

APPENDIX A
DECOMMISSIONING PLAN ANNOTATED CHECKLIST

PURPOSE OF THIS APPENDIX

The purpose of this appendix is to assist NRC staff in review of the plan by providing the checklist used in its preparation, annotated to show where each applicable topic is addressed.

INFORMATION IN THIS APPENDIX

This appendix provides in Table A-1 a comparison between the major topics of the decommissioning plan evaluation checklist found in Appendix D to Volume 1 of NUREG-1757, *Consolidated Decommissioning Guidance, Decommissioning Process for Materials Licensees* (NRC 2006), and the major sections of this plan.

It then replicates the NUREG-1757 Appendix D checklist and identifies:

- The topics that do not apply to this plan based on discussions between NRC and DOE that took place in a decommissioning plan scoping meeting held on May 19, 2008 (NRC 2008), which are marked NA for not applicable;
- The section and page number in this plan where each applicable topic is addressed; and
- The cases where NRC has agreed that DOE procedures (i.e., DOE regulations, orders, and technical standards) can be cited in the plan instead of providing details called for by the NRC checklist (NRC 2008).

RELATIONSHIP TO OTHER PARTS OF THE PLAN

This appendix shows how the other parts of this plan address the applicable topics of the NRC decommissioning plan evaluation checklist.

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Table A-1. NUREG-1757 Checklist – Phase 1 Decommissioning Plan Comparison

NUREG-1757 Checklist		WVDP Phase 1 Decommissioning Plan	
Sec	Subject	Sec	Subject
I	Executive Summary		Executive Summary
		1	Introduction
II	Facility Operating History	2	Facility Operating History
III	Facility Description	3	Facility Description
IV	Radiological Status of Facility	4	Radiological Status of Facility
V	Dose Modeling	5	Dose Modeling
VI	Environmental Information	3	Facility Description
VII	ALARA Analysis	6	ALARA Analysis
VIII	Planned Decommissioning Activities	7	Planned Decommissioning Activities
IX	Project Management and Organization	1.6	Project Management and Organization
X	Health and Safety	1.7	Health and Safety
XI	Environmental Monitoring and Control	1.8	Environmental Monitoring and Control
XII	Radioactive Waste Management Program	1.9	Radioactive Waste Management Program
XIII	Quality Assurance Program	8	Quality Assurance Program
XIV	Facility Radiation Surveys	9	Facility Radiation Surveys
XV	Financial Assurance		Not applicable.
XVI	Restricted Release/Alternate Criteria		Not applicable.
		App A	Decommissioning Plan Annotated Checklist
		App B	Environmental Radioactivity Data
		App C	Details of DCGL Development and Integrated Dose Analysis
		App D	Engineered Barriers and Post Remediation Activities
		App E	Dose Modeling Probabilistic Uncertainty Analysis
		App F	Estimated Radioactivity in Subsurface Piping
		App G	Phase 1 Final Status Survey Conceptual Framework

The annotated NUREG-1757 decommissioning plan evaluation checklist begins on the next page. Acronyms and abbreviations used in the checklist are as follows:

App = appendix ES = Executive Summary NA = not applicable

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CONTENT	SECTION	PAGE
I. EXECUTIVