IU-6 Operable Units* (EPA, 2014), defines the boundaries for locations within the 100-FR-1 and 100-FR-2 OUs where land-use ICs are required. Therefore, the IC assessments for the 100-F/IU-2/IU-6 GDA were conducted in groups based on the areas defined in the final F Area ROD, rather than based on the boundaries of the individual WIDS sites. Figure 2-5 shows the boundaries of the IC assessment areas. Assessments of the WIDS sites for the 100-F/IU-2/IU-6 GDA found that the appropriate ICs were in place and objectives for the ICs were met.

Section 2.3.1 identifies the decision documents associated with the 100-F/IU-2/IU-6 GDA. Section 2.3.2 presents the results of the assessments of the WIDS site-specific ICs in the 100-F/IU-2/IU-6 GDA. Warning notices are also ICs addressed in some of the decision documents, and Section 2.3.3 presents the results of this assessment. The results of the assessments for other ICs listed in the decision documents are provided in Section 4.0.

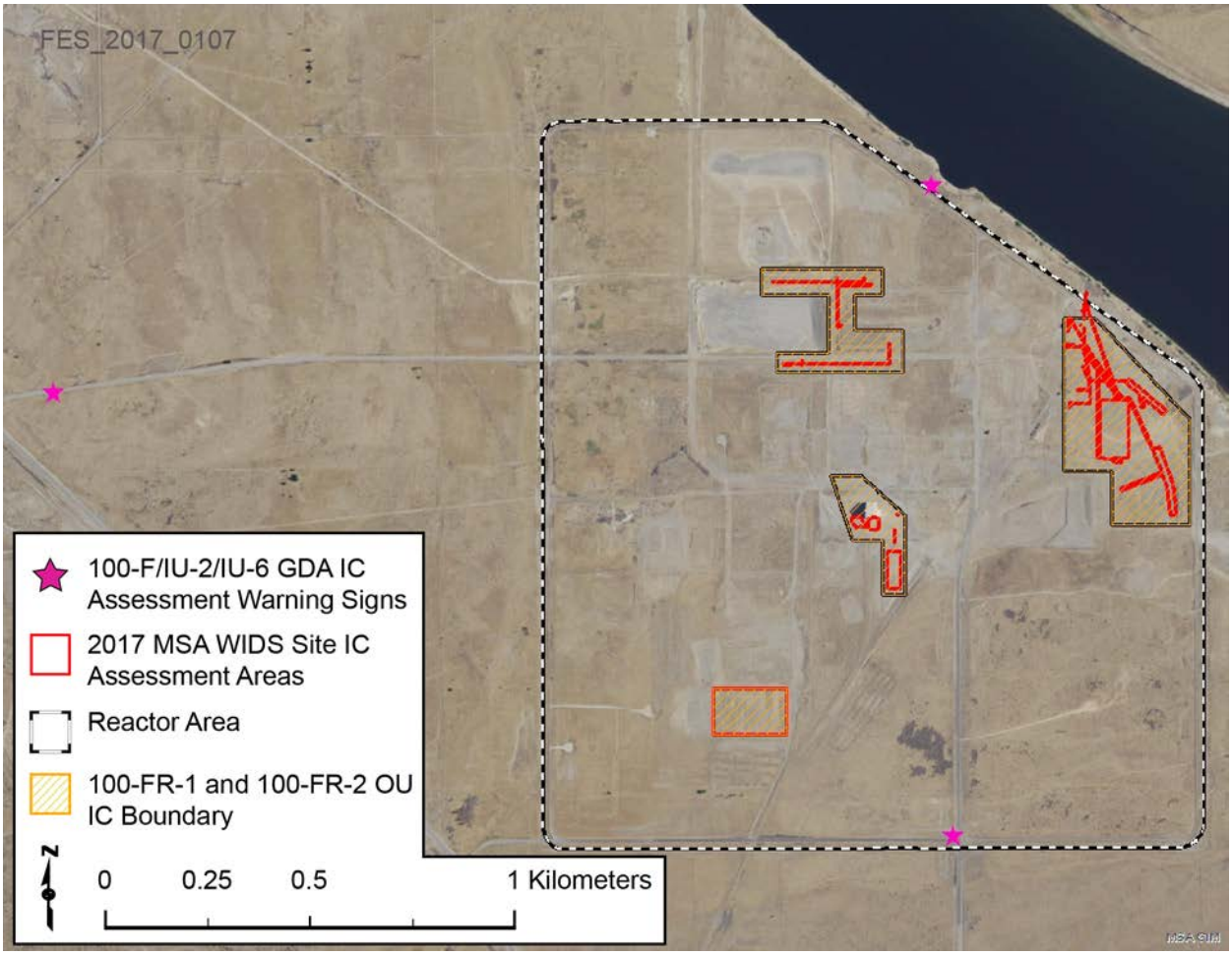


Figure 2-5. Areas Assessed in the 100-F/IU-2/IU-6 Geographic Decision Area

2.3.1 DECISION DOCUMENTS FOR THE 100-F/IU-2/IU-6 GEOGRAPHIC DECISION AREA

The primary decision document associated with the 100-F/IU-2/IU-6 GDA (EPA, 2014), which is a ROD that defines the final-action cleanup decisions, is listed in Table 2-6. This document serves as the basis for the WIDS site-specific ICs, as well as other ICs for the 100-F/IU-2/IU-6 GDA. Previously issued CERCLA decision documents (listed in a footnote of Table 2-7), which are no longer applicable to this area after the issuance of the final action ROD, were not assessed for the 100-F/IU-2/IU-GDA.

Table 2-7. Decision Documents Associated with the 100-F/IU-2/IU-6 Geographic Decision Area.

Document	Decision Area-Wide IC Assessment Results [q]	
	Warning Notices	Other ICs
Record of Decision Hanford 100 Area Superfund Site 100-FR-1, 100-FR-2, 100-FR-3, 100-IU-2 and 100-IU-6 Operable Units (EPA, 2014).[b]	Section 2.2.3	Section 4.9

[a] The results of the assessments for WIDS site ICs are presented in Section 2.3.2.

[b] This record of decision, which defines final action cleanup decisions for 100-F/IU-2/IU-6 OUs, supersedes the following previously issued CERCLA decision documents for this GDA:

- *Amendment to the Interim Action Record of Decision for the 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units, Hanford Site, Benton County, Washington* (EPA, 1997)
- *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, 1999a). This is also known as the "100 Area Remaining Sites ROD."
- *Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1,100-DR-2,100-FR-2, 100-HR-2, and 100-KR-2, Operable Units, Hanford Site, Benton County, Washington (100 Area Burial Grounds)* (EPA, 2000a).
- *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.* (EPA, 2004a).
- *Explanation of Significant Difference for the Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-2, 100-HR-2, and 100-KR-2 Operable Units (100 Area Burial Grounds), Hanford Site, Benton County, Washington* (EPA, 2007).
- *Explanation of Significant Differences for the 100 Area Remaining Sites Record of Decision, Hanford Site, Benton County, Washington* (EPA, 2009a).
- *100 Area "Plug-In" and Candidate Waste Sites for Fiscal Year 2010 – Annual Listing of Waste Sites Plugged into the Remove, Treat and Dispose Remedy in the 1999 Interim Action Record of Decision for the 100 Area* (DOE-RL, 2011a).
- *100 Area "Plug-In" and Candidate Waste Sites for Fiscal Year 2011 – Annual Listing of Waste Sites Plugged into the Remove, Treat and Dispose Remedy in the 1999 Interim Action Record of Decision for the 100 Area* (DOE-RL, 2012a).
- *100 Area "Plug-In" and Candidate Waste Sites for Calendar Year 2012 – Annual Listing of Waste Sites Plugged into the Remove, Treat Dispose Remedy in the 1999 Interim Action Record of Decision for the 100 Area Remaining Sites* (DOE-RL, 2013).

2.3.2 INSTITUTIONAL CONTROLS FOR WASTE SITES WITHIN THE 100-F/IU-2/IU-6 GEOGRAPHIC DECISION AREA

This section presents the assessment results for the WIDS site-specific ICs in the 100-F/IU-2/IU-6 GDA. Table 2-8 lists each assessment completed by waste site assessment group, identifies the associated waste sites and their respective WSRFs, assessment dates, the ICs being assessed, and the observations resulting from the assessment.

Table 2-8. 100-F/IU-2/IU-6 Geographic Decision Area Waste Sites with Institutional Controls. (2 sheets)

Waste Site Assessment Group	Reclassification Status	WSRFs	Date Assessed	Institutional Control	Observations
100-F-10 100-F-19:2 116-F-6 118-F-8:3 118-F-8:4	Final Closed Out	2003-051, 2015-078 2003-022, 2015-078 2003-006, 2015-078 2003-051, 2015-078 2007-027, 2015-078	4/18/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
100-F-19:1 100-F-29 100-F-34 116-F-2 116-F-9 116-F-12 UPR-100-F-1	Final Closed Out	2001-099, 2015-078 2003-022, 2015-078 2001-099, 2015-078 2002-057, 2015-078 2002-056, 2015-078 2001-099, 2015-078 2003-022, 2015-078	4/18/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
116-F-14	Final Closed Out	2002-050, 2015-077	4/18/2017	ICs are required to restrict excavation into deep zone soils (greater than 4.6 m [15 ft] below ground surface) and to prohibit irrigation over or near the site.	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone. • No constructed drainage systems that would discharge to the site was observed. • No unauthorized irrigation was observed. • There were no known periodic/repetitive water or other liquid discharges to the 116-F-14 WIDS site as confirmed by the ECO. • There were no known inadvertent long-term or significant releases reported at the mentioned sites or near the 116-F-14 WIDS site. • No constructed drainage systems exist that would discharge to the site, as confirmed by appropriate data systems/documentation.

Table 2-8. 100-F/IU-2/IU-6 Geographic Decision Area Waste Sites with Institutional Controls. (2 sheets)

Waste Site Assessment Group	Reclassification Status	WSRFs	Date Assessed	Institutional Control	Observations
100-F-19:3	Final Closed Out	2001-099, 2015-078	4/18/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation is observed in the deep zone.
118-F-6	Final Closed Out	2008-018, 2015-079	4/18/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation is observed in the deep zone.

ECO = environmental compliance officer.
IC = institutional control.
WIDS = Waste Information Data System.
WSRF = waste site reclassification form.

2.3.3 WARNING NOTICES IN THE 100-F/IU-2/IU-6 DECISION AREA

Warning notice requirements for the 100-F/IU-2/IU-6 GDA are documented in *Record of Decision Hanford 100 Area Superfund Site 100-FR-1, 100-FR-2, 100-FR-3, 100-IU-2 and 100-IU-6 Operable Units* (EPA, 2014) (Table 2-6). Detailed requirements for the notices, including their locations, verbiage, and language (the signs are to be in English, with one sign along the river also provided in Spanish) are defined in Section 4.3.3 of DOE/RL-2014-44-ADD1, *Remedial Design Report/Remedial Action Work Plan Addendum for 100-FR-1, 100-FR-2, 100-IU-2, and 100-IU-6 Soils.*

Table 2-8 presents the observations resulting from the assessments of these signs, which serve as the warning notices. Table 2-9 describes the location of each sign, the language used for the verbiage on the sign, and the observations. The sign near the west entrance to the 100F Reactor Area was observed to have fallen and the sign will be repaired in FY 2018. The remaining signs for the 100-F/IU-2/IU-6 GDA were found to be in place at the correct locations (see Table 2-9) and with the proper text. The signs are shown in Figure 2-6.

Table 2-9. Warning Notices for 100-F/IU-2/IU-6 Geographic Decision Area.

Location	Number of Signs	Language	Observations
Main (South) Entrance to 100F Reactor Area	1	English	In Place
West Entrance to 100F Reactor Area	1	English	Needs replacement. To be repaired in FY 2018
Near Columbia River in 100F Reactor Area	2	English & Spanish	In Place

FY = fiscal year.

Main (South) Entrance to 100F Reactor Area

West Entrance to 100F Reactor Area

Near Columbia River in 100F Reactor Area

Figure 2-6. Warning Notices for 100-F/IU-2/IU-6 Geographic Decision Area.

2.4 INSTITUTIONAL CONTROLS WITHIN THE 100-K GEOGRAPHIC DECISION AREA

The 100-K Geographic Decision Area includes ICs that are assessed by CHPRC.

This section presents the statuses and observations resulting from the IC assessments for the 100-K GDA. The 100-K GDA encompasses the 100-KR-1 and 100-KR-2 soil OU, as well as the 100-KR-4 groundwater OU. Figure 2-7 shows the boundaries of the 100-K GDA and the IC assessment areas. Assessments of the WIDS sites for the 100-K GDA found that the appropriate ICs were in place and objectives for the ICs were met.

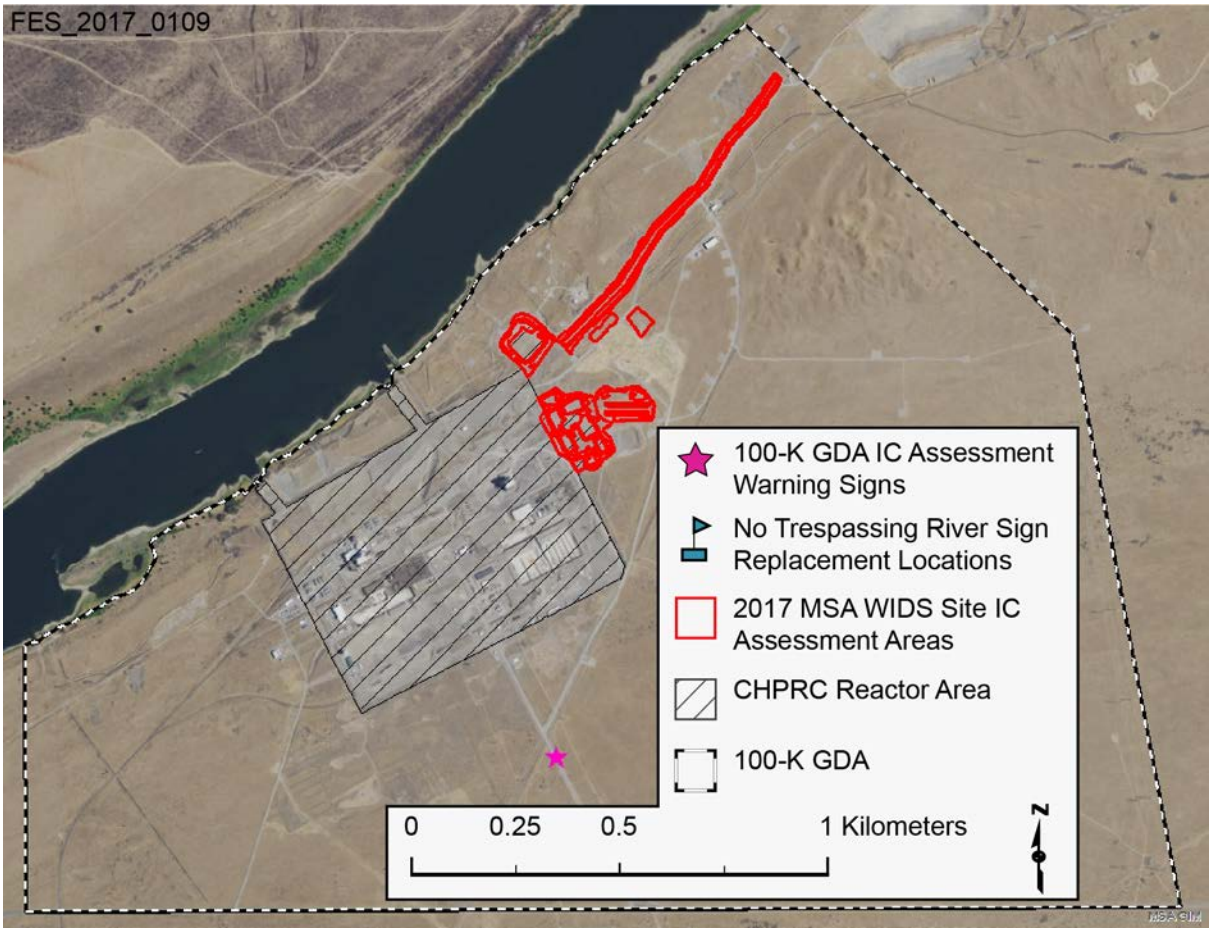


Figure 2-7. Areas Assessed in the 100-K Geographic Decision Area.

Section 2.4.1 identifies the decision documents associated with the 100-K GDA. Section 2.4.2 presents the results of the assessments of the WIDS site-specific ICs in the 100-K GDA. Warning notices are also ICs addressed in some of the decision documents, and section 2.4.3 presents the results of this assessment. The results of the assessment for other ICs listed in the decision documents are provided in Section 4.0.

2.4.1 DECISION DOCUMENTS FOR THE 100-K GEOGRAPHIC DECISION AREA

Decision documents associated with the 100-K GDA are listed in Table 2-10. These documents serve as the bases for the WIDS site-specific ICs, as well as other ICs for the 100-K GDA. However, some of the decision documents do not have IC requirements; these documents are also noted in Table 2-10.

Table 2-10. Decision Documents Associated with the 100-K Geographic Decision Area.

Decision Document	Decision Area-Wide IC Assessment Results [a]	
	Warning Notices	**Other ICs**
Interim Action Record of Decision for the 100-HR-3 and 100-KR-4 Operable Units, Hanford Site, Benton County, Washington (EPA, 1996a).	N/A.	Section 4.2
Amendment to the Interim Action Record of Decision for the 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units, Hanford Site, Benton County, Washington (EPA, 1997).	N/A.	Section 4.3
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, 1999a)**.** This is also known as the "100 Area Remaining Sites ROD."	Section 2.4.3	Section 4.4
Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1,100-DR-2,100-FR-2, 100-HR-2, and 100-KR-2, Operable Units, Hanford Site, Benton County, Washington (100 Area Burial Grounds) (EPA, 2000a).	Section 2.4.3	Section 4.7
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 (EPA, 2004a).	N/A.	The IC requirement revised the reporting date from March 30 to September 30. The annual IC assessment is reported every September at the unit managers meeting.
Explanation of Significant Difference for the Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-2, 100-HR-2, and 100-KR-2 Operable Units (100 Area Burial Grounds), Hanford Site, Benton County, Washington (EPA, 2007).	N/A.	Section 4.8
Explanation of Significant Differences for the 100 Area Remaining Sites Record of Decision, Hanford Site, Benton County, Washington (EPA, 2009a).	N/A.	No other ICs are identified in this document.
Explanation of Significant Differences for the 100-HR-3 and 100-KR-4 Operable Units Interim Record of Decision, Hanford Site, Benton County, Washington (EPA, 2009b).	N/A.	No other ICs are identified in this document.
100 Area "Plug-In" and Candidate Waste Sites for Fiscal Year 2010 – Annual Listing of Waste Sites Plugged into the Remove, Treat and Dispose Remedy in the 1999 Interim Action Record of Decision for the 100 Area, March 2011 (DOE-RL, 2011a).	N/A.	No other ICs are identified in this document.
100 Area "Plug In" and Candidate Waste Sites for Calendar Year 2011 – Annual Listing of Waste Sites Plugged into the Remove, Treat and Dispose Remedy in the 1999 Interim Action Record of Decision for the 100 Area Remaining Sites (DOE-RL, 2012a).	N/A	No other ICs are identified in this document.

[a] The results of the assessments for WIDS site ICs are presented in Section 2.4.2.
IC = institutional control. N/A = not applicable.

2.4.2 INSTITUTIONAL CONTROLS FOR WASTE SITES WITHIN THE 100-K GEOGRAPHIC DECISION AREA

This section presents the assessment results for the WIDS site-specific ICs in the 100-K GDA. Table 2-11 lists each assessment completed by waste site assessment group, identifies the associated waste sites and their respective WSRFs, assessment dates, the ICs being assessed, and the observations resulting from the assessment.

Table 2-11. 100-K Geographic Decision Area Waste Sites with Institutional Controls.

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
116-K-1	Interim Closed Out	2004-001	5/2/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation is observed in the deep zone.
116-K-2	Interim Closed Out	2006-002	5/2/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)]	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation was observed in the deep zone.
118-K-1	Interim Closed Out	2013-094	5/2/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)]	• Hanford Site Excavation Permit in 100-K Area, DAN17-0036, was issued within the 118-K-1 waste site to install a groundwater well approved by DOE and EPA. This excavation into the deep zone is authorized and the IC has been maintained. • No unauthorized excavation was observed in the deep zone.

DOE = U.S. Department of Energy.
EPA = U.S. Environmental Protection Agency.
FY = fiscal year.
IC = institutional control.
WSRF = waste site reclassification form.

2.4.3 WARNING NOTICES IN THE 100-K GEOGRAPHIC DECISION AREA

Two of the decision documents have requirements to maintain warning notices in the 100-K GDA along access roads and the Columbia River to warn visitors and workers of potential hazards associated with the area (see Section 2.4.1). Detailed requirements for the notices, including their locations, verbiage, and language (the signs are to be in English, with one sign along the river also provided in Spanish) are defined in Section 3.8 of DOE/RL-96-17.

Table 2-12 describes the location of the sign that serves as the warning notice, the language used for the verbiage on the sign, and the observations. The sign for the 100-K GDA was found to be in place at the correct locations with the proper text; the sign is shown in Figure 2-8.

Table 2-12. Warning Notices for 100-K Geographic Decision Area.

Location[1]	Number of Signs	Language	Observations
Main Entrance to 100K Reactor Area	1	English	In Place

[1]Signs in areas managed by CHPRC were not assessed and are not included in this table.

Figure 2-8. Warning Notice at Main Entrance to 100K Reactor Area.

2.5 INSTITUTIONAL CONTROLS WITHIN THE 100-N GEOGRAPHIC DECISION AREA

This section presents the statuses and observations resulting from the IC assessments for the 100-N GDA. The 100-N GDA encompasses the 100-NR-1 soil OU and the 100-NR-2 groundwater OU. Figure 2-9 shows the boundaries of the 100-N GDA and the IC assessment areas. Assessments of the WIDS sites for the 100-N GDA found that the appropriate ICs were in place and objectives for the ICs were met.

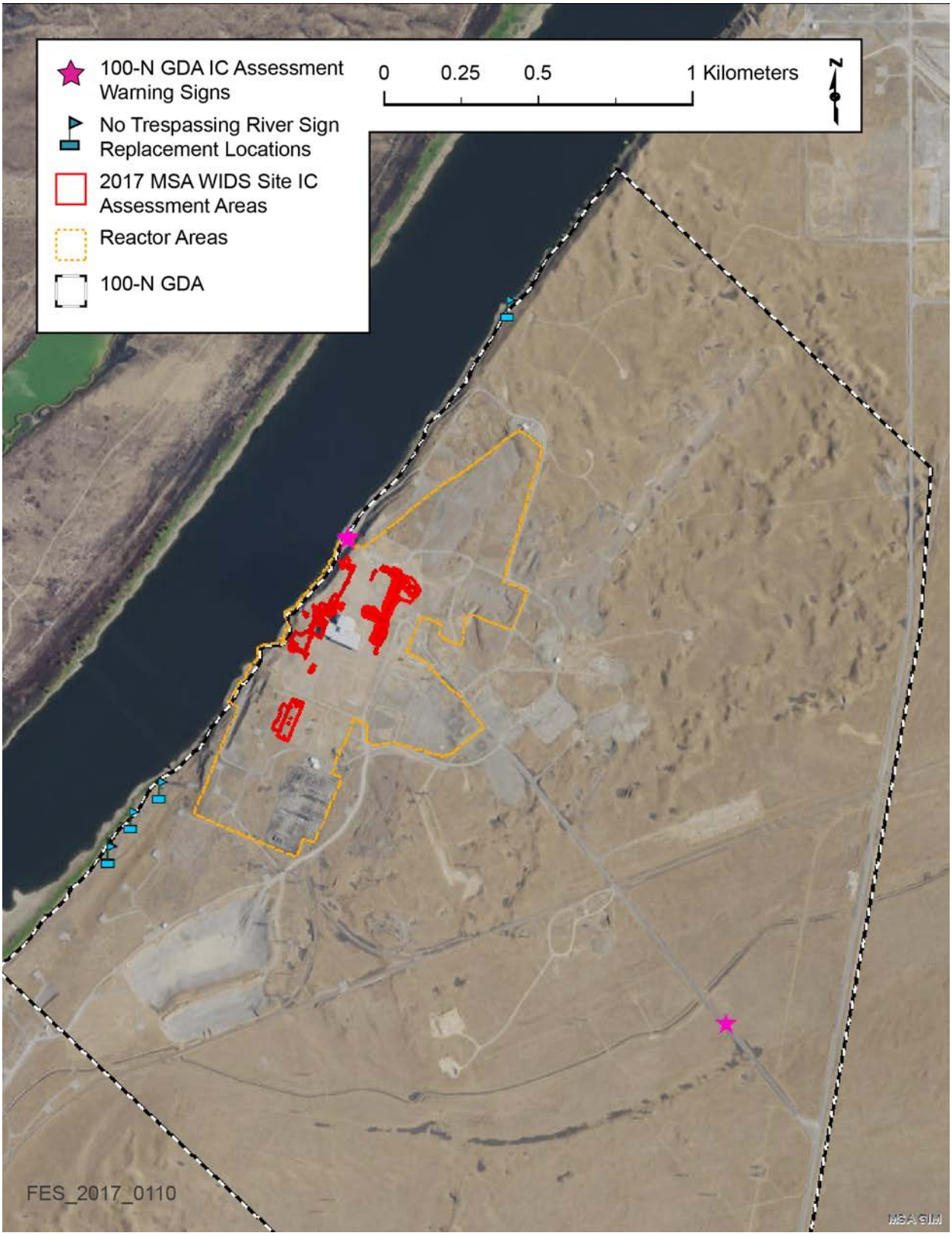


Figure 2-9. Areas Assessed in the 100-N Geographic Decision Area.

Section 2.5.1 identifies the decision documents associated with the 100-N GDA. Section 2.5.2 presents the results of the assessments of the WIDS site-specific ICs in the 100-N GDA. Warning notices are also ICs addressed in some of the decision documents, and Section 2.5.3 presents the results of this assessment. The results of the assessment for other ICs listed in the decision documents are provided in Section 4.0.

2.5.1 DECISION DOCUMENTS FOR THE 100-N GEOGRAPHIC DECISION AREA

Decision documents associated with the 100-N GDA are listed in Table 2-13. These documents serve as the bases for the WIDS site-specific ICs, as well as other ICs for the 100-N GDA. However, some of the decision documents do not have IC requirements; those documents are also noted in Table 2-13.

Table 2-13. Decision Documents Associated with the 100-N Decision Areas.

Decision Document	Decision Area-Wide IC Assessment Results[a]	
	Warning Notices	Other ICs
Interim Action Record of Decision for USDOE 100-NR-1 and NR-2 Operable Unit Hanford Site 100 Area, Benton County, Washington (EPA, 1999c).	Section 2.5.3	Section 4.5
Interim Action Record of Decision for the 100-NR-1 Operable Units (TSD) Hanford Site, Benton County, Washington (EPA, 2000b).	Section 2.5.3	Section 4.6
Explanation of Significant Difference for the 100-NR-1 Operable Unit Treatment, Storage, and Disposal Interim Action Record of Decision and 100-NR-1/100-NR-2 Operable Unit Interim Action Record of Decision, Hanford Site, Benton County, Washington (EPA, 2003b).	N/A	The IC requirement revised the reporting date from March 30 to September 30. The annual IC assessment is reported every September at the unit managers meeting.
Amendment to the Interim Action Record of Decision for the 100-NR-1 and 100-NR-2 Operable Units, Hanford Site, Benton County, Washington (EPA, 2010a).	N/A	No other ICs are identified in this document beyond those specified in the original ROD.
Explanation of Significant Differences for the 100-NR-1 and 100-NR-2 Operable Units Interim Remedial Action Record of Decision, Hanford Site, Benton County, Washington (EPA, 2011a).	N/A	No other ICs are identified in this document beyond those specified in the original ROD.
Explanation of Significant Differences for the 100-NR-1 and 100-NR-2 Operable Units Interim Remedial Action Record of Decision, Hanford Site, Benton County, Washington (EPA, 2013a).	N/A	No other ICs are identified in this document beyond those specified in the original ROD.

[a] The results of the assessments for WIDS site ICs are presented in Section 2.5.2.
IC = institutional control.
N/A = not applicable.
ROD = record of decision.

2.5.2 INSTITUTIONAL CONTROLS FOR WASTE SITES WITHIN THE 100-N GEOGRAPHIC DECISION AREA

This section presents the assessment results for the WIDS site-specific ICs in the 100-N GDA. Table 2-14 lists each assessment completed by waste site assessment group, identifies the associated waste sites and their respective WSRFs, assessment dates, the ICs being assessed, and the observations resulting from the assessment.

Table 2-14. 100-N Geographic Decision Area Waste Sites with Institutional Controls (2 sheets).

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
100-N-31 100-N-32 100-N-38 100-N-61:3 100-N-64:3 100-N-68 118-N-1 UPR-100-N-3 UPR-100-N-7 UPR-100-N-10 UPR-100-N-12	Interim Closed Out	2013-065 2013-066 2013-067 2013-068 2013-069 2013-070 2013-076 2013-071 2013-072 2013-073 2013-074	5/30/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation is observed in the deep zone.
100-N-84:2	Interim Closed Out	2014-088	6/1/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation is observed in the deep zone.
116-N-2 UPR-100-N-5 UPR-100-N-25	Interim Closed Out	2013-015 2013-016 2013-017	5/30/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation is observed in the deep zone.
124-N-2	Interim Closed Out	2013-030	5/30/2017	ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation is observed in the deep zone.

Table 2-14. 100-N Geographic Decision Area Waste Sites with Institutional Controls (2 sheets).

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
100-N-50 100-N-51 100-N-51B UPR-100-N-37	Interim Closed Out	2004-059 2004-059 2004-059 2004-059	6/1/2017	Because unrestricted access to areas greater than 4.6 m (15 t) below the ground surface was not evaluated, ICs to prevent uncontrolled drilling or excavation into the lower basement (greater than 7.6m [25ft] below the ground surface) of the 185-N Building are required.	• No excavation permits were issued in FY 2017 at the location of the sites assessed. • No unauthorized excavation is observed in the deep zone.

FY = fiscal year. IC = institutional control. WSRF = waste site reclassification form.

2.5.3 WARNING NOTICES IN THE 100-N GEOGRAPHIC DECISION AREA

Two of the decision documents have requirements to maintain warning notices in the 100-N GDA along access roads and the Columbia River to warn visitors and workers of potential hazards associated with the area (see Section 2.2.1). Detailed requirements for the notices, including their locations, verbiage, and language (the signs are to be in English, with one sign along the river also provided in Spanish) are defined in Section 3.8 of DOE/RL-2005-93, *Remedial Design Report/Remedial Action Work Plan for the 100-N Area*.

Table 2-15 presents the observations resulting from the assessments of these signs, describing the location of each sign, the language used for the verbiage on the sign, and the observations. Warning notices for the 100-N GDA were found to be in place at the correct locations and with the proper text, as described in Table 2-15. The warning notices are shown in Figure 2-10.

Table 2-15. Warning Notices for 100-N Geographic Decision Area.

Location	Number of Signs	Language	Observations
Main Entrance to 100N Reactor Area	1	English	In Place
Near Columbia River in 100N Reactor Area	2	English & Spanish	In Place

Main Entrance to 100N Reactor Area

Near Columbia River in 100N Reactor Area
(English and Spanish)

Figure 2-10. Warning Notices for the 100-N Geographic Decision Area.

2.6 INSTITUTIONAL CONTROLS WITHIN THE 300 GEOGRAPHIC DECISION AREA

This section presents the statuses and observations resulting from the IC assessments for the 300 GDA. The 300 GDA encompasses the 300-FF-1 and 300-FF-2 soil OUs, as well as the 300-FF-5 groundwater OU. Figure 2-11 shows the boundaries of the 300 Area Industrial Complex and the IC assessment areas. Assessments of the 99 WIDS sites in the 300 GDA found that the appropriate ICs were in place and objectives for the ICs were met for 78 sites; 21 WIDS sites are still undergoing implementation of enhanced recharge control (through installation of temporary surface barriers and/or drainage control) and will continue to be monitored. Also, the MSA LTS Program will be working with facility owners to identify whether additional precautions need to be initiated for fire testing procedures (e.g., fire suppression system testing) and stormwater management at facilities.

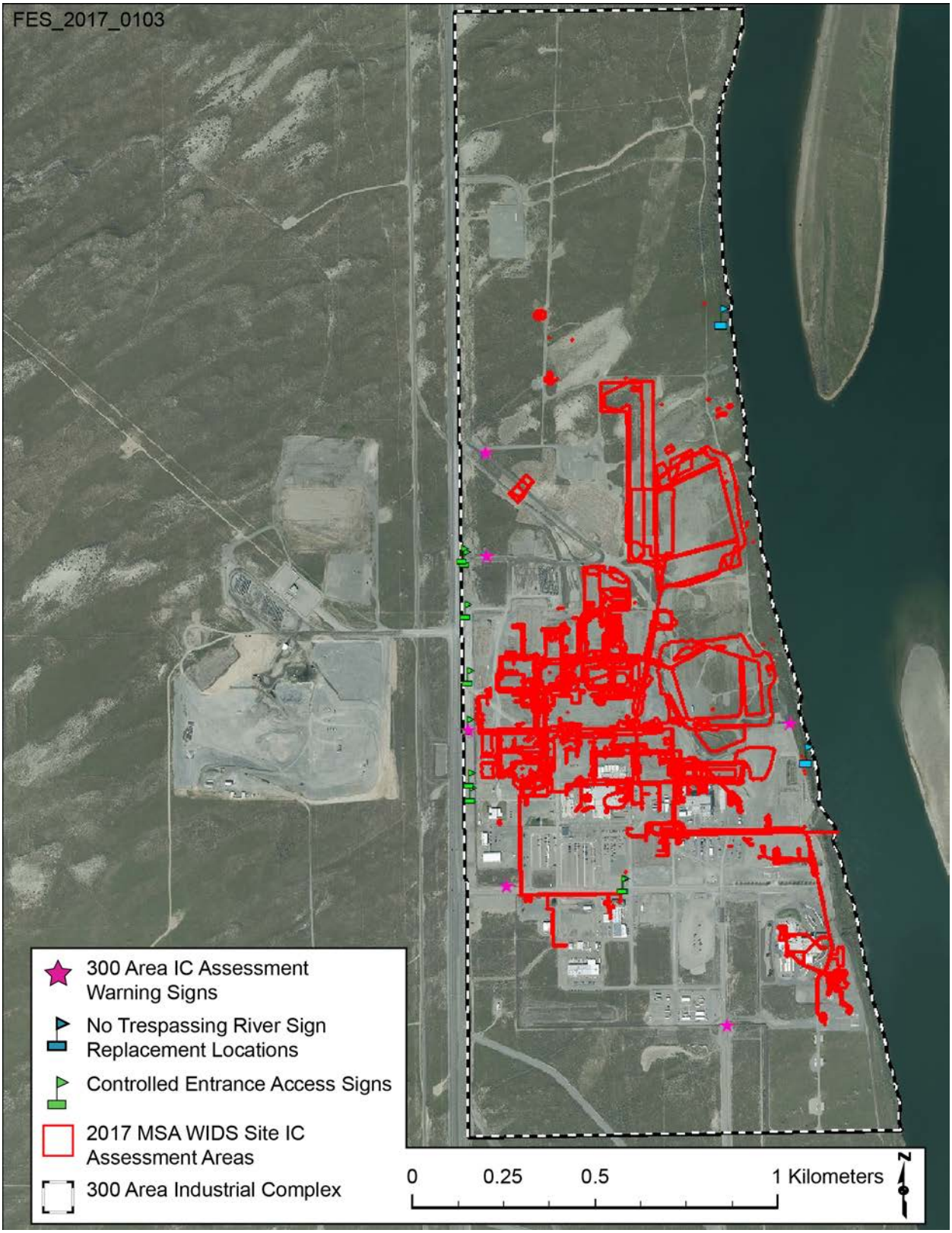


Figure 2-11. IC Assessment Area in the 300 Area Industrial Complex.

Section 2.6.1 identifies the decision documents associated with the 300 GDA. Section 2.6.2 presents the results of the assessments of the WIDS site-specific ICs in the 300 GDA. Warning notices are also ICs addressed in some of the decision documents, and Section 2.6.3 presents the results of this assessment. The results of the assessment for other ICs listed in the decision documents are provided in Section 4.0.

2.6.1 DECISION DOCUMENTS FOR THE 300 GEOGRAPHIC DECISION AREA

Decision documents associated with the 300 GDA are listed in Table 2-16. These documents serve as the bases for the WIDS site-specific ICs, as well as other ICs for the 300 GDA. However, some of the decision documents do not have IC requirements; those documents are also noted in Table 2-16. Previously issued decision documents (listed in a footnote of Table 2-16), which are no longer applicable to this area after the issuance of the final action ROD in 2013, were not assessed for the 300 GDA.

Table 2-16. Decision Documents Associated with the 300 Geographic Decision Area.

Decision Document	Decision Area-Wide IC Assessment Results [a]	
	Warning Notices	Other ICs
Hanford Site 300 Area Record of Decision for 300-FF-1 and 300-FF-5 Operable Units, Hanford Site, Benton County, Washington (EPA, 1996b).	N/A	Section 4.10
Explanation of Significant Differences for Hanford 300 Area, 300-FF-1 Operable Unit, Benton County, Washington (EPA, 2000c)	N/A	This document identifies no other ICs
Hanford Site 300 Area Record of Decision for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1, Hanford Site, Benton County, Washington (EPA, 2013b) [b]	Section 2.6.3	Section 4.11

[a] The results of the assessments for WIDS site ICs are presented in Section 2.6.2.

[b] This final record of decision supersedes the following previously issued interim decision documents for the 300-FF-2 OU:

- *Explanation of Significant Difference for the 300-FF-5 Operable Unit Record of Decision, Hanford Site, Benton County, Washington* (EPA, 2000d).
- *Interim Action Record of Decision, 300-FF-2, Hanford Site, Benton County, Washington* (EPA, 2001).
- *Explanation of Significant Difference for the 300-FF-2 Operable Unit Record of Decision, Hanford Site, Benton County, Washington* (EPA, 2004b).
- *Explanation of Significant Difference for the 300-FF-2 Operable Unit Interim Action Record of Decision, Hanford Site, Benton County, Washington* (EPA, 2009c).
- *Explanation of Significant Differences, Hanford 300 Area, 300-FF-2 Operable Unit, 618-10 Burial Ground, Hanford Site, Benton County, Washington* (EPA, 2011b).
- *300-FF-2 "Plug-In" Waste Sites for Fiscal 2010 – Annual Listing of Waste Sites Plugged into the Remove, Treat and Dispose Remedy in the 2001 Interim Action Record of Decision for 300-FF-2* (DOE-RL, 2010).
- *300 Area "Plug-In" Waste Sites for Fiscal 2011 – Annual Listing of Waste Sites Plugged into the Remove, Treat, and Dispose Remedy in the 2001 Interim Action Record of Decision for 300-FF-2* (DOE-RL, 2011b)
- *Hanford 300 Area "Plug-In" Waste Sites for Fiscal Year 2012 – Annual Listing of Waste Sites "Plugged-in" to the Remove, Treat, and Dispose Remedy in the 2011 Interim Action Record of Decision for 300-FF-2* (DOE-RL, 2012b).

IC = institutional control. N/A = not applicable. OU = operable unit.

2.6.2 INSTITUTIONAL CONTROLS FOR WASTE SITES WITHIN THE 300 GEOGRAPHIC DECISION AREA

This section presents the assessment results for the WIDS site-specific ICs in the 300 GDA. Table 2-17 lists each of the assessments completed by waste site assessment group, identifies the associated waste sites and their respective WSRFs, assessment dates, the ICs being assessed, and the observations resulting from the assessment. If the source of the IC requirement is a document other than the WSRF, or if there is no WSRF, information regarding the source of the IC is provided.

Table 2-17. 300 Geographic Decision Area Waste Sites with Institutional Controls. (10 sheets)

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
300 RFBP 316-1 UPR-300-32 UPR-300-33 UPR-300-34 UPR-300-35 UPR-300-36 UPR-300-37	Final Closed Out	2000-112 2000-112 2003-001 2003-001 2003-001 2003-001 2003-001 2003-001	8/10/2017	Site restricted to industrial land use and ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the site assessment. • No excavation permits were issued in FY 2017 at the location of the sites assessed in this assessment. • No unauthorized excavation was observed within the listed WIDS site excavation areas.
UPR-300-FF-1	Final Closed Out	2003-002	5/11/2017	Site restricted to industrial land use and ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the site assessment. • Hanford Site Excavation Permit in 300 Area, Northern Portion, Rev 2, DAN14-0149, covers a location in the UPR-300-FF-1 WIDS site, south of the 316-2 pond and was approved by DOE and EPA. This excavation into the deep zone is authorized and the IC has been maintained. • No unauthorized excavation was observed within the listed WIDS site excavation areas.
300-50	Final Closed Out	2000-110	8/9/2017	Site restricted to industrial land use and ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the site assessment. • No excavation permits were issued in FY 2017 at the location of the sites assessed in this assessment. • No unauthorized excavation was observed within the listed WIDS site excavation areas.

Table 2-17. 300 Geographic Decision Area Waste Sites with Institutional Controls. (10 sheets)

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
618-1 618-1:1 618-1:2 618-2	Final Closed Out	2010-028 2010-028 2010-028, 2015-069 2006-062, 2015-071	8/9/2017	Site restricted to industrial land use, and ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)] and prevent enhanced recharge.	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the site assessment. • No excavation permits were issued in FY 2017 at the location of the sites assessed in this assessment. • No unauthorized excavation was observed within the listed WIDS site excavation areas. • No drainage or irrigation issues were observed at the time of assessment and no opportunities for enhanced recharge. • No paved roads, parking lots, facilities, or slabs are located in or adjacent to the WIDS site.
300-110 303-M SA 303-M UOF 333 ESHWSA	Final Closed Out	2010-024, 2014-017 2010-025, 2014-018 2010-026, 2014-028 2010-027, 2014-018		Site restricted to industrial land use and ICs are required to prevent enhanced recharge.	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the site assessment. • No drainage or irrigation issues were observed at time of assessment and no opportunities for enhanced recharge. • No paved roads, parking lots, facilities, or slabs are located in or adjacent to the WIDS site.

Table 2-17. 300 Geographic Decision Area Waste Sites with Institutional Controls. (10 sheets)

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
628-4	Final Closed Out	2000-111	8/9/2017	Site restricted to industrial land use and ICs are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the site assessment. • No excavation permits were issued in FY 2017 at the location of the sites assessed in this assessment. • No unauthorized excavation was observed within the listed WIDS site excavation areas.
300-15:1	Accepted	- - - [a]	8/7/2017	Accepted site is assumed to have one or more contaminants above residential groundwater and river protection CULs. Therefore, ICs are assumed to be required to prevent enhanced recharge.	• No irrigation activities were observed. • Drainage near this site will be evaluated during inclement weather in FY 2018.
UPR-300-8 UPR-300-9 UPR-300-15 UPR-300-19 UPR-300-20 UPR-300-21 UPR-300-22 UPR-300-23 UPR-300-24 UPR-300-25 UPR-300-26 UPR-300-27 UPR-300-28 UPR-300-29 UPR-300-30 UPR-300-47	Final Closed Out	99-108, 99-108 99-108, 99-108 99-108, 99-108 99-108, 99-108 99-108, 99-108 99-108, 99-108 99-108, 99-108 99-108, 99-108	8/9/2017	Site restricted to industrial land use.	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the site assessment.

Table 2-17. 300 Geographic Decision Area Waste Sites with Institutional Controls. (10 sheets)

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
300 RLWS:3 300 RRLWS:2 300-175 300-214:2 300-265	Accepted	- - - [a]	8/17/2017	Accepted sites are assumed to have one or more contaminants above residential groundwater and river protection CULs. Therefore, ICs are assumed to be required to prevent enhanced recharge.	• No irrigation activities were observed. • Drainage near this site will be evaluated (including any temporary surface barriers constructed per DOE/RL-2014-13-ADD1, *Remedial Design Report/Remedial Action Work Plan for 300-FF-2 Soils*[b]) during inclement weather in FY 2018.
UPR-300-10 UPR-300-12 UPR-300-48	Accepted	- - - [a]	8/17/2017	Accepted site is assumed to have one or more contaminants above residential groundwater and river protection CULs. Therefore, ICs are assumed to be required to prevent enhanced recharge.	• No irrigation activities were observed. • Drainage near this site will be evaluated during inclement weather in FY 2018.
300-5 (300 Area Fire Station - 3709A Facility)	Accepted	- - - [a]	8/22/2017	DOE memo to MSA (MSA-1105355.6, *2016 Annual Sitewide Institutional Control Assessment Mission Support Alliance*) clarifies how activities at the fire station are to prevent enhanced recharge at this location. ICs include restrictions on lawn and tree irrigation near the building, use and testing of fire hydrant 1, and locations for washing fire trucks.	• Although this WIDS site is assigned to CHPRC, not MSA, MSA is responsible for assessing implementation of the restrictions at the fire station: • Irrigation restriction were posted prominently in the 3709A fire station. • No drainage or irrigation from the fire station to the WIDS site was observed.
300-16:2 300-24 300-80 300-218	Final Closed Out	2011-071, 2014-030 2011-071, 2014-030 2011-071, 2014-030 2011-071, 2014-030	8/29/2017	Site restricted to industrial land use and ICs are required to prevent enhanced recharge.	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the assessment. • No low-permeability areas were observed that would induce enhanced recharge. No source of irrigation is present. The area has been revegetated.

Table 2-17. 300 Geographic Decision Area Waste Sites with Institutional Controls. (10 sheets)

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
618-3	Final Closed Out	2006-035, 2015-072	8/24/2017	Site restricted to industrial land use and ICs are required to prevent enhanced recharge.	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the assessment. • No drainage or irrigation issues were observed at time of assessment and no opportunities for enhanced recharge. • No paved roads, parking lots, facilities, or slabs are located in or adjacent to the WIDS site.
300-270 313 ESSP UPR-300-38	Final Closed Out	2012-006, 2014-039 2012-005, 2014-039 2012-004, 2014-039	8/24/2017	Site restricted to industrial land use and ICs are required to prevent enhanced recharge.	• All land use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the assessment. • No paved roads, parking lots, facilities, or slabs are located within or adjacent to the 300-270 or UPR-300-38 WIDS sites. • No drainage or irrigation issues were observed at the assessment. • 313 ESSP is located immediately north of Gingko Street. Road pavement may remain in place. Drainage near this site will be evaluated during inclement weather in FY 2018.

Table 2-17. 300 Geographic Decision Area Waste Sites with Institutional Controls. (10 sheets)

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
300-15:2	Final Closed Out	2012-120, 2015-081	8/31/2017	Site restricted to industrial land use and ICs are required to prevent enhanced recharge.	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the assessment. • No irrigation issues were observed at time of assessment. • 300-15:2 is located around and underneath Gingko Street. Road pavement may remain in place. Drainage near this site will be evaluated during inclement weather in FY 2018.
300-15:3	Final Closed Out	2015-047	9/14/2017	Site restricted to industrial land use and ICs are required to prevent enhanced recharge.	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the assessment. • No irrigation sources were observed or discovered during assessment. • Only Decision Unit 3 was above the CUL for Aroclor-1248. This portion of the site was immediately adjacent to Apple Street, Alaska Avenue, and Wisconsin Avenue. Road pavement may remain in place. Drainage near this site should be evaluated.

Table 2-17. 300 Geographic Decision Area Waste Sites with Institutional Controls. (10 sheets)

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
300-33 300-41 300-53 300-256 300-262	Final Closed Out	2010-058, 2014-017 2010-058, 2014-017 99-014, 2014-011 2010-058, 2014-017 2000-112, 2014-017	9/7/2017	Site restricted to industrial land use, and ICs are required to prevent enhanced recharge.	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the assessment. • No paved roads, parking lots, facilities, or slabs are located within or adjacent to the 300-41, 300-53, and 300- 262 WIDS site. • No drainage or irrigation issues were observed at the time of the assessment. • WIDS sites 300-33 and 300-256 are located immediately north of Gingko Street. Road pavement may remain in place. Drainage near this site will be evaluated during inclement weather in FY 2018.
300-253	Final Closed Out	99-042, 2014-012	8/29/2017	Site restricted to industrial land use and ICs are required to prevent enhanced recharge.	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the assessment. • No irrigation issues were observed at the time the assessment. • This site is located immediately north of Apple Street. Road pavement may remain in place and drainage near this site will be evaluated during inclement weather in FY 2018.
316-2 316-5	Final Closed Out	99-05099-108	8/29/2017	Site restricted to industrial land use.	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the assessment.
316-3	Final Closed Out	2015-049	8/29/2017	Site restricted to industrial land use.	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the assessment.

Table 2-17. 300 Geographic Decision Area Waste Sites with Institutional Controls. (10 sheets)

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
300-121	Accepted	- - - [a]	8/9/2017	Site restricted to industrial land use and ICs are required to prevent enhanced recharge.	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the assessment. • The UIC at this site is inactive; the associated facility, 3612D, has been demolished. Drainage near this site will be evaluated (including any temporary surface barrier constructed per DOE/RL-2014-13-ADD1, *Remedial Design Report/Remedial Action Work Plan for 300-FF-2 Soils*)[b] during inclement weather in FY 2018 to observe whether stormwater drainage near the UIC may result in enhanced recharge.
UPR-300-17	Final Closed Out	2010-014, 2014-018	8/24/2017	Site restricted to industrial land use and ICs are required to prevent enhanced recharge.	• All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the assessment. • No drainage or irrigation issues were observed at the time of the assessment. • No paved roads, parking lots, facilities, or slabs are located within or adjacent to the UPR-300-17 WIDS site.
300-269	Accepted	- - - [a]	8/31/2017	Accepted site is assumed to have one or more contaminants above residential groundwater and river protection CULs. Therefore, ICs are required to prevent enhanced recharge.	The site has an existing concrete barrier over the entire area. No drainage enhanced recharge or irrigation potential exist at this site.

Table 2-17. 300 Geographic Decision Area Waste Sites with Institutional Controls. (10 sheets)

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations
300 Ash Pits	Final Closed Out	98-0042015-031	8/7/2017, 8/9/2017, 8/10/2017, 8/16/2017, 8/17/2017	Site restricted to industrial land use.	All land-use requests for the 300 Area in FY 2017 were consistent with industrial use; no non-industrial uses were observed during the assessment.
300 RLWS:1		2015-032			
300 RLWS:2		2015-033			
300 RRLWS:1		2015-010			
300-9		2013-117			
300-15:4		2015-0542011-105			
300-15:6		2014-029			
300-16:1		2011-100, 2014-031			
300-16:3		2011-100, 2014-031			
300-28		2015-048			
300-34		2011-100, 2014-031			
300-43		99-109			
300-44		2013-007, 2014-034			
300-46		2011-100, 2014-031			
300-48		2015-030			
300-214:1		2011-106, 2014-035			
300-219		2011-106, 2014-035			
300-224		2011-100, 2014-031			
300-249		2011-042, 2014-036			
300-251		2013-033, 2014-037			
300-257		2015-050			
300-263		2011-091, 2014-040			
300-274		2014-100			
300-284		2012-037, 2014-045			
300-286		2008-020, 2014-019			
331 LSLDF		2011-106, 2014-035			
333 WSTF		99-050			
618-12		2012-110, 2014-049			
UPR-300-4		99-050			
UPR-300-7		2010-009, 2014-018			
UPR-300-46					

Table 2-17. 300 Geographic Decision Area Waste Sites with Institutional Controls. (10 sheets)

Waste Site Assessment Group	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observations

[a] Accepted sites are not closed out and, therefore, are not assigned a reclassification status and do not have a WSRF.

[b] To support implementation of the enhanced recharge control, temporary surface barriers were planned to be installed and maintained, per DOE/RL-2014-13-ADD1, for waste sites that exceed applicable cleanup levels and are adjacent to the long-term retained facilities, These temporary surface barriers are intended to reduce infiltration and contaminant flux to groundwater at the following waste sites: 300 RLWS (subsite 3 is an Accepted site, other subsites are Final Closed Out); 300 RRLWS (subsite 2 is an Accepted site, while subsite 1 is Final Closed Out), 300-5, 300-121, 300-214 (subsite 2 is an Accepted site, while subsite 1 is Final Closed Out), and 300-265. DOE/RL-2014-13-ADD1 also describes that 300-175 has been covered with a concrete slab adjacent to the 325 facility.
(Temporary surface barriers also were planned to be installed and maintained at waste sites 331-LSLT1, 331-LSLT2, 400-37 and 400-38, which are not assigned to MSA and thus, are not within the scope of this assessment).

CUL = cleanup level.
DOE = U.S. Department of Energy.
FY = fiscal year.
IC = institutional control.
WIDS = Waste Information Data System.
WSRF = waste site reclassification form.
UIC = underground injection control (well).

2.6.3 WARNING NOTICES IN THE 300 DECISION AREA

The 300 Area signage requirements are documented in *Hanford Site 300 Area Record of Decision for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1* (EPA, 2013b). Detailed requirements for the signs, including their locations, verbiage, and language (the signs are to be in English, with one sign along the river also provided in Spanish) are outlined in Section 4.3.4 of DOE/RL-2014-13-ADD1, *Remedial Design Report/Remedial Action Work Plan for 300-FF-2 Soils*.

Table 2-18 presents the observations resulting from the assessments of these signs, which serve as the warning notices. Table 2-18 describes the location of each sign, the language used for the verbiage on the sign, and the observations. One sign near the former north parking lot entrance to the 300 Area was observed to have fallen and was subsequently repaired. The remaining signs for the 300 Area were found to be in place at the correct locations with the proper text. The signs are shown in Figure 2-11.

Table 2-18. Warning Notices for 300 Geographic Decision Area.

Location [1]	Number of Signs	Language	Observations
Cypress Street Entrance to 300 Industrial Zone	1	English	In Place
George Washington Way Extension Entrance to 300 Industrial Zone	1	English	In Place
Apple Street Entrance to 300 Industrial Zone	1	English	In Place
Former North Parking Lot Entrance	1	English	Repaired [2]
Former 300-FF-1 Remediation Entrance	1	English	In Place
Near Columbia River in 300 Industrial Area	2	English & Spanish	In Place

[1] Signs in areas managed by CHPRC were not included in this assessment and are not included in this table.
[2] Sign was found to be fallen and was subsequently repaired.

Cypress Street Entrance to 300 Area

George Washington Way Extension Entrance to 300 Area

Apple Street Entrance to the 300 Area

North Parking Lot Entrance to 300 Area, Prior to Repair

North Parking Lot Entrance to 300 Area, Following Repair

Figure 2-12. Warning Notices for the 300 Geographic Decision Area. (2 sheets)

Former 300-FF-1 Remediation Entrance

Near Columbia River at 300 Area

Figure 2-12. Warning Notices for the 300 Geographic Decision Area. (2 sheets)

2.7 INSTITUTIONAL CONTROLS WITHIN THE 1100 AREA

This section presents the statuses and observations resulting from the IC assessments for the 1100 Area. The 1100 Area NPL site contains four operable units – 1100-EM-1, 1100-EM-2, 1100-EM-3, and 1100-IU-1.[4] Figure 2-12 shows the location within the 1100 Area where ICs are applicable, which is at the Horn Rapids Landfill (WIDS site HRD). The figure also shows the boundaries from the WIDS HGIS that correlate to the fence surrounding the landfill, as well as the location of the soil cap that was installed in the 1990s.

[4] The 1100 Area NPL site was deleted from the NPL in 1996 after the Horn Rapids Landfill was capped and revegetated in accordance with the *Record of Decision for the USDOE Hanford 1100 Area* (EPA, 1993).

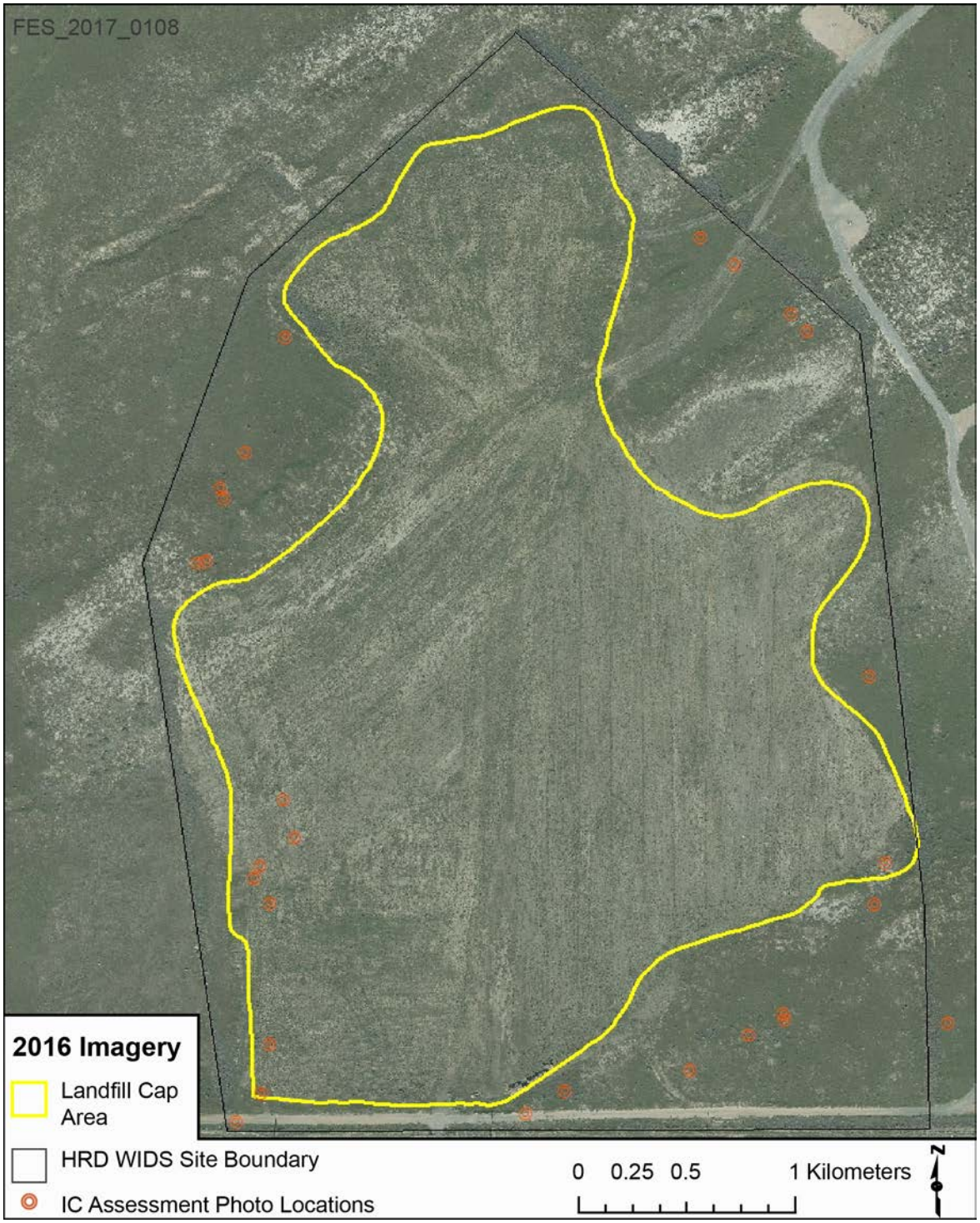


Figure 2-13. Area Assessed in the 1100 Area.

2.7.1 DECISION DOCUMENTS FOR THE 1100 AREA

Decision documents associated with the 1100 Area are listed in Table 2-19. These documents serve as the bases for the WIDS site-specific ICs, as well as other ICs for the 1100 Area.

Table 2-19. Decision Documents Associated with the 1100 Area.

Decision Document	Decision Area-Wide IC Assessment Results [a]	
	Warning Notices	Other ICs
Record of Decision for the USDOE Hanford 1100-Area Final Remedial Action, Benton County, Washington (EPA, 1993).	N/A	Section 4.12
Explanation of Significant Differences for the USDOE Hanford 1100 Area, Benton County, Washington (EPA, 1996c).	N/A	No other ICs are identified in this document.
Superfund Site Final Closeout Report, U.S. Department of Energy Hanford 1100 Area, Richland, Washington (DOE, 1996).	N/A	Section 4.13
Explanation of Significant Differences for USDOE Hanford 1100 Area, Benton County, Washington, (EPA, 2010b).	Section 2.7.3	Section 4.14

[a] The results of the assessment for the WIDS site ICs are presented in Section 2.6.2
IC = institutional control.

2.7.2 INSTITUTIONAL CONTROLS FOR WASTE SITES WITHIN THE 1100 AREA

This section presents the assessment results for the WIDS site-specific ICs in the 1100 Area. Table 2-20 identifies the waste sites, their status, the assessment dates, the ICs being assessed, and the observations resulting from the assessment.

Table 2-20. 1100 Area Waste Sites with Institutional Controls.

Waste Site	Reclassification Status	WSRF	Date Assessed	Institutional Control	Observation
HRD	Deleted From NPL	- - -	9/13/2017	Control access to the landfill property, including inspecting and maintaining the fencing and signs (which are to be in accordance with 40 CFR 61.151[a] as an asbestos-containing landfill) at the Horn Rapids Landfill [b].	Access is controlled by fencing and gates. Signs are in place as required (see Section 2.7.3).

[a] 40 CFR 61.151, "Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations," *Code of Federal Regulations*, as amended.
[b] The sources of this IC requirement is *Superfund Site Final Closeout Report, U.S. Department of Energy Hanford 1100 Area* and *Explanation of Significant Differences, USDOE, Hanford 1100 Area, Benton County, Washington*.
HRD = Horn Rapids Landfill. NPL = National Priorities List WSRF = waste site reclassification form.

2.7.3 WARNING NOTICES IN THE 1100 AREA

The *Explanation of Significant Differences for the USDOE Hanford 1100 Area* (EPA, 2010b) includes an IC requirement for the Horn Rapids Landfill to control access to the landfill property. This includes maintaining the fencing and signs to prevent disturbance of the landfill contents. Detailed requirements for the locations and verbiage on the signs are provided in Title 40 *Code of Federal Regulations* (CFR) Part 61.151, "Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations." In FY 2017, the fencing was found to be intact, and the signs, bearing the correct text, were visible at regular intervals around the perimeter of the fence line. No disturbance to the landfill cap was observed. Photographs of the signs, which serve as warning notices, were collected during MSA FY 2017 field assessments (see Figure 2-13 for a representative sign).

Figure 2-14. Example of a Warning Notice at the Horn Rapids Landfill.

3.0 SITEWIDE INSTITUTIONAL CONTROLS ASSESSMENT

Some of the institutional controls specified by decision documents are implemented at a Sitewide level. This section describes access control requirements and notification of trespassing incidents implemented Site wide.

3.1 FENCES AND SIGNAGE

Several decision documents include a requirement to control access to the Hanford Site, as noted in Section 4. In addition to the area-specific warning notices described in Section 2, access to the entire Site is controlled by fencing and/or "No Trespassing" signs. These controls serve a dual purpose, helping to minimize the potential for human exposure to residual contamination while helping meet Hanford Site operational requirements to protect government property. Fencing is installed along Horn Rapids Road and State Route 240, which, respectively, comprise the southern and western perimeters of the Hanford Site. Fencing is also installed along other portions of the Site that may potentially be accessible to the public (i.e., around the perimeter of the 300 Area). "No Trespassing" signs are maintained at 500-ft intervals along these identified fence locations, major roadways south of the Wye Barricade, and along the Columbia River shoreline near the high-water mark.

The fence line and "No Trespassing" signs outside of the Wye Barricade were inspected in August 2017 after multiple wildfires were reported along State Route 240 (Figure 3-1). In these areas, over 100 "No Trespassing" signs were found to be illegible due to fire damage, general weathering, or vandalism. Damaged fencing was identified in four locations. The fencing has been repaired and a work order has been submitted to replace the damaged signs.

In FY 2016, the MSA LTS Program conducted a riverside signs assessment from the Columbia River vantage point. Approximately 80 "No Trespassing" signs could not be seen from the Columbia River. In FY 2017, MSA LTS initiated a project to identify and replace the missing signs. They replaced 69 signs using existing t-posts and identified several locations where the t-posts were missing. A project will be initiated in FY 2018 to install new t-posts and signs at these locations. For the locations where signs were replaced within the GDAs, see the figure for each respective GDA in Section 2.

Example of a "No Trespassing" sign

Newly installed shoreline "No Trespassing" sign

Damaged Fence and "No Trespassing" Sign

Repaired Section of Fence

Figure 3-1. No Trespassing Signs.

3.2 TRESPASSING INCIDENTS

Several decision documents include a requirement to report trespassing incidents on the Hanford Site to the Benton County Sheriff's Office, as noted in Section 4. The MSA Safeguards and Security group is responsible for tracking and reporting these incidents. Eight reportable trespassing incidents occurred from October 2016 to September 2017. Information regarding the details of the incidents is considered to be official use only and is not discussed in this report.

4.0 DECISION DOCUMENTS THAT INCLUDE INSTITUTIONAL CONTROLS

This section details IC requirements from the decision documents mentioned in previous sections, and includes assessment results for the FY 2017. Each decision document listed in this section includes one or more ICs. Each IC was assessed by evaluating current Hanford procedures and processes, and through field verification, where applicable.

4.1 INTERIM ACTION RECORD OF DECISION FOR 100-BC-1, 100-DR-1, AND 100-HR-1 OPERABLE UNITS

The ICs identified in *Interim Action Record of Decision for 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units, Hanford Site, Benton County, Washington,* (EPA, 1995) are listed in Table 4-1. These ICs apply to locations in the 100-B/C and 100-D/H GDAs, which are shown in green in the inset map in Table 4-1.

Table 4-1. Assessment of Institutional Controls Listed in *Interim Action Record of Decision for 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units Hanford Site, Benton County, Washington* (EPA, 1995).

Institutional Controls Requirement	Institutional Control Status
The U.S. Department of Energy will control access and use of the Hanford Site for the duration of the cleanup, including restrictions on the drilling of new groundwater wells in the existing plumes or their paths. It is expected that institutional controls will be enforced until the remedial action objectives have been attained.	Access to the Hanford Site is controlled through barricades and warning notices (see Section 3.1). Use of the Hanford Site is controlled through the site evaluation and excavation permitting processes. Construction of new groundwater wells is controlled through the regulatory approval and excavation permitting processes. The ICs are assessed and reported annually to ensure that they continue to be enforced.

IC = institutional control.

4.2 INTERIM ACTION RECORD OF DECISION FOR 100-HR-3 AND 100-KR-4 OPERABLE UNITS

The ICs identified in *Interim Action Record of Decision Hanford 100-HR-3 and 100-KR-4 Operable Units, Hanford Site, Benton County, Washington* (EPA, 1996a), are listed in Table 4-2. These ICs apply to locations in the 100-K and 100-D/H GDAs, which are shown in green in the inset map in Table 4-2.

Table 4-2. Assessment of Institutional Controls Listed in *Interim Action Record of Decision Hanford 100-HR-3 and 100-KR-4 Operable Units, Hanford Site, Benton County, Washington* (EPA, 1996a).

Institutional Controls Requirement	Institutional Control Status
Institutional controls are required to prevent human exposure to groundwater. The U.S. Department of Energy is responsible for establishing and maintaining land use and access restrictions until maximum contaminant levels and risk based criteria are met or the final remedy is selected. Institutional controls include placing written notification of the remedial action in the facility land use master plan. The U.S. Department of Energy will prohibit any activities that would interfere with the remedial activity without U.S. Environmental Protection Agency and Washington State Department of Ecology concurrence. In addition, measures necessary to ensure the continuation of these restrictions will be taken in the event of any transfer or lease of the property before a final remedy is selected. A copy of the notification will be given to any prospective purchaser/transferee before any transfer or lease. The U.S. Department of Energy will provide the U.S. Environmental Protection Agency and Washington State Department of Ecology with written verification that these restrictions have been put in place.	Access to the Hanford Site is controlled through barricades, warning notices, and a badging program, see Section 3.1. DOE/EIS-0222, *Hanford Comprehensive Land Use Plan (CLUP) Final Environmental Impact Statement* (HCP EIS), identifies the institutional controls plan as an implementing control for the HCP EIS. DOE/RL-2001-41, *Sitewide Institutional Controls Plan for Hanford CERCLA Response Actions and RCRA Corrective Actions*, Rev. 8, lists the CERCLA decision documents for the remedial actions, along with their associated ICs. In addition, use of the Hanford Site is controlled through the site evaluation and excavation permitting processes. These processes include the review of any associated ICs. No activities that would interfere with the remedial activities have been identified. No land has been transferred or leased in FY2017 from the area covered by the ROD.

CERCLA = *Comprehensive Environmental Response, Compensation, and Liability Act of 1980.*
CLUP = Comprehensive Land Use Plan.
RCRA = *Resource Conservation and Recovery Act of 1976.*
ROD = record of decision.

4.3 ADMENDMENT TO THE INTERIM ACTION RECORD OF DECISION FOR 100-BC-1, 100-DR-1, AND 100-HR-1 OPERABLE UNITS

The ICs identified in *Amendment to the Interim Action Record of Decision for the 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units, Hanford Site, Benton County, Washington* (EPA, 1997) are listed in Table 4-3. These ICs apply to locations in the 100-B/C, 100-K and 100-D/H GDAs, which are shown in green in the inset map in Table 4-3.

Table 4-3. Assessment of Institutional Controls Listed in *Amendment to the Interim Action Record of Decision for the 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units, Hanford Site, Benton County, Washington* (EPA, 1997).

Institutional Controls Requirement	Institutional Control Status
Institutional controls and long-term monitoring will be required for sites where wastes are left in place.	ICs have been applied to the individual WIDS sites with waste left in place. Each WIDS site with an IC was assessed in FY 2017. No excavation into the deep zone occurred during the assessment period at these locations.

FY = fiscal year.
IC = institutional control.
WIDS = Waste Information Data System.

4.4 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

The ICs identified in *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 (100 Area Remaining Sites ROD)* (EPA, 1999a) are listed in Table 4-4. These ICs apply to locations in the 100-B/C, 100-K and 100-D/H GDAs, which are shown in green in the inset map in Table 4-4. The ICs were not evaluated for the 100-FR-1, 100-FR-2, 100-IU-2, and 100-IU-6 OUs, because this interim action ROD has been superseded by a final ROD for those operable units (see Sections 2.3.1 and 4.9); therefore, those operable units are not shown in the inset map.

Table 4-4. Assessment of Institutional Controls Listed in *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, (100 Area Remaining Sites ROD)* (EPA, 1999a). (2 sheets)

Institutional Controls Requirement	Institutional Controls Status
DOE will continue to use a badging program to control access to the associated sites for the duration of the interim action. Visitors entering the sites associated with the Interim Action ROD are required to be escorted at all times.	DOE has an active badging program to control access to Hanford Site. Visitors entering the sites associated with the Interim Action ROD are escorted at all times.
DOE will use the onsite excavation permit process to control land use (e.g., well drilling or excavation of soil) within the 100 Area operable units.	The DOE excavation permit program is in place as defined in DOE-0344, *Hanford Site Excavating, Trenching and Shoring Procedure*.

Table 4-4. Assessment of Institutional Controls Listed in *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, (100 Area Remaining Sites ROD)* (EPA, 1999a). (2 sheets)

Institutional Controls Requirement	Institutional Controls Status
DOE will maintain existing signs prohibiting public access.	The signage (see Sections 2.1.3, 2.2.3, and 2.4.3) and the access controls (see Section 3.1) are in place and are being maintained.
DOE will provide notification to EPA and Ecology upon discovery of any trespass incidents.	DOE transmits copies of the annual IC assessment report to EPA and Ecology. The assessment includes a report on the trespassing incidents.
Trespass incidents will be reported to the Benton County Sheriff's Office for investigation and evaluation for possible prosecution.	Trespassing incidents are reported to the Benton County Sherriff's Office, see Section 3.2.
DOE will add access restriction language to any land transfer, sale, or lease of property that the U.S. Government considers appropriate while ICs are compulsory.	No land has been transferred or leased from the area covered by the ROD in FY 2017.
Until final remedy selection, DOE shall not delete or terminate any IC requirement established in this Interim Action ROD unless EPA and Ecology have provided written concurrence on the deletion or termination and appropriate documentation has been placed in the Administrative Record.	None of the IC requirements established in this Interim Action ROD were deleted or terminated in FY 2017.
DOE will evaluate the implementation and effectiveness of ICs for the 100 Area operable units on an annual basis. DOE shall submit a report to EPA and Ecology by March 30 of each year summarizing the results of the evaluation for the preceding calendar year. At a minimum, the report shall contain an evaluation of whether or not the IC requirements continue to be met and a description of any deficiencies discovered and measures taken to correct problems.	DOE conducts an annual assessment on the implementation and effectiveness of the ICs. The annual IC assessment is reported every September at the unit managers meeting.

Note: ICs were not evaluated for the 100-FR-1, 100-FR-2, 100-IU-2, and 100-IU-6 operable units, because this interim action ROD has been superseded by a final ROD for those operable units (see Sections 2.3.1 and 4.9).

DOE = U.S. Department of Energy.
Ecology = Washington State Department of Ecology.
EPA = U.S. Environmental Protection Agency.
IC = institutional control.
LTS = long-term stewardship.
MSA = Mission Support Alliance, LLC.
ROD = record of decision.
UMM = unit managers meeting.

4.5 INTERIM ACTION RECORD OF DECISION FOR 100-NR-1 AND 100-NR-2 OPERABLE UNITS

The ICs identified in *Interim Action Record of Decision for the 100-NR-1 and 100-NR-2 Operable Units, Hanford Site 100 Area, Benton County, Washington* (EPA, 1999c) are listed in

Table 4-5. These ICs apply to locations in the 100-N GDA, which is shown in green in the inset map in Table 4-5.

Table 4-5. Assessment of Institutional Controls Listed *Interim Action Record of Decision for the 100-NR-1 and 100-NR-2 Operable Units, Hanford Site 100 Area, Benton County, Washington* (EPA, 1999c). (2 sheets)

Institutional Controls Requirement	Institutional Controls Status
DOE will continue to use a badging program to control access to the sites associated with this ROD for the duration of the interim action. Visitors entering the sites associated with the Interim Action ROD are required to be escorted at all times.	DOE has an active badging program to control access to Hanford Site. Visitors entering the sites associated with the Interim Action ROD are escorted at all times.
DOE will use the onsite excavation permit process to control well drilling and excavation of soil within the 100 Area OUs to prohibit any drilling or excavation except as approved by Ecology.	The DOE excavation permit program is in place as defined in DOE-0344, *Hanford Site Excavating, Trenching and Shoring Procedure*.
DOE will maintain existing signs prohibiting public access.	The signage (see Section 2.5.3) and the access controls (see Section 3.1) are in place and are being maintained.
DOE will provide notification to Ecology upon discovery of any trespass incidents.	DOE transmits copies of the annual IC assessment report to EPA and Ecology. The assessment includes a report on the trespassing incidents.
Trespass incidents will be reported to the Benton County Sheriff's Office for investigation and evaluation for possible prosecution.	Trespassing incidents are reported to the Benton County Sheriff's Office, see Section 3.2.
DOE will add access restriction language to any land transfer, sale, or lease of property that the U.S. Government considers appropriate while ICs are compulsory, and Ecology will have to approve any access restrictions before transfer, sale, or lease.	No land has been transferred or leased from the area covered by the ROD in FY 2017.
Until final remedy selection, DOE shall not delete or terminate any IC requirements established in this Interim Action ROD unless Ecology has provided written concurrence on the deletion or termination and appropriate documentation has been placed in the Administrative Record.	None of the IC requirements established in this Interim Action ROD were deleted or terminated in FY 2017.
DOE will evaluate the implementation and effectiveness of ICs for the 100 NR 1 and 100 NR 2 OUs on an annual basis. DOE shall submit a report to Ecology by July 31 of each year summarizing the results of the evaluation for the preceding calendar year. At a minimum, the report shall contain an evaluation of whether or not the IC requirements continue to be met, a description of any deficiencies discovered, and measures taken to correct problems.	DOE conducts an annual assessment on the implementation and effectiveness of the ICs. The annual IC assessment is reported every September at the unit managers meeting.

Table 4-5. Assessment of Institutional Controls Listed *Interim Action Record of Decision for the 100-NR-1 and 100-NR-2 Operable Units, Hanford Site 100 Area, Benton County, Washington* (EPA, 1999c). (2 sheets)

Institutional Controls Requirement	Institutional Controls Status

DOE = U.S. Department of Energy.
FY = fiscal year.
IC = institutional control.
MSA = Mission Support Alliance, LLC.
OU = operable unit.
ROD = record of decision.
UMM = unit managers meeting.

4.6 INTERIM ACTION RECORD OF DECISION FOR 100-NR-1 OPERABLE UNIT (TSD)

The ICs identified in *Interim Action Record of Decision for the DOE Hanford 100-NR-1 Operable Unit (TSD), Hanford Site, Benton County, Washington* (EPA 2000b) are listed in Table 4-6. These ICs apply to locations in the 100-N GDA, which is shown in green in the inset map in Table 4-6.

Table 4-6. Assessment of Institutional Controls Listed in *Interim Action Record of Decision for the DOE Hanford 100-NR-1 Operable Unit (TSD), Hanford Site, Benton County, Washington* (EPA 2000b). (2 sheets)

Institutional Controls Requirement	Institutional Controls Status
DOE will continue to use a badging program to control access to the sites associated with this ROD for the duration of the interim action. Visitors entering any of the sites associated with the Interim Action ROD are required to be escorted at all times.	DOE has an active badging program to control access to Hanford Site. Visitors entering the sites associated with the Interim Action ROD are escorted at all times.
DOE will use the onsite excavation permit process to control land use (e.g., well drilling and excavation of soil) within the 100 Area OUs to prohibit any drilling or excavation except as approved by Ecology.	The DOE excavation permit program is in place as defined in DOE-0344, *Hanford Site Excavating, Trenching and Shoring Procedure.*
DOE will maintain existing signs prohibiting public access.	The signage (see Section 2.5.3) and the access controls (see Section 3.1) are in place and are being maintained.
DOE will provide notification to Ecology upon discovery of any trespass incidents.	DOE transmits copies of the annual IC assessment report to EPA and Ecology. The assessment includes a report on the trespassing incidents.

Table 4-6. Assessment of Institutional Controls Listed in *Interim Action Record of Decision for the DOE Hanford 100-NR-1 Operable Unit (TSD), Hanford Site, Benton County, Washington* (EPA 2000b). (2 sheets)

Institutional Controls Requirement	Institutional Controls Status
Trespass incidents will be reported to the Benton County Sheriff's Office for investigation and evaluation for possible prosecution.	Trespassing incidents are reported to the Benton County Sherriff's Office, see Section 3.2.
DOE will add access restriction language to any land transfer, sale, or lease of property that the U.S. Government considers appropriate while ICs are compulsory, and Ecology will have to approve any access restrictions before transfer, sale, or lease.	No land has been transferred or leased from the area covered by the ROD in FY 2017.
Until final remedy selection, DOE shall not delete or terminate any IC requirement established in this Interim Action ROD unless Ecology has provided written concurrence on the deletion or termination and appropriate documentation has been placed in the Administrative Record.	None of the IC requirements established in this Interim Action ROD were deleted or terminated in FY 2017.
DOE will evaluate the implementation and effectiveness of ICs for the 100-NR-1 Operable Units on an annual basis. DOE will submit a report to Ecology by July 31 of each year summarizing the results of the evaluation for the preceding calendar year. At a minimum, the report shall contain an evaluation of whether or not the IC requirements continue to be met, a description of any deficiencies discovered, and measures taken to correct problems.	DOE conducts an annual assessment on the implementation and effectiveness of the ICs. The annual IC assessment is reported every September at the unit managers meeting.

DOE = U.S. Department of Energy.
IC = institutional control.
MSA = Mission Support Alliance, LLC.
UMM = unit managers meeting.

4.7 INTERIM ACTION RECORD OF DECISION FOR THE 100-BC-1, 100-BC-2, 100-DR-1, 100-DR 2, 100-FR-2, 100-HR-2, AND 100-KR-2, OPERABLE UNITS, HANFORD SITE, BENTON COUNTY, WASHINGTON (100 AREA BURIAL GROUNDS)

The ICs identified in *Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-2, 100-HR-2, and 100-KR-2, Operable Units, Hanford Site, Benton County, Washington (100-Area Burial Grounds)* (EPA, 2000a) are listed in Table 4-7. These ICs apply to locations within the 100-B/C, 100-K and 100-D/H GDAs, which are shown in green in the inset map in Table 4-7. These ICs were not evaluated for the 100-FR-2 OU because this interim action ROD has been superseded by a final ROD for that operable unit (see Sections 2.3.1 and 4.9); therefore, the 100-FR-2 OU is not shown in the inset map.

Table 4-7. Assessment of Institutional Controls listed in *Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-2, 100-HR-2, and 100-KR-2, Operable Units, Hanford Site, Benton County, Washington (100 Area Burial Grounds)* (EPA, 2000a). (4 sheets)

Institutional Controls Requirement	Institutional Controls Status
DOE will continue to use a badging program to control access to the associated sites for the duration of the interim action. Visitors entering the sites associated with the Interim Action ROD are required to be escorted at all times.	DOE has an active badging program to control access to the Hanford Site. Visitors entering the sites associated with the Interim Action ROD are escorted at all times.
Well drilling is prohibited, except for monitoring or remediation wells authorized in documents approved by EPA and/or the Ecology. Groundwater use is prohibited, except for monitoring and treatment, as approved by EPA or Ecology.	The DOE excavation permit program is in place as defined in DOE-0344, *Hanford Site Excavating, Trenching and Shoring Procedure*. This program prevents unauthorized well drilling. Groundwater use is managed by CHPRC.
No intrusive work is allowed on or near the waste sites covered in this ROD without prior approval of EPA or Ecology.	Interim remedial actions have been completed for the sites covered in this ROD. Intrusive work near waste sites with excavation/drilling ICs is controlled by the excavation permit process.
DOE shall maintain signs that warn river users of potential hazards along the shoreline from 100 Area waste sites.	The signage is in place and being maintained (see Sections 2.1.3, 2.2.3, and 2.4.3).
DOE shall post and maintain in good condition "No Trespassing" signs along the 100 Area shoreline.	The "No Trespassing" signs are in place and being maintained (see Section 3.1).
DOE shall maintain signs along access roads that warn Site visitors and workers of potential hazards from 100 Area waste sites.	The signage is in place and being maintained (see Sections 2.1.3, 2.2.3, and 2.4.3).
DOE shall report trespass incidents to the Benton County Sheriff's Office for investigation and evaluation for possible prosecution.	Trespassing incidents are reported to the Benton County Sheriff's Office, see Section 3.2.

Table 4-7. Assessment of Institutional Controls listed in *Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-2, 100-HR-2, and 100-KR-2, Operable Units, Hanford Site, Benton County, Washington (100 Area Burial Grounds)* (EPA, 2000a). (4 sheets)

Institutional Controls Requirement	Institutional Controls Status
DOE shall submit a Sitewide IC plan that includes the applicable ICs for the 100 Area OUs. This Sitewide plan will be submitted to EPA and Ecology for approval as a primary document under the Tri Party Agreement by July 2001. This plan shall be updated by DOE periodically at the request of EPA or Ecology. At a minimum, the plan shall contain the following: *A comprehensive facility wide list of all areas or locations covered by any and all decision documents at the Hanford Site that have or should have ICs for protection of human health or the environment. The information on the list will include, at a minimum, the location of the area, the objectives of the restriction or control, the timeframe that the restrictions apply, and the tools and procedures DOE will use to implement the restrictions or controls and to evaluate the effectiveness of these restrictions or controls.* *Cover, and legally bind where appropriate, all entities and persons, including, but not limited to, employees, contractors, lessees, agents, licensees, and visitors. In areas where DOE is aware of routine trespassing, trespassers also must be covered.* *Cover all activities, and reasonably anticipated future activities, including, but not limited to, any future soil disturbances, routine and non routine utility work, well placement and drilling, recreational activities, Hanford Reach National Monument related uses, groundwater withdrawals, paving, construction, renovation work on structures, Tribal use, or other activities.* *Include a tracking mechanism that identifies all land areas under restriction or control.* *Include a process to promptly notify EPA and Ecology before any making anticipated change in land use designation, restriction, land users, or activity for any ICs required by a decision document.*	DOE/RL-2001-41, *Sitewide Institutional Controls Plan For Hanford CERCLA Response Actions*, Rev. 0 was published in 2002. It is revised within 180 days of the publication of a decision document that specifies ICs. Rev. 8, the current version of DOE/RL 2001 41, *Sitewide Institutional Controls Plan for Hanford CERCLA Response Actions and RCRA Corrective Actions*, was published March 17, 2015.
DOE will notify EPA and Ecology immediately upon discovery of any activity that is inconsistent with the OU-specific IC objectives for the Site, or of any change in the land use or land-use designation of a site. DOE will work together with EPA and Ecology to determine a plan of action to rectify the situation, except in the case where DOE believes the activity creates an emergency situation, DOE can respond to the emergency immediately upon notification to EPA and Ecology and need not wait for EPA or Ecology input to determine a plan of action. DOE also will identify deficiencies with the IC process, evaluate how to correct the process to avoid future problems, and implement these changes after consulting with EPA and Ecology.	No activities inconsistent with the OU-specific ICs have been discovered. There were no changes in land use/designations in the 100 Areas in FY 2017.

Table 4-7. Assessment of Institutional Controls listed in *Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-2, 100-HR-2, and 100-KR-2, Operable Units, Hanford Site, Benton County, Washington (100 Area Burial Grounds)* (EPA, 2000a). (4 sheets)

Institutional Controls Requirement	Institutional Controls Status
DOE will identify a point of contact for implementing, maintaining, and monitoring ICs for the 100 Area, as well as for the Hanford Site.	DOE has a person responsible for maintaining and monitoring ICs in the 100 Areas.
"DOE will comply with TPA requirements to request and obtain funding to institute and maintain ICs as a compliance requirement under the TPA. *NOTE: This is an existing TPA requirement.*	Funding is requested for maintaining and monitoring ICs through the DOE Long-Term Stewardship Program.
DOE will notify EPA and Ecology at least 6 months before any transfer, sale, or lease of any property subject to ICs required by a CERCLA decision document so that EPA and Ecology can be involved in discussions to ensure that appropriate provisions are included in the conveyance documents to maintain effective ICs. If it is not possible for DOE to notify EPA and Ecology at least 6 months before any transfer, sale, or lease, then DOE will notify EPA and Ecology as soon as possible, but no later than 60 days before the transfer, sale, or lease of any property subject to ICs.	No land has been transferred or leased from the area covered by the ROD in FY 2017.
DOE will not delete or terminate any ICs unless EPA and Ecology have concurred in the deletion or termination.	None of the IC requirements established in this Interim Action ROD were deleted or terminated in FY 2017.
DOE will evaluate the implementation and effectiveness of ICs for the Hanford Site and the 100 Area OUs on an annual basis. The annual IC monitoring report shall be written by DOE and submitted to EPA and Ecology as a primary document under the TPA. The report shall be consistent with the requirements established in the Sitewide IC plan. Justification will be provided for any information that is not included as required by the Sitewide plan. The annual monitoring report will be due on September 30 of each year and will summarize the results of the evaluation for the preceding calendar year. In addition, after the comprehensive Sitewide approach is well established and DOE has demonstrated its effectiveness, the frequency of future monitoring reports may be modified subject to approval by EPA and Ecology. The IC monitoring report, at a minimum, must contain the following: *A description of how DOE is meeting the Sitewide IC requirements.* *A description of how DOE is meeting the OU-specific objectives, including results of visual field inspections of all areas subject to OU-specific restrictions.*	DOE conducts an annual assessment on the implementation and effectiveness of the ICs. The annual IC assessment is reported every September at the unit managers meeting.
EPA and Ecology review of the IC monitoring report will follow existing procedures for agency review of primary documents.	This requirement is the responsibility of the EPA and Ecology.

Table 4-7. Assessment of Institutional Controls listed in *Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-2, 100-HR-2, and 100-KR-2, Operable Units, Hanford Site, Benton County, Washington (100 Area Burial Grounds)* (EPA, 2000a). (4 sheets)

Institutional Controls Requirement	Institutional Controls Status

Note: ICs were not evaluated for the 100-FR-2 operable unit, because this interim action ROD has been superseded by a final ROD for that operable unit (see Sections 2.3.1 and 4.9).

CHPRC = CH2M HILL Plateau Remediation Company.
DOE = U.S. Department of Energy.
Ecology = Washington State Department of Ecology.
EPA = U.S. Environmental Protection Agency
IC = institutional control.
OU = operable unit.
ROD = record of decision.
TPA = *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement).
UMM = unit managers meeting.

4.8 EXPLANATION OF SIGNIFICANT DIFFERENCES FOR THE INTERIM ACTION RECORD OF DECISION FOR 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-2, 100-HR-2, AND 100-KR-2 OPERABLE UNITS (100 AREA BURIAL GROUNDS)

The ICs identified in *Explanation of Significant Differences for the 100 Area Interim Action Record of Decision for 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-2, 100-HR-2, and 100-KR-2 Operable Units (100 Area Burial Grounds), Hanford Site, Benton County, Washington* (EPA, 2007) are listed in Table 4-8. These ICs apply to locations within the 100-B/C, 100-K and 100-D/H GDAs, which are shown in green in the inset map in Table 4-8. These ICs were not evaluated for the 100-FR-2 operable unit, because this interim action ROD has been superseded by a final ROD for that operable unit, and thus, the 100-FR-2 operable unit is not shown in the inset map.

Table 4-8. Assessment of Institutional Controls Listed in *Explanation of Significant Differences for the 100 Area Interim Action Record of Decision for 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-2, 100-HR-2, and 100-KR-2 Operable Units (100 Area Burial Grounds), Hanford Site, Benton County, Washington* (EPA, 2007). (2 sheets)

Institutional Controls Requirement	Institutional Controls Status
A report is required every 5 years to document effectiveness of the institutional controls, which must include identification of any deficiencies and corrective actions taken or to be taken.	The effectiveness of the ICs is evaluated every 5 years and published in the CERCLA Five-Year Review Report. The most recent report (2011-2015) can be found in DOE/RL-2016-01, *Hanford Site Fourth CERCLA Five-Year Review Report*.

Table 4-8. Assessment of Institutional Controls Listed in *Explanation of Significant Differences for the 100 Area Interim Action Record of Decision for 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-2, 100-HR-2, and 100-KR-2 Operable Units (100 Area Burial Grounds), Hanford Site, Benton County, Washington* (EPA, 2007). (2 sheets)

Institutional Controls Requirement	Institutional Controls Status
Institutional controls are required to be maintained in accordance with both the Burial Ground Record of Decision and the Sitewide Institutional Controls Plan for Hanford CERCLA Response Actions (DOE/RL-2001-41, as amended [current version]).	The ICs are maintained as required by DOE/RL-2001-41, *Sitewide Institutional Controls Plan for Hanford CERCLA Response Actions*, Rev. 8.

Note: ICs were not evaluated for the 100-FR-2 operable unit, because this interim action ROD has been superseded by a final ROD for that operable unit (see Sections 2.3.1 and 4.9)

DOE = U.S. Department of Energy.
IC = institutional control.
MSA = Mission Support Alliance, LLC.
UMM = unit managers meeting.

4.9 RECORD OF DECISION HANFORD 100 AREA SUPERFUND SITE 100-FR-1, 100-FR-2, 100-FR-3, 100-IU-2 AND 100-IU-6 OPERABLE UNITS

The ICs identified in *Record of Decision Hanford 100 Area Superfund Site 100-FR-1, 100-FR-2, 100-FR-3, 100-IU-2 and 100-IU-6 Operable Units* (EPA, 2014) are listed in Table 4-9. These ICs apply to locations in the 100-F/IU-2/IU-6 GDA, which is shown in green in the inset map in Table 4-9.

Table 4-9. Assessment of Institutional Controls Listed in *Record of Decision for 100-FR-1, 100-FR-2, 100-FR-3, 100-IU-2, and 100-IU-6* (EPA, 2014). (4 sheets)

Institutional Controls Requirement	Institutional Control Status
ICs are required before, during and after the active phase of remedial action implementation where ICs are needed to protect human health and the environment. ICs are used to control access to residual contamination in soil and groundwater above standards for unlimited use and unrestricted exposure.	ICs required to control access to residual contamination in soil and groundwater above standards for unlimited use and unrestricted exposure are in place.

Table 4-9. Assessment of Institutional Controls Listed in *Record of Decision for 100-FR-1, 100-FR-2, 100-FR-3, 100-IU-2, and 100-IU-6* (EPA, 2014). (4 sheets)

Institutional Controls Requirement	Institutional Control Status
No later than 180 days after the ROD is signed, DOE shall update the Sitewide Institutional Controls Plan to include the ICs required by this ROD and specify the implementation and maintenance actions that will be taken, including periodic inspections. The revised Sitewide Institutional Controls Plan shall be submitted to EPA and the Washington State Department of Ecology (Ecology) for review and approval as a Tri-Party Agreement primary document. The DOE shall comply with the Sitewide Institutional Controls Plan as updated and approved by EPA and Ecology.	The Sitewide Institutional Control Plan was revised within 180 days and submitted to EPA and Ecology for review and approval. The approved plan was published as DOE/RL 2001-41, Rev. 8, in March 2015.
In the event that land is transferred out of federal ownership, deed restrictions (proprietary controls such as easements and covenants) are required that are legally enforceable against subsequent property owners.	No land has been transferred from the area covered by the ROD in FY 2017.
In the event of any unauthorized access (e.g. trespassing), DOE shall report such incidents to the Benton County Sheriff's Office for investigation and evaluation of possible prosecution.	Trespassing incidents are reported to the Benton County Sheriff's Office, see Section 3.2.
Activities that would disrupt or lessen the performance of any component of the remedies are prohibited.	No activities that would disrupt or lessen the performance of any remedy component have taken place.
Signage and access control to waste sites with contamination above cleanup levels will be provided.	The signage (see Section 2.3.3) and the access controls (see Section 3.1) are in place and are being maintained.
Maintain the integrity of any current or future remedial or monitoring system such as monitoring wells.	Any potential impacts to remedial or monitoring systems are reviewed through the site evaluation and site excavation permit processes. CHPRC maintains the integrity of the monitoring wells.
Prohibit the development and use of property for residential housing, elementary and secondary schools, child care facilities and playgrounds until cleanup levels are met.	No development or use for residential purposes in the area covered by this ROD occurred in FY 2017.
DOE shall employ and maintain an excavation permit program for protection of human health against unacceptable exposure, and protection of environmental and cultural resources.	The DOE excavation permit program is in place as defined in DOE-0344, *Hanford Site Excavating, Trenching and Shoring Procedure*.
The DOE shall report on the effectiveness of ICs for all OUs that are the subject of this ROD in an annual report, or on an alternative reporting frequency specified by the lead regulatory agency. Such reporting may be for OUs individually or may be part of the Hanford Sitewide ICs report.	DOE conducts an annual assessment on the implementation and effectiveness of the ICs. The annual IC assessment is reported every September at the unit managers meeting.

Table 4-9. Assessment of Institutional Controls Listed in *Record of Decision for 100-FR-1, 100-FR-2, 100-FR-3, 100-IU-2, and 100-IU-6* (EPA, 2014). (4 sheets)

Institutional Controls Requirement	Institutional Control Status
Measures that are necessary to ensure continuation of ICs shall be taken before any lease or transfer of any land subject to ICs. DOE will provide notice to Ecology and EPA at least 6 months before any transfer or sale of land subject to ICs so that the lead regulatory agency can be involved in discussions to ensure that appropriate provisions are included in the transfer terms or conveyance documents to maintain effective ICs. If it is not possible for DOE to notify Ecology and EPA at least 6 months before any transfer or sale, DOE will notify Ecology and EPA as soon as possible, but no later than 60 days before the transfer or sale of any property subject to ICs. In addition to the land transfer notice and discussion provisions, DOE further agrees to provide Ecology and EPA with similar notice, within the same time frame, as to federal-to-federal transfer of property. DOE shall provide a copy of the executed deed or transfer assembly to Ecology and EPA.	No land has been transferred from the area covered by the ROD in FY 2017.
DOE shall notify EPA and Ecology immediately upon discovery of any activity inconsistent with the specific ICs.	No activities inconsistent with the ICs have been discovered.
Institutional Controls Component Unique to 100-FR-1 and 100-FR-2 Operable Units	
Exposure to contamination deeper than 4.6 m (15 ft) bgs is not anticipated. Where contamination at depth exceeds the residential or industrial use CULs, ICs are required to ensure future activities do not bring this contamination to the surface or otherwise result in exposure to contaminant concentrations that exceed the CULs.	Excavation at the locations with deep zone ICs is controlled by the excavation permitting process. No excavation occurred during the assessment period at these locations in the 100-F/IU-2/IU-6 area.
Prohibit irrigation over or near waste site 116-F-14 that represents an unacceptable surface water protection risk.	The irrigation restriction at the 116-F-14 site remains in place. No irrigation activities occurred at the site in FY 2017. Refer to Section 2.3.2 for more information.
Institutional Controls Component Unique to 100-FR-3 Operable Unit	
DOE shall employ and maintain an excavation permit program limiting 100-FR-3 groundwater access and use to research purposes and for monitoring and treatment in areas where groundwater is above cleanup levels (Figure A1-3).	DOE excavation permit program is in place as defined in DOE-0344, *Hanford Site Excavating, Trenching and Shoring Procedure*. Excavation at the locations with ICs is controlled by the excavation permitting process. No excavation to the groundwater occurred during the assessment period.

Table 4-9. Assessment of Institutional Controls Listed in *Record of Decision for 100-FR-1, 100-FR-2, 100-FR-3, 100-IU-2, and 100-IU-6* (EPA, 2014). (4 sheets)

Institutional Controls Requirement	Institutional Control Status
Prevent access or use of the groundwater for drinking water purposes until cleanup levels are met.	Access to groundwater is controlled through the excavation permitting process. Access and use of existing groundwater wells is managed by CHPRC.

bgs = below ground surface.
CHPRC = CH2M HILL Plateau Remediation Company.
CUL = cleanup level.
DOE = U.S. Department of Energy.
IC = institutional control.
OU = operable unit.
ROD = record of decision.
Tri-Party Agreement = *Hanford Federal Facility Agreement and Consent Order.*

4.10 RECORD OF DECISION FOR THE 300-FF-1 AND 300-FF-5 OPERABLE UNITS

The ICs identified in R*ecord of Decision for the 300-FF-1 and 300-FF-5 Operable Units, Hanford Site, Benton County, Washington*, (EPA, 1996b) are listed in Table 4-10. These ICs apply to locations within the 300 GDA, which is shown in green in the inset map in Table 4-10.

Table 4-10. Assessment of Institutional Controls Listed in R*ecord of Decision for the 300-FF-1 and 300-FF-5 Operable Units, Hanford Site, Benton County, Washington* (EPA, 1996b). (2 sheets)

Institutional Controls Requirement	Institutional Controls Status
ICs are required to prevent human exposure to groundwater and to ensure that unanticipated changes in land use do not occur that could result in unacceptable exposure to residual contamination. DOE is responsible for establishing and maintaining land-use and access restrictions until cleanup criteria are met.	Access to groundwater is controlled through the excavation permitting process. Access and use of groundwater wells is managed by CHPRC. Land-use requests for the Hanford site are managed in accordance with the DOE/EIS-0222, *Hanford Comprehensive Land Use Plan (CLUP) Final Environmental Impact Statement* (HCP EIS). Access to the 300 Area is controlled by signage and/or fences, see Sections 2.6.3 and 3.1.

Table 4-10. Assessment of Institutional Controls Listed in R*ecord of Decision for the 300-FF-1 and 300-FF-5 Operable Units, Hanford Site, Benton County, Washington* (EPA, 1996b). (2 sheets)

Institutional Controls Requirement	Institutional Controls Status
ICs include placing written notification of the remedial action in the facility land -use master plan.	The HCP EIS identifies the institutional controls plan as an implementing control for the HCP EIS. The institutional controls plan, DOE/RL-2001-41, *Sitewide Institutional Controls Plan for Hanford CERCLA Response Actions and RCRA Corrective Actions*, Rev. 8, lists the CERCLA decision documents for the remedial actions, along with their associated ICs.
DOE will prohibit any activities that would interfere with the remedial activity without EPA concurrence.	No activities that interfere with the remedial activity have been identified.
In addition, measures acceptable to EPA that are necessary to ensure the continuation of these restrictions will be taken before any transfer or lease of the property. A copy of the notification will be given to any prospective purchaser / transferee before any transfer or lease. DOE will provide EPA with written verification that these restrictions have been put in place.	No land has been transferred or leased from the area covered by the ROD in FY 2017.

DOE = U.S. Department of Energy.
CERCLA = *Comprehensive Environmental Response, Compensation, and Liability Act of 1980.*
EPA = U.S. Environmental Protection Agency.
FY = fiscal year.
IC = institutional control.
MSA = Mission Support Alliance, LLC.
ROD = record of decision.
UMM = unit managers meeting.

4.11 HANFORD SITE 300 AREA RECORD OF DECISION FOR 300-FF-2 AND 300-FF-5, AND RECORD OF DECISION AMENDMENT FOR 300-FF-1

The ICs identified in *Hanford Site 300 Area Record of Decision for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1* (EPA, 2013b) are listed in Table 4-11. These ICs apply to locations within the 300 GDA, which is shown in green in the inset map in Table 4-11.

Table 4-11. Assessment of Institutional Controls Listed in *Hanford Site 300 Area Record of Decision for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1* (EPA, 2013b). (3 sheets)

Institutional Controls Requirement	Institutional Controls Status
ICs are required before, during and after the active phase of remedial action implementation where ICs are needed to protect human health and the environment. ICs are used to control access to residual contamination in soil and groundwater above standards for unlimited use and unrestricted exposure.	ICs required to control access to residual contamination in soil and groundwater above standards for unlimited use and unrestricted exposure are in place.
No later than 180 days after the ROD is signed, DOE shall update the Sitewide Institutional Controls Plan to include the ICs required by this ROD and specify the implementation and maintenance actions that will be taken, including periodic inspections. The revised Sitewide Institutional Controls Plan shall be submitted to EPA and the Washington State Department of Ecology (Ecology) for review and approval as a Tri-Party Agreement primary document. The DOE shall comply with the Sitewide Institutional Controls Plan as updated and approved by EPA and Ecology.	The Sitewide Institutional Control Plan was revised within 180 days and submitted to EPA and Ecology for review and approval. The approved plan was published as DOE/RL-2001-41, Rev. 7, in May 2014.
Activities that would disrupt or lessen the performance of any component of the remedies are prohibited.	No activities that would disrupt or lessen the performance of any remedy component have taken place.
In the event that land is transferred out of federal ownership, deed restrictions (proprietary controls such as easements and covenants) are required that are legally enforceable against subsequent property owners.	No land has been transferred out of federal ownership from the area covered by the ROD in FY 2017.
In the event of any unauthorized access (e.g. trespassing), DOE shall report such incidents to the Benton County Sheriff's Office for investigation and evaluation of possible prosecution.	Trespassing incidents are reported to the Benton County Sheriff's Office, see Section 3.2.
The DOE shall report on the effectiveness of ICs for 300-FF-2 and 300-FF-5 in an annual report, or on an alternative reporting frequency specified by the lead regulatory agency. Such reporting may be for 300-FF-2 and 300-FF-5 alone or may be part of the Hanford Sitewide ICs report.	DOE conducts an annual assessment on the implementation and effectiveness of the ICs. The annual IC assessment is reported every September at the unit managers meeting.

Table 4-11. Assessment of Institutional Controls Listed in *Hanford Site 300 Area Record of Decision for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1* (EPA, 2013b). (3 sheets)

Institutional Controls Requirement	Institutional Controls Status
The IC performance objectives are required to be met as part of this remedial action. Land-use controls will be maintained until CULs are achieved and concentrations of hazardous substances are at such levels to allow for unlimited use and unrestricted exposure and EPA authorizes the removal of restrictions.	Land-use requests for the Hanford site are managed in accordance with DOE/EIS-0222, *Hanford Comprehensive Land Use Plan (CLUP) Final Environmental Impact Statement* (HCP EIS). Use of the Hanford Site is controlled through the site evaluation and excavation permitting processes. DOE/RL-2001-41, *Sitewide Institutional Controls Plan for Hanford CERCLA Response Actions and RCRA Corrective Actions*, Rev. 8, maintains the list of ICs.
Measures that are necessary to ensure continuation of ICs shall be taken before any lease or transfer of any land subject to ICs. DOE will provide notice to Ecology and EPA at least 6 months before any transfer or sale of land subject to ICs so that the lead regulatory agency can be involved in discussions to ensure that appropriate provisions are included in the transfer terms or conveyance documents to maintain effective ICs. If it is not possible for DOE to notify Ecology and EPA at least 6 months before any transfer or sale, DOE will notify Ecology and EPA as soon as possible, but no later than 60 days before the transfer or sale of any property subject to ICs. In addition to the land transfer notice and discussion provisions, DOE further agrees to provide Ecology and EPA with similar notice, within the same time frame, as to federal-to-federal transfer of property. DOE shall provide a copy of the executed deed or transfer assembly to Ecology and EPA.	No land has been leased or transferred from the area covered by the ROD in FY 2017.
DOE shall notify EPA and Ecology immediately upon discovery of any activity inconsistent with the specific ICs.	No activities inconsistent with the ICs have been discovered.
Exposure to contamination deeper than 4.6 m (15 ft) bgs is not anticipated. Where contamination at depth exceeds the residential or industrial use CULs, ICs are required to ensure future activities do not bring this contamination to the surface or otherwise result in exposure to contaminant concentrations that exceed the CULs.	Excavation at the locations with deep zone ICs is controlled by the excavation permitting process. Each WIDS site with this IC was assessed in FY 2017. No excavation into the deep zone occurred during the assessment period at these locations.

Table 4-11. Assessment of Institutional Controls Listed in *Hanford Site 300 Area Record of Decision for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1* (EPA, 2013b). (3 sheets)

Institutional Controls Requirement	Institutional Controls Status
The DOE will prevent the development and use of property that does not meet residential CULs at the 300 Area Industrial Complex and 618-11 (figure 10) for other than industrial uses, including use of property for residential housing, elementary and secondary schools, childcare facilities and playgrounds.	Land-use requests for the Hanford site are managed in accordance with DOE/EIS-0222, *Hanford Comprehensive Land Use Plan (CLUP) Final Environmental Impact Statement* (HCP EIS). All Site Evaluation Requests for the 300 Area in FY 2017 were consistent with industrial land uses.
Signage and access control to waste sites with contamination above CULs will be provided.	The signage (see Section 2.6.3) and the access controls (see Section 3.1) are in place and are being maintained.
DOE shall employ and maintain an excavation permit program for protection of human health against unacceptable exposure, and protection of environmental and cultural resources.	The DOE excavation permit program is in place as defined in DOE-0344, *Hanford Site Excavating, Trenching and Shoring Procedure*.
Prevent enhanced recharge in the 300 Area Industrial Complex and 618-11 over or near waste sites with soil concentration at any depth that exceed residential (irrigation-based) groundwater and surface water protection CULs until the CULs are achieved. Enhanced recharge controls are no irrigation or landscape watering, control drainage from low permeability areas including paved parking lots or buildings, and prevent bare gravel or bare sand covers.	The enhanced recharge IC is being evaluated for the individual waste sites with soil concentrations above the specified CULs. Assessments for drainage controls will be ongoing in FY 2018.
Administrative controls limiting 300-FF-5 groundwater access and use in a manner that is protective of human health where groundwater is above CULs.	Access to groundwater is controlled through the excavation permitting process. Access and use of groundwater wells is managed by CHPRC.

DOE = U.S. Department of Energy.
CUL = clean up level.
MSA = Mission Support Alliance, LLC.
UMM = unit managers meeting.

4.12 RECORD OF DECISION FOR THE USDOE HANFORD 1100 AREA

The ICs identified in *Record of Decision for the USDOE Hanford 1100 Area* (EPA, 1993) are listed in Table 4-12. The only portion of these operable units where ICs still apply is the HRD site, which is shown in green in the inset map in Table 4-12.

Table 4-12. Assessment of Institutional Controls Listed in R*ecord of Decision for the USDOE Hanford 1100 Area* (EPA, 1993).

Institutional Controls Requirement	Institutional Controls Status
The U.S. Department of Energy will control access and use of the Site for the duration of the cleanup, including restrictions on the drilling of new groundwater wells in the plume or its path will be enforced until the remedial action objectives have been attained.	The groundwater remedial action objectives have been attained. TCE concentrations have met cleanup goals in all three 1100-EM-1 compliance wells since 2001. Data from thirteen years of subsequent sampling confirm that concentrations are stable at levels well below the cleanup goal. No further groundwater monitoring is needed for 1100-EM-1 (TPA-CN-679, "TPA Change Notice for PNNL-12220, Sampling and Analysis Plan Update for Groundwater Monitoring 1100-EM-1").
The U.S. Department of Energy will record a notation on the deed to the Horn Rapids Landfill property as specified in the asbestos National Emission Standards for Hazardous Air Pollutants standards.	The Notice in Deed was recorded by the Benton County Auditor in April 1997 (Benton County Notice in Deed for Horn Rapids Landfill-Notice in Deed recorded date by Benton County Auditor April 18, 1997; File No. 1997-008784).

TCE = Trichloroethylene.

4.13 SUPERFUND SITE FINAL CLOSEOUT REPORT, U.S. DEPARTMENT OF ENERGY HANFORD 1100 AREA

The ICs identified in *Superfund Site Final Closeout Report, U.S. Department of Energy Hanford 1100 Area, Richland, Washington* (DOE 1996) are listed in Table 4-13. These ICs apply to the HRD site, which is shown in green in the inset map in Table 4-13.

Table 4-13. Assessment of Institutional Controls Listed in *Superfund Site Final Closeout Report, U.S. Department of Energy Hanford 1100 Area, Richland, Washington* (DOE 1996)[a].

Institutional Controls Requirement	Institutional Controls Status
Plans are in place for the U.S. Department of Energy to inspect and maintain the integrity of the cap and fencing at the Horn Rapids Landfill.	The integrity of the cap and fencing at the Horn Rapids Landfill is inspected on an annual basis.
Continued groundwater monitoring around the Horn Rapids Landfill is necessary to verify the modeled contaminant attenuation predictions and to evaluate the need for active remedial measures.	Groundwater monitoring for the Horn Rapids Landfill has been discontinued. TCE concentrations have met cleanup goals in all three 1100-EM-1 compliance wells since 2001. Data from thirteen years of subsequent sampling confirm that concentrations are stable at levels well below the cleanup goal. No further groundwater monitoring is needed for 1100-EM-1 (TPA-CN-679, "TPA Change Notice for PNNL-12220, Sampling and Analysis Plan Update for Groundwater Monitoring 1100-EM-1").

TCE = trichloroethylene.

4.14 EXPLANATION OF SIGNIFICANT DIFFERENCES, USDOE HANFORD 1100 AREA

The ICs identified in *Explanation of Significant Differences, USDOE Hanford 1100 Area, Hanford Site, Benton County, Washington* (EPA, 2010b) are listed in Table 4-14. These ICs apply to the HRD site, which is shown in green in the inset map in Table 4-14.

Table 4-14. Assessment of Institutional Controls Listed in *Explanation of Significant Differences, USDOE Hanford 1100 Area, Hanford Site, Benton County, Washington* (EPA, 2010b). (2 sheets)

Institutional Controls Requirement	Institutional Controls Status
DOE is responsible for implementing, maintaining, reporting on, and enforcing the IC and land use control. Although DOE may later transfer these procedural responsibilities to another party by contract, property transfer agreement, or through other means, DOE shall retain ultimate responsibility for remedy integrity and ICs in perpetuity.	DOE currently maintains ownership of the Horn Rapids Landfill and all associated responsibilities.

Table 4-14. Assessment of Institutional Controls Listed in *Explanation of Significant Differences, USDOE Hanford 1100 Area, Hanford Site, Benton County, Washington* (EPA, 2010b). (2 sheets)

Institutional Controls Requirement	Institutional Controls Status
DOE shall comply with the Sitewide Institutional Controls Plan as approved by EPA and Ecology.	The ICs are maintained as required by DOE/RL-2001-41, Sitewide Institutional Control Plan, Rev. 8, approved by EPA and Ecology.
DOE will control access to the landfill property, including maintaining the fencing and signs, to prevent disturbance of the landfill contents. The ICs are required to be maintained at the fenced area, which is shown in Figure A4-1.	Access to the landfill is controlled. The fencing and signs are assessed on an annual basis, see Section 2.7.3. The ICs continue to be maintained at the fenced area.
DOE will prevent the development and use of the landfill property for residential housing, elementary and secondary schools, or childcare facilities.	Land-use requests for the Hanford site are managed in accordance with DOE/EIS-0222, *Hanford Comprehensive Land Use Plan (CLUP) Final Environmental Impact Statement* (HCP EIS). No development or use for residential purposes in the landfill property occurred in FY 2017.
DOE will provide notice to EPA and Ecology at least 6 months prior to any transfer, sale, or lease of the landfill property so that EPA and Ecology can be involved in discussions to ensure that appropriate provisions are included in the transfer terms or conveyance documents to maintain effective ICs. For example, if the landfill is transferred to a private entity, one such mechanism may be a restrictive covenant under the Washington Uniform Environmental Covenant Act *(RCW 64.70). If it is not possible for DOE to notify EPA and Ecology at least 6 months prior to any transfer or sale, then the DOE will notify EPA and Ecology as soon as possible but no later than 60 days prior to the transfer or sale of any property subject to ICs. In addition to the land transfer notice and discussion provisions above, the DOE further agrees to provide EPA and Ecology with similar notice, within the same time frames, as to federal-to-federal transfer of property. DOE shall provide a copy of executed deed or transfer assembly to EPA and Ecology.*	No land has been transferred or leased from the landfill property in FY 2017.

CLUP = Comprehensive Land Use Plan.
DOE = Department of Energy.
Ecology = Washington State Department of Ecology.
EPA = Environmental Protection Agency.
FY = fiscal year.
IC = institutional control.

5.0 SUMMARY

This section summarizes the status and observations resulting from this year's IC assessment and the related ongoing efforts. As described in Section 1.3, this year's assessment is the first IC assessment conducted by MSA that includes the entire River Corridor and the results of this assessment will serve as a basis of comparison for future assessments.

As described in Section 2.0, the ICs for WIDS sites assigned to MSA were observed to be in place, as required. Several follow-on items were observed for further maintenance and review. Maintenance activities to replace damaged warning notices are scheduled in FY 2018. Implementation of the IC to prevent enhanced recharge for 21 of the WIDS sites in the 300 Area (see Sections 2.6.2) will continue to be monitored. This includes evaluating stormwater drainage during inclement weather events at 14 "Final Closed Out" WIDS sites to determine whether there are possible locations of enhanced recharge. Stormwater drainage also will be evaluated at seven "Accepted" WIDS sites where temporary surface barriers were planned in DOE/RL-2014-13-ADD1, remedial design report (RDR)/remedial action work plan (RAWP) for the 300-FF-2 soils. (Temporary surface barriers already are in place at some sites and are being planned at other sites. Construction of the physical barriers is outside the scope of the MSA LTS Program.) Also, the MSA LTS Program will be working with facility owners to identify whether additional precautions need to be initiated for fire testing procedures (e.g., fire suppression system testing) and stormwater management at facilities.

In addition, housekeeping items that were identified during field assessment activities are identified, logged, and being tracked. For biological-related housekeeping items (e.g., deep-rooted plants, burrowing animals), the MSA LTS Program is working with the MSA Ecological Monitoring and Environmental Surveillance department to determine a path forward. Site-specific signage observed during the IC assessment but not related to IC requirements will be addressed separately and individually, in accordance with applicable requirements. In addition, areas where possible subsidence and/or erosion were observed are being evaluated individually by the MSA LTS Program in partnership with the MSA Safety and Health Program and the MSA Roads and Grounds Program.

As described in Section 3.0, Sitewide ICs are in place, including "No Trespassing" signs and fencing. Items for which follow-on maintenance will be required (i.e., replacements signs), were also identified. Replacement signs are scheduled to be installed in FY 2018. Also as described in Section 3.0, eight reportable trespassing incidents occurred from October 2016 to September 2017 (information regarding details of the incidents is considered to be official use only and is not discussed in this report).

As described in Section 4.0, the ICs defined in each CERCLA decision document, which may affect one or more GDAs, also are in place. The ICs defined in the CERCLA decision documents include access controls, land-use-management ICs, groundwater-management ICs, and waste-site-information-management ICs. Even though many of the ICs are similar, each IC was assessed separately for the specific GDA to which it applies.

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6.0 REFERENCES

40 CFR 61.151, "Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations," *Code of Federal Regulations*, as amended.

Benton County Notice in Deed for Horn Rapids Landfill-Notice in Deed recorded date by Benton County Auditor April 18, 1997; File No. 1997-008784.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 USC 9601, et seq.

DAN14-0149, 2015, Hanford Site Excavation Permit in 300 Area, Northern Portion, Rev 2.

DAN17-0036, 2017, Hanford Site Excavation Permit in 100-K Area.

DAN17-0105, 2017, Hanford Site Excavation Permit in 100-H Area.

DOE-0344, 2017, *"Hanford Site Excavating, Trenching, and Shoring Procedure,"* Rev 4-1, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE, 1996, *Superfund Final Closeout Report, U.S. Department of Energy Hanford 1100 Area, Richland, Washington*, U.S. Department of Energy, Washington, D.C.

DOE/EIS-0222, 1999, *Final Hanford Comprehensive Land-Use Plan Environmental Impact Statement*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 2010, *300-FF-2 "Plug-In" Waste Sites for Fiscal 2010 – Annual Listing of Waste Sites Plugged into the Remove, Treat and Dispose Remedy in the 2001 Interim Action Record of Decision for 300-FF-2*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 2011a, *100 Area "Plug-In" and Candidate Sites for Fiscal Year 2010 – Annual Listing of Waste Sites Plugged into the Remove, Treat and Dispose Remedy in the 1999 Interim Action Record of Decision for the 100 Area*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 2011b, *300 Area "Plug-In" Waste Sites for Fiscal 2011 – Annual Listing of Waste Sites Plugged into the Remove, Treat, and Dispose Remedy in the 2001 Interim Action Record of Decision for 300-FF-2*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 2012a, *100 Area "Plug-In" and Candidate Sites for Fiscal Year 2011 – Annual Listing of Waste Sites Plugged into the Remove, Treat and Dispose Remedy in the 1999 Interim Action Record of Decision for the 100 Area*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 2012b, *Hanford 300 Area "Plug-In" Waste Sites for Fiscal Year 2012 – Annual Listing of Waste Sites "Plugged-in" to the Remove, Treat, and Dispose Remedy in the 2011 Interim Action Record of Decision for 300-FF-2*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 2013, *100 Area "Plug In" and Candidate Waste Sites for Calendar Year 2012 – Annual Listing of Waste Sites Plugged into the Remove, Treat and Dispose Remedy in the 1999 Interim Action Record of Decision for the 100 Area Remaining Sites*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-96-17, 2009, *Remedial Design Report/Remedial Action Work Plan for the 100 Area*, Rev. 6, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2001-41, 2002, *Sitewide Institutional Controls Plan For Hanford CERCLA Response Actions*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2001-41, 2014, *Sitewide Institutional Controls Plan for Hanford CERCLA Response Actions and RCRA Corrective Actions*, Rev. 7, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2001-41, 2015, *Sitewide Institutional Controls Plan for Hanford CERCLA Response Actions and RCRA Corrective Actions*, Rev. 8, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2005-93, 2013, *Remedial Design Report/Remedial Action Work Plan for the 100-N Area*, Rev. 1, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2014-13-ADD1, 2016, *Remedial Design Report/Remedial Action Work Plan for 300-FF-2 Soils*, Rev. 1, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2014-44-ADD1, 2015, *Remedial Design Report/Remedial Action Work Plan Addendum for 100-FR-1, 100-FR-2, 100-IU-2, and 100-IU-6 Soils*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2016-01, 2017, *Hanford Site Fourth CERCLA Five-Year Review Report.* Rev 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

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

EPA, 1993, *Record of Decision for USDOE Hanford 1100 Area*, EPA/ROD/R10-93/063, Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy, Olympia, Washington.

EPA, 1995, *Interim Action Record of Decision for the 100-BC-1, 100-DR-1, and 100 HR-1 Operable Units, Hanford Site, Benton County, Washington*, EPA/ROD/R10-95/126, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 1996a, *Interim Action Record of Decision for the 100-HR-3 and 100-KR-4 Operable Units, Hanford Site, Benton County Washington*, EPA/ROD/R10-96/134, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 1996b, *Record of Decision for the 300-FF-1 and 300-FF-5 Operable Units, Hanford Site, Benton County, Washington*, EPA/ROD/R10-96/143, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 1996c, *Explanation of Significant Differences for the USDOE Hanford 1100 Area, Benton County, Washington*, EPA/ESD/R10-96/145, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 1997, *Amendment to the Interim Action Record of Decision for the 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units, Hanford Site, Benton County, Washington*, EPA/AMD/R10-97/044, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 1999a, *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 (100 Area Remaining Sites ROD), Hanford Site, Benton County, Washington*, EPA/ROD/R10-99/039, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 1999b, *Amendment to the Interim Action Record of Decision for the 100-HR-3 Operable Unit, Hanford Site, Benton County, Washington*, EPA/AMD/R10-00/122, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 1999c, *Interim Action Record of Decision for USDOE 100-NR-1 and NR-2 Operable Unit Hanford Site 100 Area, Benton County, Washington*, EPA/ROD/R10-99/112, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2000a, *Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2,100-FR-2, 100-HR-2, and 100-KR-2 Operable Units, Hanford Site, Benton County, Washington (100-Area Burial Grounds)*, EPA/ROD/R10-00/121, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2000b, *Interim Action Record of Decision for the 100-NR-1 Operable Units (TSD), Hanford Site, Benton County, Washington*, EPA/ROD/R10-00/120, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2000c, *Explanation of Significant Differences for Hanford 300 Area, 300-FF-1 Operable Unit, Benton County, Washington*, EPA/ESD/R-10-00/505, U.S. Environmental Protection Agency, Region 10, Richland, Washington.

EPA, 2000d, *Explanation of Significant Differences for 300-FF-5 Operable Unit, Benton County, Washington*, EPA/ESD/R10-00/524, U.S. Environmental Protection Agency, Region 10, Richland, Washington.

EPA, 2001, *Interim Action Record of Decision, 300-FF-2, Hanford Site, Benton County, Washington*, EPA/ROD/R10-01/119, U.S. Environmental Protection Agency, Region 10, Richland, Washington.

EPA, 2003a, *Explanation of Significant Difference for the 100-HR-3 Operable Unit Interim Action Record of Decision, Benton County, Washington*, EPA/ESD/R10-03/606, U.S. Environmental Protection Agency, Region 10, Richland, Washington.

EPA, 2003b, *Explanation of Significant Differences for the 100-NR-1 Operable Unit Treatment, Storage, and Disposal Interim Action Record of Decision and 100-NR-1/100-NR-2 Operable Unit Interim Actions Record of Decision, Hanford Site – 100 Area (100-N), Benton County, Washington*, EPA/ROD/R10-03/605, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2004a, *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.

EPA, 2004b, *Explanation of Significant Difference for the 300-FF-2 Operable Unit Record of Decision, Hanford Site, Benton County, Washington*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2007, *Explanation of Significant Difference for the Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100 FR-2, 100-HR-2, and 100-KR-2 Operable Units, Hanford Site, Benton County, Washington (100 Area Burial Grounds)*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2009a, *Explanation of Significant Differences for the 100 Area Remaining Sites Record of Decision, Hanford Site, Benton County, Washington*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2009b, *Explanation of Significant Differences for the 100-HR-3 and 100-KR-4 Operable Units Interim Record of Decision, Benton County, Washington*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2009c, *Explanation of Significant Difference for the 300-FF-2 Operable Unit Interim Action Record of Decision, Hanford Site, Benton County, Washington*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2010a, *Amendment to the Interim Action Record of Decision for the 100-NR-1 and 100-NR-2 Operable Units, Hanford Site, Benton County, Washington*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2010b, *Explanation of Significant Differences for the USDOE 1100 Area, Hanford Site, Benton County, Washington*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2011a, *Explanation of Significant Differences for the 100-NR-1 and 100-NR-2 Operable Units Interim Remedial Action Record of Decision, Hanford Site, Benton County, Washington*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2011b, *Explanation of Significant Differences, Hanford 300 Area, 300-FF-2 Operable Unit, 618-10 Burial Ground, Hanford Site, Benton County, Washington*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2013a, *Explanation of Significant Differences for the 100-NR-1 and 100-NR-2 Operable Units Interim Remedial Action Record of Decision, Hanford Site, Benton County, Washington,* U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2013b, *Hanford Site 300 Area Record of Decision for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1,* U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

EPA, 2014, *Record of Decision, Hanford 100 Area Superfund Site 100-FR-1, 100-FR-2, 100-FR-3, 100-IU-2, and 100-IU-6 Operable Units*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

HNF-54166, 2015, *Long-Term Stewardship Surveillance and Maintenance Plan,* Rev. 5, Mission Support Contractor, LLC, Richland, Washington.

MSA-1105355.6, 2016, *2016 Annual Sitewide Institutional Control Assessment-Mission Support Alliance,* Mission Support Alliance, LLC, Richland, Washington.

TPA-CN-679, 2015, *TPA Change Notice for PNNL-12220, Sampling and Analysis Plan Update for Groundwater Monitoring 1100-EM-1",* U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 98-004, 1998, 300 ASH PITS, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 98-012, 116-C-1, 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 98-013, UPR-300-8, 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 98-014, UPR-300-9, 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 98-015, UPR-300-15, 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 98-017, UPR-300-20, 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 98-018, UPR-300-21, 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 98-019, UPR-300-22, 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 98-020, UPR-300-23, 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 98-021, UPR-300-24, 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 98-022, UPR-300-25, 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 98-023, UPR-300-26, 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 98-024, UPR-300-27, 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 98-025, UPR-300-28, 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 98-026, UPR-300-29, 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 98-027, UPR-300-30, 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 98-028, UPR-300-47, 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 99-014, 1999, 300-53, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 99-033, 116-B-11, 1999, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 99-036, 116-C-5, 1999, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 99-042, 1999, 300-253, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 99-046, 116-DR-9, 2000, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 99-048, 116-B-1, 1999, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 99-050, 1999, 316-2, 618-12, UPR-300-7, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 99-052, 116-B-12, 2000, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 99-055, 116-B-6A and 116-B-16, 2000, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 99-082, 116-B-4, 2000, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 99-097, 116-B-2, 2000, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 99-098, 2000, 105-C Pluto Crib, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 99-099, 2000, 105-C Pluto Crib Pump Station, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 99-100, 2000, 105-C Pluto Crib Sand Filter, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 99-101, 116-B-3, 2000, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 99-106, 100-D-25, 2000, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 99-108, 1999, 316-5, U.S. Environmental Protection Agency, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2000-109, 2003, 300-49 (Landfill 1A), U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-007, 116-D-7, 2000, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-034, UPR-100-D-4, 2001, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-040, 100-D-18, 2000, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-062, UPR-100-D-2, 2000, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-063, UPR-100-D-3, 2000, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-064, 100-D-48:2, 2000, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-065, 100-D-49:2, 2000, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-068, 116-DR-1&2, 2000, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2000-099, 2000, 105-C Reactor Building Below-Grade Structures and Underlying Soils, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-104, 116-DR-6, 2000, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-106, 116-D-6, 2000, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2000-110, 2003, 300-50 (Landfill 1B), U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2000-111, 2003, 628-4 (Landfill 1D), U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2000-112, 2000, 316-1, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2000-112, 2000, 316-1, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-115, 100-D-46, 116-D-1A and 116-D-1B, 2001, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-117, 100-H-5, 2000, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-118, 1607-H2, 2001, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-126, 100-D-48:1, 2001, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-127, 100-D-49:1, 2001, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-128, 100-D-19, 2001, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-133, 100-D-48:4, 2001, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2000-135, 116-H-3, 2001, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2001-004, 100-D-48:3 and 100-D-49:3, 2001, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2001-005, 100-D-6, 2001, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2001-006, 100-H-21, and 100-H-22, 2001, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2001-007, 100-H-1, 2001, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2001-013, 116-H-1, 2001, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2001-022, 100-D-5, 2001, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2001-026, 116-H-7, 2001, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2001-099, 2002, 100-F-19:1 North Pipelines, 100-F-19-:3 Pipelines, 100-F-34 Biology Facility French Drain and 116-F-12 French Drain, Waste Site Codes: 100-F-19:1, 100-F-19-:3, 100-F-34 and 116-F-12, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2002-046, 116-B-7, 132-B-6, and 132-C-2, 2002, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2002-050, 2002, 116-F-14 Retention Basin, Waste Site Code 116-F-14, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2002-056, 2002, 116-F-9 Trench, Waste Site Code 116-F-9, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2002-057, 2003, 116-F-2 Trench, Waste Site Code 116-F-2, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2003-001, 2003, UPR-300-32; UPR-300-33; UPR-300-34; UPR-300-35; UPR-300-36; and UPR-300-37, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2003-002, 2003, UPR-300-FF-1, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2003-006, 2003, 116-F-6 Trench, Waste Site Code 116-F-6, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2003-022, 2003, 100-F-19:2 Pipelines, 116-F-11 French Drain, UPR-100-F-1 Sewer Line Leak, 100-F-29 Pipelines, Waste Site Codes 100-F-19:2, 116-F-11, UPR-100-F-1, 100-F-29, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2003-030, 100-B-5, 2003, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2003-050, 2004, 100-C Area North Effluent Pipelines, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2003-051, 2004, 118-F-8:1 and 118-F-8:3 Reactor Site and 100-F-10 French Drain, Waste Site Codes 118-F-8:1, 118-F-8:3, and 100-F-10, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2003-051, 2004, 118-F-8:1 and 118-F-8:3 Reactor Site and 100-F-10 French Drain, Waste Site Codes 118-F-8:1, 118-F-8:3, and 100-F-10, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2003-053, 100-D-53 (122-DR-1:2. 122-DR-1:4), 132-DR-2 (122DR-1:5), 100-D-64, 100-D-23, 100-D-54, 2004, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2004-001, 2004, 116-K-1 100-K Crib, 100-K Pond, 116-K-1 Trench, 107-K Pond, Waste Site Code 116-K-1, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2004-005, 2007, with attachment, *Remaining Sites Verification Package for the 100-B-14:1 Process Sewer*, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2004-012, 2007, with attachment, *Remaining Sites Verification Package for the 100-C-9:1 Main Process Sewer Collection Line*, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2004-014, 2004, with attachment, *Remaining Sites Verification Package for the 100-C-9:3, 183-C Clearwell Site*, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2004-015, 2004, with attachment, *Remaining Sites Verification Package for the 100-C-9:4, Cooling Water Pipe Tunnels Site*, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2004-020, 2004, 100-C Area South Effluent Pipelines, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2004-059, 2004, *UPR-100-N-37 Transformer Yard (SWMU #1), 100-N-51 Oil Storage Area (SWMU #2), 185-N Turbine Building Drains and Sumps (SWMU #3), and 100-N-50 Turbine Oil Filter Unit (SWMU #4),* Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2005-021, 118-D-6:2 and 118-D-6:3, 2005, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2005-022, 132-D-4, 2005, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2005-024, 2006, with attachment, *Remaining Sites Verification Package for the 132-D-2; 117-D Filter Building*, Rev. 0, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2005-033, 2006, with attachment, *Remaining Sites Verification Package for the 132-D-3; 1608-D Effluent Pumping Station*, Rev. 0, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2005-035, 2005, with attachment, *Remaining Sites Verification Package for the 132-DR-1, 1608-DR Effluent Pumping Station*, Rev. 0, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2006-002, 2006, 116-K-2 100-K Mile Long Trench, 116-K-2 Trench, Waste Site Code 116-K-2, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2006-005, 2006, 108-B Solid Waste Burial Ground, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2006-006, 2012, with attachment, *Remaining Sites Verification Package for the 126-H-2, 183-H Clearwells/Disposal Pit Waste Site*, Rev. 0, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2006-008, 118-H-6:2, 2006, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2006-009, 118-H-6:3, 2006, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2006-022, 118-H-6:6, 2006, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2006-035, 2006, 618-3, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2006-049, 2006, with attachment, *Remaining Sites Verification Package for the 132-H-2, 117-H Filter Building*, Rev. 0, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2006-058, 2006, with attachment, *Remaining Sites Verification Package for the 128-B-3 Burn Site*, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2006-062, 2006, 618-2, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2006-063, 2007, 105-C Burial Ground, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2007-027, 2008, 118-F-8:4 Unplanned Release -Fuel Storage Basin West Side Adjacent and Side Slope Soils, Waste Site Code 118-F-8:4, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2007-032, 2008, 105-B Solid Waste Burial Ground, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2008-002, 2008, with attachment, *Remaining Sites Verification Package for the 116-C-3, 105-C Chemical Waste Tanks*, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2008-018, 2008, 118-F-6 Burial Ground, Waste Site Code 118-F-6, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2008-020, 2008, with attachment, *Remaining Sites Verification Package for the 331 Life Sciences Laboratory Drain Field Septic System*, Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2009-015, 2011, with attachment, *Remaining Sites Verification Package for the 116-D-8, 100-D Cask Storage Pad*, Rev. 0, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2009-041, 2010, with attachment, *Remaining Sites Verification Package for the100-B-21:4 Pipeline from the 105-C Reactor to the 116-C-2B Sump*, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2010-009, UPR-300-46, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2010-014, 2010, with attachment, *Remaining Sites Verification Package for the UPR-300-17, UN-300-17, Metal Shavings Fire Waste Site*, Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2010-024, 2010, 300-110, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2010-025, 2010, 303-M SA, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2010-026, 2010, 303-M UOF, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2010-027, 2010, 333 ESHWSA, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2010-028, 2010, 618-1, 618-1:1, 618-1:2, 333 LHWSA, UPR-300-13, and UPR-300-14, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2010-058, 2010, with attachment, *Remaining Sites Verification Package for the 300-33, 306W Metal Fabrication development Building Releases; the 300-256, 306E Fabrication and Testing Laboratory Releases; and the 300-41, 306E Neutralization Tank, Underground Lime Tank and Valve Pit*, Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2010-071, 2011, with attachment, *Remaining Sites Verification Package for the 118-D-6:4, Northern Decontamination Pad and 105-D Fuel Storage Basin Side Slope Soils*, Rev. 0, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2011-042, 2011, with attachment, *Remaining Sites Verification Package for the 300-251, Unplanned Release Outside the 303-K Building*, Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2011-053, 2011, with attachment, *Remaining Sites Verification Package for the 600-151, Dumping Areas 50 Yards and 200 Yards Downstream of River Mile 14 Waste Site*, Rev. 0, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2011-071, 2011, 300-16:2; 300-24; 300-80, and 300-218, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2011-091, 2013, with attachment, *300-274 Surface Debris*, Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2011-100, 2011, with attachment, *Remaining Sites Verification Package for the 300-28, 300-43, 300-48, 300-249, and 300-16:3 Waste Sites*, Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2011-105, 2012, with attachment, *Remaining Sites Verification Package for the 300-16:1, Utility Pole Northwest of 314 Building*, Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2011-106, 2011, with attachment, *Remaining Sites Verification Package for the 300-219, 300 Area Waste Transfer Line; 300-224, WATS and U-Bearing Piping Trench; and 333 WSTF, West Side Tank Farm,* Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Forms 2012-004, 2012-005, and 2012-006, 2012, with attachment, *Remaining Sites Verification Package for the UPR-300-38 Soil Contamination Beneath the 313 Building, the 313 ESSP, 313 East Side Storage Pad, and the 300-270, Unplanned Release at 313 Building,* Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2012-037, 2012, with attachment, *Remaining Sites Verification Package for the 300-286, Three 300 Area Potentially Contaminated French Drain/Drywells,* Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2012-101, 2013, with attachment, *Remaining Sites Verification Package for the 100-D-50:1 Emergency Discharge Pipeline,* Rev. 0, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2012-110, 2013, with attachment, *Remaining Sites Verification Package for the UPR-300-4, UN-300-4, Contaminated Soil Beneath the 321 Building Waste Site,* Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2012-120, 2013, with attachment, *Remaining Sites Verification Package for the 300-15:2, 300 Area Process Sewer North of Apple Street,* Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2013-007, 2013, with attachment, *Remaining Sites Verification Package for the 300-46, Soil Contamination and French Drains Surrounding 3706 Building Waste Site,* Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2013-011, 2013, with attachment, *Remaining Sites Verification Package for the 100-D-50:6, 183-DR Clearwell Pipelines,* Rev. 0, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Numbers 2013-015, 2013-016, and 2013-017, 2013, with attachment, *Remaining Sites Verification Package for the 116-N-2; 1310-N Chemical Waste Storage Tank; 1310-N Waste Storage Area; The Golf Ball, UPR-100-N-5; 116-N-2 Radioactive Chemical Waste Treatment Storage Facility; 1310-N Chemical Waste Storage Tank Leak; UN-100-N-5, UPR-100-N-25; UN-100-N-25; Uncontrolled Venting of 1310-N Tank Waste Sites,* Rev. 0, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2013-030, 2013, with attachment, *Remaining Sites Verification Package for the 124-N-2, 124-N-2 Septic Tank; 100-N Sanitary Sewer System No. 2 Waste Site*, Rev. 0, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2013-033, 2013, with attachment, *Remaining Sites Verification Package for the 300-257, 309 Process Sewer to River*, Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Numbers 2013-065, 2013-066, 2013-067, 2013-068, 2013-069, 2013-070, 2013-071, 2013-072, 2013-073, 2013-074, and 2013-075, 2013, with attachment, *Remaining Sites Verification Package for the 100-N-31, 100-N-32, 100-N-38, 100-N-61:3, 100-N-64:3, 100-N-68, UPR-100-N-3, UPR-100-N-7, UPR-100-N-10, UPR-100-N-12, and UPR-100-N-39 Waste Sites*, Rev. 0, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2013-076, 2013, with attachment, *Remaining Sites Verification Package for the 118-N-1, 1303-N Spacer Silos Waste Site*, Rev. 0, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2013-117, 2015, with attachment, *300-15:4, 3906 North Side and 3906-B Lift Stations Subsite*, Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2013-094, 2014, 118-K-1 Burial Ground, Waste Site Code 118-K-1, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-011, 2014, 300-53, Unplanned Release East Side of 303-G, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-012, 2014, 300-253, 384-W Original Brine Pit, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-017, 2014, 300-33, 306W Metal Fabrication Development Building Releases; 300-41, 306E Neutralization Tank; 300-110, 333 Building Stormwater Runoff; 300-256, 306E Fabrication and Testing Laboratory Releases, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-018, 2014, 303-M SA, 303-M Storage Area; 303-M UOF, 303-M Uranium Oxide Facility; UPR-300-17, UN-300-17, Metal Shavings Fire; UPR-300-46, Contamination North of 333 Building; 333 ESHWSA, 333 East Side HWSA, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-019, 2014, 331 LSLDF, 331 LSL Drain Field, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-028, 2014, 300-6, 366/366A Fuel Oil Bunkers; 300-123, 366 Building Fuel Oil Bunker Loading Station Steam Condensate French Drain; 300-268, 3741 Building Foundation; 300-273, Fuel Oil Transfer Pipeline; UPR-300-42, 300 Area Powerhouse Fuel Oil Spill, with attachment, *Evaluation of 300 Area Waste Sites,* Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-029, 2014, 300-16:1, Utility Pole Northwest of the 314 Building, with attachment, *Evaluation of 300 Area Waste Sites,* Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-030, 2014, 300-24, Soil Contamination at the 314 Metal Extrusion Building; 300-80, 314 Building Stormwater Runoff and Steam Condensate; 300-218, 314, 314A, and 314B Buildings; 300-16:2, Utility Pole East of 314 Building, with attachment, *Evaluation of 300 Area Waste Sites,* Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-031, 2014, 300-28, Contamination Found Along Ginko Street, Solid Waste Near 303-G Building; 300-43, Unplanned Release Outside the 304 Building; 300-48, Thorium Oxide and Fuel Fabrication Chemical Wastes Around 3732 Building; 300-249, 304 Building, Residual Rad Contamination; 300-16:3, Utility Pole Southeast of 314 Building, with attachment, *Evaluation of 300 Area Waste Sites,* Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-034, 2014, 300-46, Soil Contamination and French Drains Surrounding 3706 Building, with attachment, *Evaluation of 300 Area Waste Sites,* Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-035, 2014, 300-219, 300 Area Waste Transfer Line; 300-224, WATS and U-Bearing Piping Trench; 333 WSTF, West Side Tank Farm, with attachment, *Evaluation of 300 Area Waste Sites,* Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-036, 2014, 300-251, Unplanned Release Outside the 303-K Building, with attachment, *Evaluation of 300 Area Waste Sites,* Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-037, 2014, 300-257, 309 Process Sewer to River, with attachment, *Evaluation of 300 Area Waste Sites*, Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-039, 2014, UPR-300-38, Soil Contamination Beneath the 313 Building; 313 ESSP, 313 East Side Storage Pad; 300-270, Unplanned Release at 313 Building, with attachment, *Evaluation of 300 Area Waste Sites*, Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-040, 2014, 300-274, Surface Debris, with attachment, *Evaluation of 300 Area Waste Sites*, Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-045, 2014, 300-286, Three 300 Area Potentially Contaminated French Drain/Drywells, with attachment, *Evaluation of 300 Area Waste Sites*, Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-049, 2014, UPR-300-4, Contaminated Soil Beneath the 321 Building, with attachment, *Evaluation of 300 Area Waste Sites*, Rev. 0, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2014-088, 2014, with attachment, *Remaining Sites Verification Package for the 100-N-84:2, 100-N Area Fuel and Foam Pipelines Subsite*, Rev. 0, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2014-100, 2014, 300-284, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2015-010, 2015, 300-9, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form, Control Number 2015-016, 2015, with attachment, *Remaining Sites Verification Package for the 100-D-86:3, 105-DR Fan Room Sewer Pipelines Subsite*, Rev. 0, Washington State Department of Ecology and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2015-027, 2015, 100-H-28:5, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2015-030, 2015, 300-214:1, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2015-031, 2015, 300 RLWS:1, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2015-032, 2015, 300 RLWS:2, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2015-033, 2015, 300 RRLWS:1, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2015-047, 2015, 300-15:3, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2015-048, 2015, 300-34, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2015-049, 2015, 316-3, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2015-050, 2015, 300-263, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2015-054, 2015, 300-15:6, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2015-069, 2015, 618-1, Solid Waste Burial Ground No. 1, 318-1, 300 Area Burial Ground No. 1, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2015-071, 2015, 618-2, Solid Waste Burial Ground No. 2, 318-2, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2015-077, 2015, 16-F-14, 107-F Retention Basin, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2015-078, 2015, 100-F-10, French Drain at East End of 105-F Storage Room (Southeast Corner); 100-F-19:1, 100-F Reactor Cooling Water Effluent Underground Pipelines (North Group); 100-F-19:2, 100-F Reactor Cooling Water Effluent Underground Pipelines (South Group); 100-F-19:3, 100-F Reactor Cooling Water Effluent Underground Pipelines (West Group); 100-F-29, 100-F Experimental Animal Farm Process Sewer Pipelines; 100-F-34, Biology Facility French Drain; 116-F-2, 107-F Liquid Waste Disposal Trench; 116-F-6, 1608-F Liquid Waste Disposal Trench; 116-F-9, Animal Waste Leaching Trench; 116-F-12, 148-F French Drain; 118-F-8:3, 105-F Reactor Fuel Storage Basin Underlying Soils; 118-F-8:4, 105-F Fuel Storage Basin West Side Adjacent and Side Slope Soils; UPR-100-F-1, 141 Building Sewer Line Spill, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Waste Site Reclassification Form 2015-071, 2015, 118-F-6, PNL Solid Waste Burial Ground, U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operations Office, Richland, Washington.

APPENDIX A
EXAMPLE OF COMPLETED ASSESSMENT FORM

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APPENDIX A
EXAMPLE OF A COMPLETE ASSESSMENT FORM

Figure A-1 is an example of a completed assessment form for a grouping of WIDS sites with a similar institutional control in the 100-B Area.

Figure A-1. Example Completed Assessment Form (Pages 1 through 12)

LTS WASTE SITE INSTITUTIONAL CONTROL ASSESSMENT

If assessing multiple sites, attach a list with their WIDS Numbers and Reclassification Status

Assessment Number: LTS-WSIC-2017-006

Scope: WIDS Number and Reclassification Status: See attached Excel spreadsheet LTS-WSIC-2017-006

OR Area or Group: 100-B

Assessor:

Print First and Last Name	Organization	Date of Field Visit
Landon Collom	MSA LTS Program	04/20/2017

Other Field Visit Attendees:

Print First and Last Name	Organization
Chris Picken	MSA Mapping Services
Kristine Cornils	Demand Management
Brian Harmon	MSA Real Estate Services

Basis for Assessment: DOE/RL-2001-41, *Sitewide Institutional Controls Plan for Hanford CERCLA Response Actions and RCRA Corrective Actions*

Procedure for Assessment: SIL-LTS-003, *Conducting and Reporting Annual Institutional Controls Assessment*

INSTITUTIONAL CONTROL - SPECIFIC OBSERVATIONS AND FINDINGS

Institutional Control:	A. Prevent uncontrolled drilling or excavations into the deep zone (below 4.6m/15 feet)

PERFORMANCE OBJECTIVE

Performance Objective	A1. No excavation permit was issued for excavation into the deep zone (more than 4.6 m [15 ft] in depth).

SUPPORTING DOCUMENTATION

Observation	A GIS spatial analysis was performed comparing the WIDS site locations with the boundaries of the excavation permits. No excavation permits were issued in FY 2017 at the location of the sites assessed (see attached excel spreadsheet list 2017-WSIC-2017-006).
Objective was	◉ Met ○ Not Met
Additional Notes:	*Describe any additional information*

1 of 12

A-6006-620 (REV 6)

LTS WASTE SITE INSTITUTIONAL CONTROL ASSESSMENT (Continued)

Assessment Number:	Scope: WIDS Number and Reclassification Status:	OR Area or Group
LTS-WSIC-2017-006	See attached Excel spreadsheet LTS-WSIC-2017-006	100-B

INSTITUTIONAL CONTROL - SPECIFIC OBSERVATIONS AND FINDINGS

PHOTOS

Image Field DSC00049 General site view of WIDS site 100-C-6:3 looking southwest towards the 105B reactor.

Image Field DSC00057 General site view of WIDS site 116-C-5 looking east.

INSTITUTIONAL CONTROL - SPECIFIC OBSERVATIONS AND FINDINGS

Institutional Control:	A. Prevent uncontrolled drilling or excavations into the deep zone (below 4.6m/15 feet)

PERFORMANCE OBJECTIVE

Performance Objective	A2. No unauthorized excavation is observed in the deep zone.

SUPPORTING DOCUMENTATION

Observation	No unauthorized excavation is observed in the deep zone.
Objective was	◉ Met ○ Not Met
Additional Notes:	*For most of the WIDS sites, the team systematically traversed the entire area of the WIDS sites, based on the boundaries of the excavations and the boundaries of the WIDS Site in HGIS. The team of four people walked approximately 15 meters apart, observing for evidence of excavations. The area is general flat with maturing vegetation (see photo DSC00043). 100-C-6:3 Observed areas of gravel & sparse vegetation. 116-C-5, Observed multiple flowering plants and multiple ant hills. Sparsely vegetated and some areas of gravel. Not as much tumbleweed and thistle as some of the other sites in the 100-B/C Area. Observed some maturing sagebrush. 116-B-11, Light vegetation and sparse sagebrush.*

LTS WASTE SITE INSTITUTIONAL CONTROL ASSESSMENT (Continued)

Assessment Number:	Scope: WIDS Number and Reclassification Status:	OR Area or Group
LTS-WSIC-2017-006	See attached Excel spreadsheet LTS-WSIC-2017-006	100-B

INSTITUTIONAL CONTROL - SPECIFIC OBSERVATIONS AND FINDINGS

PHOTOS

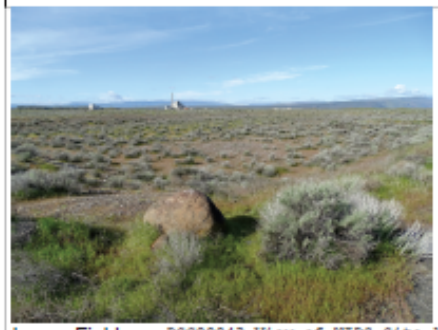


Image Field DSC00043 View of WIDS Site 116-C-1, looking west towards the 105-B Reactor. The area is generally flat with maturing vegetation

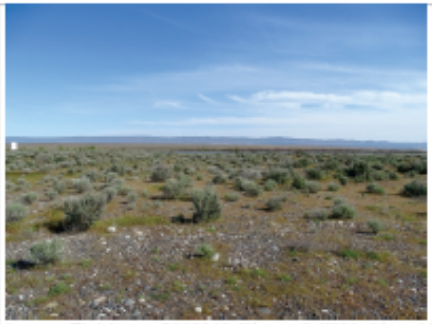


Image Field DSC0048 View of WIDS Site 132-C-2, looking north towards the Columbia River.

Image Field DSC00047 View of WIDS site 132-C-2, looking west. Observed abundant maturing sagebrush, as well as multiple gravel patches.

Image Field DSC000079 View of the area of WIDS Sites 100-C-6:2 and 116-C-5, looking east

LTS WASTE SITE INSTITUTIONAL CONTROL ASSESSMENT (Continued)

Assessment Number:	Scope: WIDS Number and Reclassification Status:	OR Area or Group
LTS-WSIC-2017-006	See attached Excel spreadsheet LTS-WSIC-2017-006	100-B

Image Field DSC00065 Close-up of an anthill observed at WIDS Site 116-B-7, looking west.

Image Field DSC00071 Close-up of an ant hill observed at WIDS Site 116-B-1.

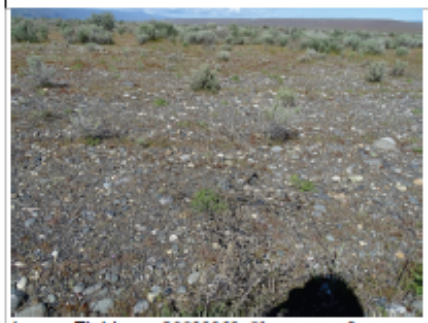


Image Field DSC00062 Close-up of a younger star thistle with a dead thistle plant coming out of it at WIDS Site 116-C-5.

Image Field DSC00083 View of a row of bollards, looking east near the boundary of the 116-C-5 WIDS site.

General Site Observations *(Occupational hazards, ground subsidence, erosion, animal/pest intrusion, vegetation, trash, etc.)*:

No significant subsidence/erosions were observed. No immediate hazards were identified/observed requiring expedited response. No borrowing animal holes or intrusions were observed. No gophers, badgers or other larger animal intrusions observed. Small ant hills were observed the 116-C-1, 100-C-6:3, 116-C-5, 116-B-11 and 116-B-1 WIDS areas. Scattered tumble weeds, Russian and Star thistles were also noted on these sites. 100-B-8:2, Observed an ant hill, occasional star thistle, immature vegetation/sagebrush, and no tumbleweed. A row of bollards was observed without out signage, possible housekeeping issue to further investigate.

Attachments *(Please list all documents that are attached, include description and file name)*:

LTS WASTE SITE INSTITUTIONAL CONTROL ASSESSMENT (Continued)

Assessment Number:	Scope: WIDS Number and Reclassification Status:	OR Area or Group
LTS-WSIC-2017-006	See attached Excel spreadsheet LTS-WSIC-2017-006	100-B

Three attachments include a one-page Excel spreadsheet (LTS-WSIC-2017-006) that lists the sites included in this assessment, a PDF map (LTS-WSIC-2017-006_Map) that shows the mapped areas of the sites assessed on this form and all available photo locations with ID numbers labeled, and a word document photo log (LTS-WSIC-2017-006 Photolog) with extra geotagged photo locations with captions that were not able to be embedded in the assessment. For a complete record of photos, please contact the LTS Program site assessment team.

Assessor:

Landon Collom		9/27/2017
Print First and Last Name	*Signature*	*Date*

A-6006-620 (REV 6)

LTS-WSIC-2017-006 Photo Log

04/20/2017

Close-up of ant hill observed at WIDS site 116-C-1. This is geotagged photo location DSC00044.

Close-up of an ant hill observed at WIDS site 100-C-6:3. This is geotagged photo location DSC00050.

Close-up of a flowering plant found at WIDS site 116-C-5 and general site area vegetation. This is geotagged photo location DSC00055.

Close-up of ant hill at WIDS 116-C-5. This is geotagged photo location DSC00059.

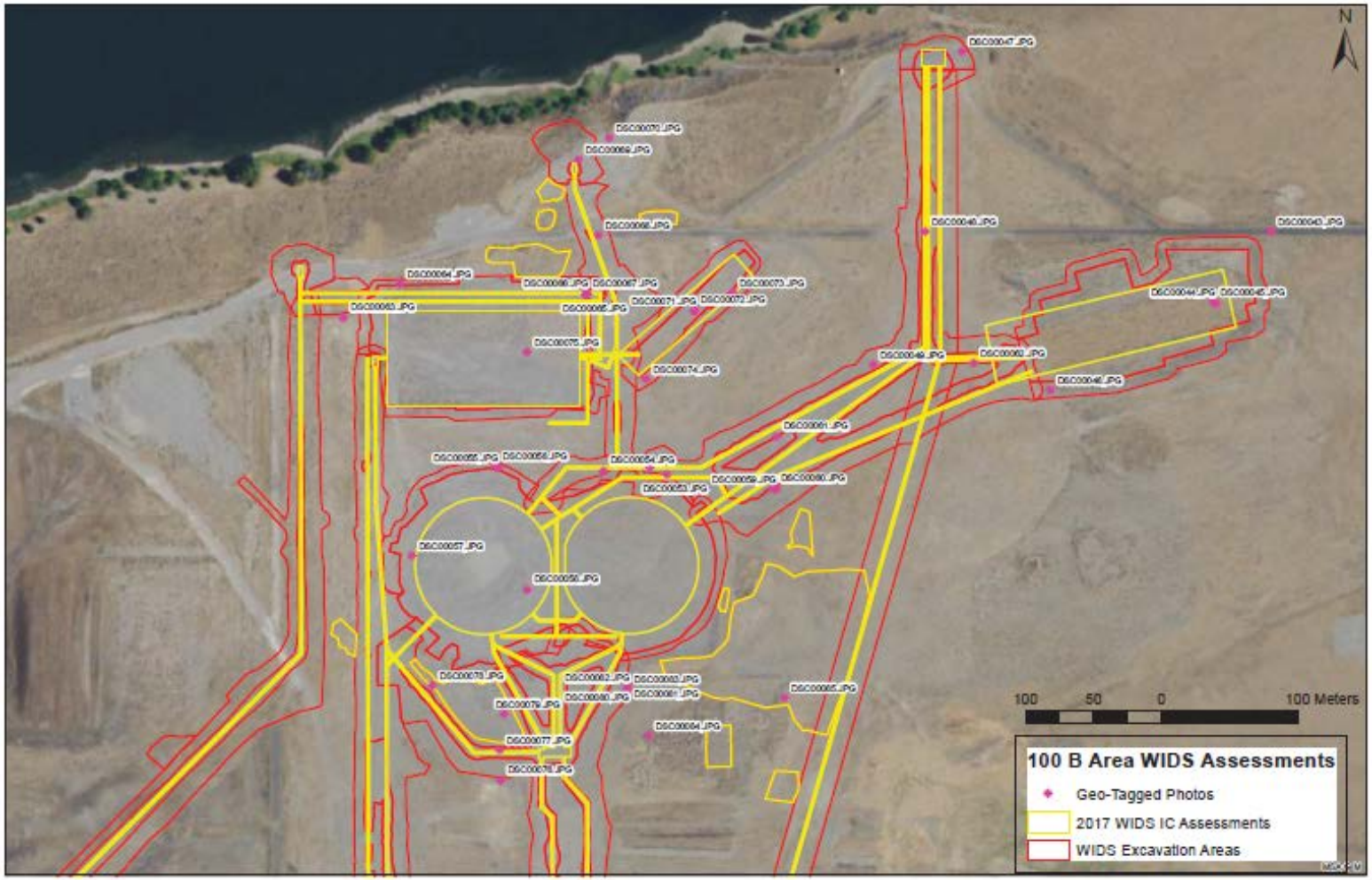
View of WIDS Site 116-B-11, looking east. This is geotagged photo location DSC00063.

View of WIDS 132-B-6, looking north towards the Columbia River. This is geotagged photo location DSC00068.

View of WIDS Site 100-C-6:2, looking north. This is geotagged photo location DSC00076.

View of WIDS Site 100-B-8:2, looking west. This is geotagged photo location DSC00077.

Assessment team walking north at WIDS 100-C-6:4. This is geotagged photo location DSC00085.


N
100 B Area WIDS Assessments
Geo-Tagged Photos
2017 WIDS IC Assessments
WIDS Excavation Areas
100
50
0
100 Meters

11 of 12

Site	Form	Date Assessed	Names	Area	Reclass Status	WSRF	Institutional Control	A - Deep Zone	B - Access Control	C - Irrigation	D - Inhalation Exposure	E - Horn Rapids Landfill	F - Shallow Zone	G - 300 Fire Station	H - Industrial Land Use	I - Other IC
100-B-8:2	LTS-WSIC-2017-006	4/20/2017	100-B-8:2, 100-B Area North Effluent Pipelines	100-B/C	Interim Closed Out	2003-050	Institutional controls are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	X								
100-C-6:2	LTS-WSIC-2017-006	4/20/2017	100-C-6:2, 100-C Area North Effluent Pipelines	100-B/C	Interim Closed Out	2003-050	Institutional controls are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	X								
100-C-6:3	LTS-WSIC-2017-006	4/20/2017	100-C-6:3, 100-C Retention Basin to Outfalls Effluent Pipelines	100-B/C	Interim Closed Out	2003-050	Institutional controls are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	X								
100-C-6:4	LTS-WSIC-2017-006	4/20/2017	100-C-6:4, B/C Pipelines Discovery Areas	100-B/C	Interim Closed Out	2003-050	Institutional controls are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	X								
116-B-1	LTS-WSIC-2017-006	4/20/2017	116-B-1, 107-B Liquid Waste Disposal Trench, Process Effluent Trench	100-B/C	Interim Closed Out	99-048	Institutional controls are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	X								
116-B-7	LTS-WSIC-2017-006	4/20/2017	116-B-7, 1904-B-1 Outfall Structure, 1904-B1	100-B/C	Interim Closed Out	2002-046	Institutional controls are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	X								
116-B-11	LTS-WSIC-2017-006	4/20/2017	116-B-11, 107-B Retention Basin, 116-B-11 Retention Basin	100-B/C	Interim Closed Out	99-033	Institutional controls are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	X								
116-C-1	LTS-WSIC-2017-006	4/20/2017	116-C-1, 107-C Liquid Waste Disposal Trench	100-B/C	Interim Closed Out	98-012	Institutional controls are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	X								
116-C-5	LTS-WSIC-2017-006	4/20/2017	116-C-5, 116-C-5 Retention Basins, 107-C Retention Basins	100-B/C	Interim Closed Out	99-036	Institutional controls are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	X								
132-B-6	LTS-WSIC-2017-006	4/20/2017	132-B-6, 1904-B-2 Outfall Structure Site, 116-B-8, 1904-B2	100-B/C	Interim Closed Out	2002-046	Institutional controls are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	X								
132-C-2	LTS-WSIC-2017-006	4/20/2017	132-C-2, 1904-C Outfall, 116-C-4	100-B/C	Interim Closed Out	2002-046	Institutional controls are required to prevent uncontrolled drilling or excavation into deep zone [i.e., below 4.6 m (15 ft)].	X								

MSA-1105355.6

CONTRACT NO. DE-AC06-09RL14728

ATTACHMENT 2

Contract Deliverable CD0182

2017 ANNUAL SITEWIDE INSTITUTIONAL CONTROL ASSESSMENT
CH2M HILL PLATEAU REMEDIATION COMPANY

Consisting of 23 pages,
including this cover page

2017 ANNUAL SITEWIDE INSTITUTIONAL CONTROL ASSESSMENT
CH2M HILL PLATEAU REMEDIATION COMPANY

Background and Introduction

The 100-K Basins Interim Remedial Action Record of Decision calls for Institutional Controls that will minimize the potential for human exposure to hazardous substances that will be addressed by the remedial action. The specific controls are identified in the work plans that implement the remedial action decision. This assessment checklist identifies the required controls and provides an evaluation of the whether the control has been implemented and whether the implementation has been effective in minimizing the potential for human exposure to hazardous substances.

Institutional Control Category	Institutional Controls Requirement	2017 Status
Entry Restrictions	Continue the current badging program and access controls for the duration of the interim action. Visitors entering the sites associated with this interim action are required to be escorted at all times.	The badging and other entry restrictions remain in place and appear to be effective.
	Utilize the onsite excavation permit process to control intrusive activities such as well drilling and excavation of soil.	The excavation permit process remains in place as an effective control.
Warning Notices	Maintain existing signs prohibiting public access.	No trespassing signs are in place along the river. Large warning signs are present at the entrance to the 100-K area and at the former location of the 181KW and 181KE buildings along the river (Figures 1 through 6). The signs are effective controls.
Miscellaneous Provision	Provide notification to the lead regulator upon discovery of any trespass incidents.	Security forces continue to patrol the area and report trespass. MSA manages this function.
Miscellaneous Provision	Report trespass incidents to the Benton County Sheriff's Office for investigation and evaluation for possible prosecution.	DOE reports trespass incidents to appropriate authorities.
Land-Use Management	Take the necessary precautions to add access restriction language to any land transfer, sale, or lease of property that the U.S. Government considers appropriate while institutional controls are compulsory. The lead regulator will have to approve any access restrictions prior to transfer, sale, or lease.	No land transfers have taken place in 100-K. The controls remain in place as managed by MSA.
Miscellaneous Provision	Until final remedy selection, institutional control requirements will not be deleted or terminated unless the lead regulator has provided written concurrence on the deletion or termination and appropriate documentation has been placed in the Administrative Record.	No institutional control requirements were modified.
Miscellaneous Provision	The implementation and effectiveness of institutional controls will be evaluated and reported in accordance with DOE/RL-2001-41, Sitewide Institutional Controls Plan for Hanford CERCLA Response Actions.	The assessment of the implementation and effectiveness of the institutional controls were evaluated and reported.
Warning Notices Entry Restrictions	Current access controls include signs along the river, non-continuous fencing, locked access to buildings containing the primary hazards, and routine security patrols.	Signs along the river are in place, buildings are locked, and there are routine security patrols. A non-continuous fence is in place. Fencing and/or signs are present at locations where access is most likely to occur.

Figure 1. Approaching Main Entrance to 100-K.

Figure 2. Signage to main entrance to 100-K.

Figure 3. Southwest fence line of 100-K.

Figure 4. West fence line at 100-K.

Figure 5. Warning signs at the former 100-KW Intake Structure.

Figure 6. Warning signs at the former 100-KE Intake Structure.

Figure 7. Taken on the North West side of the KW Reactor.

*

Figure 8. East fence line at 100-K.

Figure 9. Southeast gate entrance to 100-K.

Background and Introduction

The 200 Area Central Plateau Records of Decision calls for Institutional Controls that will minimize the potential for human exposure to hazardous substances that will be addressed by the remedial action. The specific controls are identified in the work plans that implement the remedial action decision. This assessment identifies the required controls and provides an evaluation of the whether the control has been implemented and whether the implementation has been effective in minimizing the potential for human exposure to hazardous substances.

Table 1. Institutional Controls Requirements Listed in Record of Decision for Final Remedial Action for Hanford 200 Area, 200-UP-1 Operable Unit (Required through time of completion of the remedy.)

Institutional Controls Category	Institutional Controls Requirement	2017 Status
Entry Restrictions	The DOE shall control access to 200-UP-1 OU Groundwater to prevent unacceptable exposure of humans to contaminants, except as otherwise authorized in lead regulatory agency approved documents.	No findings, access controls still in place.
Land-Use Management	Visitors entering any site areas of the 200-UP-1 OU will be required to be badged and escorted at all times.	No findings, work plans are being/have been submitted for approval.
Land-Use Management	No intrusive work shall be allowed in the 200-UP-1 OU unless the lead regulatory agency has approved the plan for such work and that plan is followed.	No findings, no unauthorized wells have been drilled.
Groundwater-Use Management	The DOE shall prohibit well drilling in the 200-UP-1 OU, except for monitoring, characterization, or remediation wells authorized in EPA approved documents.	No findings, no unauthorized well drilling.
Groundwater-Use Management	Groundwater use at the 221-U Facility site is prohibited, except for limited research purposes and monitoring and treatment authorized in EPA approved documents.	No findings, no unauthorized groundwater use has occurred.
Warning Notices	The DOE shall post and maintain warning signs along pipelines conveying untreated groundwater that caution site visitors and workers of potential hazards from the 200-UP-1 OU.	No findings.
Miscellaneous Provision	In the event of any unauthorized access (e.g. trespassing), DOE shall report such incidents to the Benton County Sheriff's Office for investigation and evaluation of possible prosecution.	No findings, no unauthorized access or trespass.
Land-Use Management	Activities that would disrupt or lessen the performance of the any component of the remedy are to be prohibited, except as otherwise authorized in lead regulatory agency approved documents.	No findings, no activities have been implemented that would disrupt/lesson performance of the interim remedy
Miscellaneous Provision	The DOE shall prohibit activities that would damage the remedy components (e.g. extraction wells, piping, treatment plant, and monitoring wells), except as otherwise authorized in lead regulatory agency approved documents.	No findings.

Table 1. Institutional Controls Requirements Listed in Record of Decision for Final Remedial Action for Hanford 200 Area, 200-UP-1 Operable Unit (Required through time of completion of the remedy.)

Institutional Controls Category	Institutional Controls Requirement	2017 Status
Land-Use Management	The DOE will prevent the development and use of property above the 200-UP-1 OU for residential housing, elementary and secondary schools, childcare facilities, and playgrounds.	No findings.
Miscellaneous Provision	The DOE shall report on the effectiveness of ICs for the 200-UP-1 OU interim remedy in an annual report, or on an alternative reporting frequency specified by the lead regulatory agency. Such reporting may be for the 200-UP-1 OU alone or may be part of the Hanford Site wide report.	No findings, included in annual report.
Land-Use Provision	Measures that are necessary to ensure continuation of ICs shall be taken before any lease or transfer of any land above the 200-UP-1 OU. DOE will provide notice to Ecology and EPA at least 6 months before any transfer or sale of 200-UP-1 OU or any land above the 200-UP-1 OU so that the lead regulatory agency can be involved in discussions to ensure that appropriate provisions are included in the transfer terms or conveyance documents to maintain effective ICs. If it is not possible for DOE to notify Ecology and EPA at least 6 months before any transfer or sale, DOE will notify Ecology and EPA as soon as possible, but no later than 60 days before the transfer or sale of any property subject to ICs. In addition to the land transfer notice and discussion provisions, DOE further agrees to provide Ecology and EPA with similar notice, within the same time frames, as to federal-to-federal transfer of property. DOE shall provide a copy of the executed deed or transfer assembly to Ecology and EPA.	No findings, no transfer/sale of land has taken place.
Miscellaneous Provision	DOE shall notify EPA and Ecology immediately upon discovery of any activity inconsistent with the OU-specific institutional control objectives for the Site.	No findings, no inconsistent activity discovered.

Table 2. Institutional Controls Requirements (Required through the Time of Completion of Remedy Construction) Listed in Record of Decision for 221-U Facility (Canyon Disposition Initiative).

Institutional Controls Category	Institutional Controls Requirement	2017 Status
Entry Restrictions	DOE shall control access to prevent unacceptable exposure of humans to contaminants at the 221-U Facility site addressed in the scope of this ROD until remedy construction is complete. Visitors entering any site areas are required to be badged and escorted at all times. See Figure 7 of the 221-U Facility ROD (US EPA 2005) for a site map showing the extent of the 221-U Facility site and the boundaries of the land-use controls. A more detailed map will be developed and included in the RD/RA work plan to be approved by EPA and Ecology.	No findings, access controls still in place.
Land-Use Management	No intrusive work shall be allowed at the 221-U Facility site unless the EPA and Ecology have approved the plan for such work and that plan is followed.	No findings, work plans are being/have been submitted for approval.
Land-Use Management	DOE shall prohibit well drilling at the 221-U Facility site except for monitoring, characterization, or remediation wells authorized in EPA-and Ecology-approved documents.	No findings, no unauthorized wells have been drilled.
Groundwater-Use Management	Groundwater use at the 221-U Facility site is prohibited, except for limited research purposes and monitoring and treatment authorized in EPA-and Ecology-approved documents. This prohibition applies until drinking water standards are achieved and EPA and Ecology authorize removal of restrictions. Decision documents for the 200-UW-1 Source Operable Unit and 200-UP-1 Groundwater Operable Unit as well as the Sitewide institutional controls plan will contain the institutional controls and implementing details prohibiting well drilling and groundwater use in the U Plant Area and portions of the 200 West Area as defined in those decision documents.	No findings, no unauthorized groundwater use has occurred.
Warning Notices	DOE shall post and maintain warning signs along access roads to caution site visitors and workers of potential hazards from the 221-U Facility site.	No findings, warning signs are in place.
Miscellaneous Provision	In the event of any unauthorized access to the site, such as trespass, DOE shall report such incidents to the Benton County Sheriff's Office for investigation and evaluation of possible prosecution.	No findings, no unauthorized access to the site has occurred.

Table 3. Institutional Controls Requirements Listed in Record of Decision Hanford 200 Area 200-ZP-1 OU Superfund Site Benton County, Washington (2 Sheets).

Institutional Controls Category	Institutional Controls Requirement	2017 Status
Entry Restrictions	The DOE shall control access to prevent unacceptable exposure of humans to contaminants in the 200-ZP-1 OU groundwater addressed in the scope of this ROD until the remedy is complete. Visitors entering any site areas of the 200-ZP-1 OU will be required to be badged and escorted at all times.	No findings, access controls are in place.
Land-Use Management	No intrusive work shall be allowed in the 200-ZP-1 OU unless EPA has approved the plan for such work and that plan is followed.	No findings, work plans are being/have been submitted for approval.
Land-Use Management	The DOE shall prohibit well drilling in the 200-ZP-1 OU, except for monitoring, characterization or remediation wells authorized in EPA approved documents.	No findings, no unauthorized wells have been drilled.
Groundwater-Use Management	Groundwater use in the 200-ZP-1 OU is prohibited, except for limited research purposes, monitoring, and treatment authorized in EPA approved documents. The Sitewide Institutional Controls Plan will contain the institutional controls and implementing details prohibiting well drilling and groundwater use in the 200-ZP-1 OU, as defined in the Decision document for the 200-ZP-1 OU.	No findings, no unauthorized groundwater use has occurred.
Warning Notices	The DOE shall post and maintain warning signs along pipelines conveying untreated groundwater that caution site visitors and workers of potential hazards from the 200-ZP-1 OU groundwater.	No findings, signs have been/will be installed along pipelines. (Figures 8 – 11)
Miscellaneous Provision	In the event of any unauthorized access to the site (e.g., trespassing), DOE shall report such incidents to the Benton County Sheriff's Office for investigation and evaluation of possible prosecution.	No findings, no unauthorized access to the site has occurred.
Land-Use Management	Activities that would disrupt or lessen the performance of the pump-and-treat, MNA (Monitored Natural Attenuation), and flow-path control components of the remedy are to be prohibited.	No findings, no activities have been implemented that would disrupt/lesson performance of remedy.
Land-Use Management	The DOE shall prohibit activities that would damage the pump-and-treat, MNA, and flow-path control components (e.g., extraction wells, injection wells, piping, treatment plant, or monitoring wells).	No findings, no activities have been implemented that would damage the remedy components.
Miscellaneous Provision	The DOE shall report on the effectiveness of institutional controls for the 200-ZP-1 OU remedy in an annual report, or on an alternative reporting frequency specified by EPA. Such reporting may be for this OU alone or may be part of a Hanford sitewide report.	No findings.
Land-Use Management	The DOE will provide notice to EPA at least six months prior to any transfer or sale of the any land above the 200-ZP-1 OU so EPA can be involved in discussions to ensure that appropriate provisions are included in the transfer terms or conveyance documents to maintain effective institutional controls. If it is not possible for DOE to notify EPA at least six months prior to any transfer or sale, then the DOE will notify EPA as soon as possible but no later than 60 days prior to the transfer or sale of any property subject to institutional controls. In addition to the land transfer notice and discussion provisions above, the DOE further agrees to provide	No findings, no transfer/sale of land has taken place.

Table 3. Institutional Controls Requirements Listed in Record of Decision Hanford 200 Area 200-ZP-1 OU Superfund Site Benton County, Washington (2 Sheets).

Institutional Controls Category	Institutional Controls Requirement	2017 Status
	EPA with similar notice, within the same time frames, as to federal-to-federal transfer of property. The DOE shall provide a copy of executed deed or transfer assembly to EPA.	
Land -Use Management	The DOE will prevent the development and use of property above the 200-ZP-1 groundwater OU for residential housing, elementary and secondary schools, childcare facilities and playgrounds.	No findings, no property development has taken place.
Land -Use Management	Land use controls will be maintained until cleanup levels are achieved and the concentrations of hazardous substances in groundwater are at such levels to allow for unrestricted use and exposure and EPA authorizes the removal of restrictions.	No findings, land use controls are still in place.

Table 4. Institutional Controls Requirements (Required through the Time of Completion of Remedy Construction) Listed in Record of Decision for 200-CW-2 and 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units.

Institutional Controls Category	Institutional Controls Requirement	2017 Status
Entry Restrictions	DOE shall controls access to prevent unacceptable exposure of humans to contaminants in the 200-CW-5 and 200-PW-1. 200-PW-3, and 200-PW-6 OU's. Visitors entering any of these OUs will be required to be badged and escorted at all time.	No findings, access controls still in place.
Warning Notices	DOE shall post and maintain warning signs at the waste sites in these OUs that caution visitors and workers of potential hazards from contaminants below the ground surface.	No findings, warning signs are in place.
Miscellaneous Provision	In the event of any unauthorized access to the site, such as trespass, DOE shall report such incidents to the Benton County Sheriff's Office for investigation and evaluation of possible prosecution.	No findings, no unauthorized access to the site has occurred.
Land-Use Management	DOE shall prohibit activities that are not industrial in nature, and prohibit drilling, excavation, or use of soil at these waste sites.	No findings.
Groundwater Use Management	DOE shall prohibit use of groundwater located beneath the 200-CW-5, 200-PW-1, 200-PW-3, and 200-PW-6 OUs for the foreseeable future until drinking water standards are achieved.	No findings, no use of groundwater as a drinking water standards.
Land-Use Management	DOE shall maintain the integrity of and prohibit activities that could damage or lessen the performance of required evapotranspiration caps and soil covers.	Not applicable at present time.
Miscellaneous Provision	DOE shall report annually on the effectiveness of ICs for the 200-CW-4 and 200-PW-1, 200-PW-3, and 200-PW-6 OUs as specified in the Hanford Sitewide Institutional Controls Plan or an alternative report reporting frequency specified by EPA.	No findings, ICs have been effective.
Land-Use Management	DOE will provide notice to EPA at least 6 months prior to any transfer or sale of any land in the 200-CW-1 and 200-PW-1, 200-PW-3, and 200-PW-6 so EPA can be involved in discussions to ensure that appropriate provisions are included in the transfer terms or conveyance documents to maintain effective ICs. If it is not possible for DOE to notify Ecology and EPA at least 6 months before any transfer or sale, DOE will notify Ecology and EPA as soon as possible, but no later than 60 days before the transfer or sale of any property subject to ICs. In addition to the land transfer notice and discussion provisions, DOE further agrees to provide Ecology and EPA with similar notice, within the same time frames, as to federal-to-federal transfer of property. DOE shall provide a copy of the executed deed or transfer assembly to Ecology and EPA.	Land has not been transferred or sold, no findings.
Land-Use Management	DOE will prevent the development and use of 200-CW-5, 200-PW-1, 200-PW-3, and 200-Pw-6 OUs for residential housing, elementary and secondary schools, childcare facilities, and playgrounds.	Development of land has not occurred, no findings.

Table 4. Institutional Controls Requirements (Required through the Time of Completion of Remedy Construction) Listed in Record of Decision for 200-CW-2 and 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units.

Institutional Controls Category	Institutional Controls Requirement	2017 Status
Land-Use Management	Land-use controls will be maintained as long as the contamination remains at levels do not allow for unrestricted use and unlimited exposure and shall not be removed without the prior authorization of EPA.	Land use controls are still being maintained.

Table 5. Institutional Controls Requirements Listed in EPA/ROD/R10-93/063 1993 Record of Decision 1100-EM-1, 1100-EM2, 1100-EM-3, and 1100-IU-1 Operable Units, Explanation of Significant Differences, Horn Rapids Landfill.

Institutional Controls Category	Institutional Controls Requirement	2017 Status
Land-Use Management Entry Restrictions	Institutional controls are required to prevent human exposure to the landfill soil. DOE is responsible for establishing and maintaining land-use and access restrictions through fencing and signs.	No findings, land use access restriction still in place. Signage was update to reflect current requirements (Figure 12).
Land-Use management	Use of the landfill property or residential housing, elementary and secondary schools, or childcare facilities is prohibited the remedial activity without the lead agency's concurrence.	No findings, no activities have occurred.
Land-Use Management	In addition, measures necessary to ensure the continuation of this restriction will be taken in the event of any transfer or lease of the property before the final remedy is selected. A copy of the notification in a land-use plan will be given to any prospective purchaser/transfer before any transfer or lease. DOE will provide the Washington State Department of Ecology and U.S. Environmental Protection Agency notification at least six months prior to any transfer, sale or lease of the landfill property.	No findings.

Figure 12. Warning Sign at the Horn Rapids Landfill.

CHPRC WORK SITE ASSESSMENT REPORT

1. WSA NO.: KBO&PR-2017-WSA-17874

2. Project/Function: KBO&PR

13. Date(s): 5/15/2017

4. Assessment Title and Purpose/Scope:

Annual Evaluation of Institutional Controls for lOOK. The purpose of this assessment is to evaluate the effectiveness of institutional controls identified for CERCLA remedial actions in the lOOK area.

5. Location:

lOOK

6. Assessment Personnel:

Kathleen Thompson

7. Personnel Contacted: (titles may be used rather than specific names to identify people contacted and interviewed during the review)

None

8. Applicable Requirements/Criteria:

K Basins Interim Remedial Action Record of Deision (EPA/ROD/Rl0-99/059) and implementing work plans. Requirements are as follows:

DOE/RL-99-89 (RDR/RAWP for K Basins Interim Remedial Action) as modified by TPA-CN-604;
DOE/RL-2010-52 (RD/RAWP for 105-K West Basins Deactivation) as modified by TA-CN-607;
DOE/RL-2010-53 (RD/RAWP for 105-K West Basin Demolition & Removal) as modified by TPA-CN-605;
DOE/RL-2010-63 Rev 1 (RD/RAWP for Removal of K Basins Sludge from the River Corridor to the Central Plateau)

9. Documents Reviewed:

- 2016 Institutional Control Evaluation Report as documented in KBOPR-2016-WSA-16207
- TPA Change Notices TPA-CN-604, TPA-CN-605, TPA-CN-606, and TPA-CN-607
- Sitewide Institutional Control Plan (DOE/RL-2001-41)

10. Description of Assessment Methods: (e.g., what methods were used in the assessment)

This assessment was per£ormed through document reviews and a field inspection to evaluate status of a6cess controls.

11. Assessment Summary Containing Information That Address the LOIs, Assessment Conclusion, and Findings and Opportunities for Improvement Identified:

This report provides the results of the evaluation of institutional controls associated with the K Basins Interim Remedial Action. The evaluation was supplemented by a field inspection to assess the physical condition of two of the institutional controls (warning signs and fencing). The stipulated institutional controls for the K Basins Interim Remedial Action are deemed to be appropriately implemented and effective.

Large "Warning" signs are posted in prominent locations for access to the lOOK area (on the main access road (K Avenue r and at the locations of the former 181 KW and 181 KE river intake structures). "No Trespassing" signs are posted at regular intervals along the Columbia River. These warning signs appear to be adequate and in good condition.

The other institutional controls evaluated in the field inspection was fencing. Chain link fencing is provided around much of the lOOK perimeter. The perimeter fence is supplemented with barbed wire fencing along the river and interior fencing and other barriers around the 105KW facility.

See the attached assessment hecklist for additional details.

Record numbers for anv CRs initiated bv this report

CHPRC WORK SITE ASSESSMENT REPORT

1. WSA NO.: KBO&PR-2017-WSA-17874	2. Project/Function: KBO&PR	3. Date(s): 5/15/2017

12. WSA Performed By:

Kathleen R Thompson — Name

Signature

5/tJ/'2-t, 5/15/2017 — Date

KT 5/17/17

13. Approved Responsible Manager:

Deborah G. Singleton — Name

Signature

5/17/2017 — Date

14. Attachments: [x] Yes [ ] No (It is not necessary to attach copies of records, documents, procedures, etc. which are retrievable from IDMS or other records storage locations, which are referenced in block 9)

If Yes, List: Assessment Checklist and Photos

15. Distribution:

Initiator:	Kathleen Thompson	NSR&ER (APAAADocs):	
Responsible Manager:	Deborah G. Singleton	Others (list):	Kathleen Thompson
Affected Management, as applicable:	Michael W. Johnson Steve Moore		
Project Assessment Coordinator (Electronic):	Jim Meeker		

Assessment Checklist

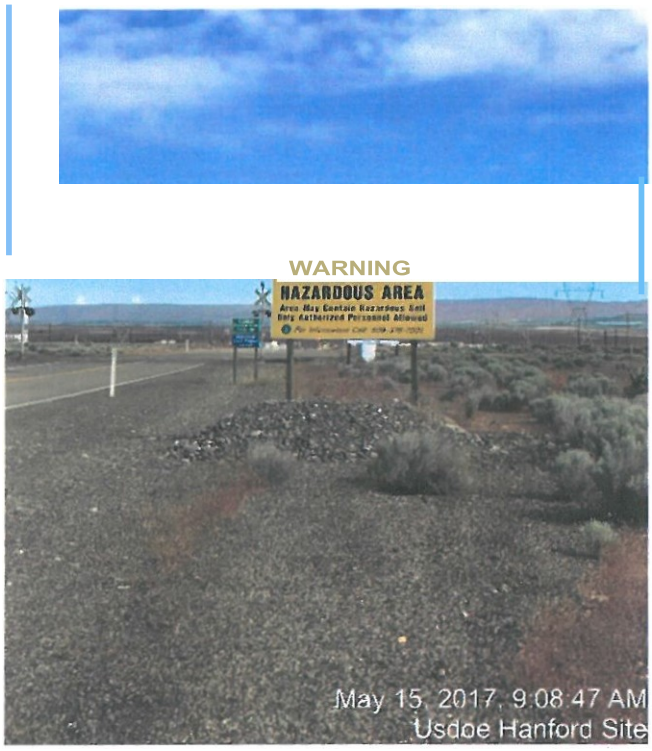
Institutional Controls for lOOK

Background and Introduction

The K Basins Interim Remedial Action Record of Decision calls for institutional controls that will minimize the potential for human exposure to hazardous substances that will be addressed by the remedial action. The specific controls are identified in the work plans that implement the remedial action decision. This assessment checklist identifies the required controls and provides an evaluation to determine whether the controls have been implemented and whether the implementation has been effective in minimizing the potential for human exposure to hazardous substances.

Institutional Controls Requirement	**Discussion of Implementation and Effectiveness**
Continue the current badging program and access controls for the duration of the interim action. Visitors entering the sites associated with this interim action are required to have an escort at all times.	The badging and other entry restrictions remain in place and appear to be effective.
Utilize the onsite excavation permit process to control intrusive activities such as well drilling and excavation of soil.	The excavation permit process remains in place as an effective control.
Maintain existing signs prohibiting public access.	No trespassing signs are in place along the river. Large warning signs are present at the entrance to lOOK and at the former locations of the 181 KW and 181KE river intake structures along the river. The signs are effective controls.
Provide notification to the lead regulator upon discovery of any trespass incidents.	Security forces continue to patrol the area and report trespass. MSA manages this function.
Report trespass incidents to the Benton County Sheriff's Office for investigation and evaluation for possible prosecution.	DOE reports trespass incidents to the appropriate authorities.
Take the necessary precautions to add access restriction language to any land transfer, sale, or lease of property that the U.S. Government considers appropriate while institutional controls are compulsory. The lead regulator will have to approve any access restrictions prior to transfer, sale, or lease.	No land transfers have taken place in lOOK. The controls remain in places as managed by MSA.
Until final remedy selection, institutional control requirements will not be deleted or terminated unless the lead regulator has provided written concurrence on the deletion or termination and appropriate documentation has been placed in the Administrative Record.	The institutional control requirements were modified by TPA change notices 604, 605, 606, and 607 and have been placed in the Administrative Record.
The implementation and effectiveness of institutional controls will be evaluated and reported in accordance with DOE/RL-2001-41, Sitewide	DOE/RL-2001-41 is typically revised 180 days after a ROD is issued to reflect updates and changes. The latest revision to

Institutional Controls Plan for Hanford CERCLA Response Actions.	DOE/RL-2001-41 was in March 2015. It went from revision 7 to revision 8.
Current access controls include signs along the river, non-continuous fencing, and locked access to buildings containing the primary hazards, and routine security patrols.	Signs along the river are in place, buildings are locked, and there are routine security patrols. A non-continuous fence is in place. Fencing and/or signs are present at locations where access is most likely to occur.



Approaching the main entrance of lOOK

Signage to main entrance to the 100-K

West fence line of the 100-K

West fence line of the 100-K

South fence line of the 100-K

North fence line of the 100-K

Warning signs at the former KW Intake Structure

Warning signs at the former KE Intake Structure

East fence line of the 100-K

Southeast gate entrance to the 100-K

MSA-1105355.6

CONTRACT NO. DE-AC06-09RL14728

ATTACHMENT 3

Contract Deliverable CD0182

ASSESSMENT OF CERCLA INSTITUTIONAL CONTROLS FOR BUILDINGS OCCUPIED IN HANFORD 300 AREA

PACIFIC NORTHWEST NATIONAL LABORATORY

Consisting of 4 pages,
including this cover page

MEMORANDUM

Pacific Northwest NATIONAL LABORATORY
Proudly Operated by Battelle Since 1965

Date:	**August 11, 2017**	Project No.:	
To:	**Raja Ranade, MSA**	Internal Distribution:	**KM McDonald** **MJ Stephenson** **File/LB**
From:	**Harold Tilden**		
Subject:	**PNNL Assessment of CERCLA Institutional Controls for Buildings Occupied in Hanford 300 Area**		

Pacific Northwest National Laboratory (PNNL) occupies 300 Area facilities that are being retained to support PNNL missions. As of this date, those facilities include:

Table 1. PNNL-Occupied 300 Area Retained Facilities

Building #	Building Name/Function
312	Pump Pit
318	Radiological Calibrations Laboratory
318 T4	Office Trailer
325	Radiochemical Processing Laboratory (RPL)
331	Life Sciences Laboratory I
350	Plant Operations and Maintenance Facility
350A	Paint Shop
350B	Warehouse
350C	Storage Building
350D	Oil Storage Facility
3614A	River Water Support Building

The “Hanford Site 300 Area Record of Decision for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1”, dated November 2013 (hereinafter “300 Area ROD”) identifies several waste sites which, while not the direct responsibility of PNNL, rely on measures utilized by PNNL as part of the management of the retained facility for compliance with the institutional controls requirements. These waste sites are associated with the retained facilities in that they lie underneath or in close proximity to these facilities, which prevents the exercise of the selected remedy (i.e., remove contaminated soil to disposal until industrial cleanup levels have been reached) until the

buildings can be demolished. The waste sites identified in the 300 Area ROD that are deferred and located adjacent to PNNL-occupied retained facilities are:

Table 2. WIDS Sites Included in 300 Area ROD That Are Associated with Retained 300 Area Facilities Occupied by PNNL and Require Further (Deferred) Remedial Action

WIDS ID	Description	Associated With
300 RLWS	Radioactive Liquid Waste System	325RPL
300 RRLWS	Retired Radioactive Liquid Waste System	325RPL
300-15	300 Area Process Sewer	318, 325RPL, 331
300-265	324/325 Building Transfer Pipeline	325RPL
300-269	331-A Building Foundation	331
331 LSLT1	LSL Septic Tank/Drainfield	331
331 LSLT2	LSL Septic Tank/Drainfield	331
UPR-300-10	Pipeline Leak Under 325-B Building	325RPL
UPR-300-12	Pipeline Leak Under 325-A Building	325RPL
UPR-300-48	Broken Pipe Under 325 Building	325RPL

This assessment identifies the applicable 300 Area ROD requirements that are met or partially met through PNNL's management activities for the 300 Area retained facilities it occupies and those facilities' associated WIDS sites.

Table 3. Assessment of Institutional Controls in 300 Area ROD and Applicable to PNNL Retained Facilities.

Institutional Controls Requirement[1]	**Institutional Controls Status**
Signage and access control to waste sites	Warning sign posted at 300 Area entrances (maintained by MSA). PNNL maintains access control (using key cards) to its facilities.
Maintenance and operation of an excavation permit program for protection of environmental and cultural resources and site workers	PNNL has a fully deployed and operated excavation permit program. This is coordinated with Mission Support Alliance's excavation permit program for the Hanford Site when excavation is proposed in the 300 Area.

[1] From 300 Area ROD Section 9.2.

Table 3. Assessment of Institutional Controls in 300 Area ROD and Applicable to PNNL Retained Facilities.

Institutional Controls Requirement[1]	Institutional Controls Status
Administrative controls limiting groundwater access and use where groundwater is above CULs	Groundwater access and use is prohibited, except for utilization of the 399-4-12 well for supplemental water supply for the aquatic research facility in 331 as previously authorized.
Prevent enhanced recharge over or near waste sites with potential to pose an unacceptable groundwater risk from irrigation	No irrigation at any PNNL-occupied 300 Area facility except for 331. PNNL discontinued irrigation around the 331 Building except for the west tree line and a few shrubs near the south building entrance in June 2014.
Prevent bare gravel or bare sand covers over waste sites in the 300 Area Industrial Complex in areas where contamination exceeds residential groundwater and river protection CULs	Areas around PNNL-occupied 300 Area buildings are paved with asphalt except for 331. The soil (covered with now-dead grass) over WIDS sites near 331 is planned to receive a ROD-compliant cover in late FY17 or early FY18.
Prevent enhanced recharge from the discharge of water (such as drainage from paved parking lots or buildings) in areas where contamination exceeds residential groundwater and river protection CULs. Prevent irrigation in areas where contamination exceeds residential groundwater and river protection CULs.	Paved areas are generally graded to drain away from buildings and waste sites. One exception exists at the 331 Building and is being evaluated in conjunction with the development of the ROD-compliant cover for the WIDS sites (see above). Some building roof drains are routed to dry wells on site; others are routed to paved areas that follow the natural slope of the 300 Area towards the Columbia River.

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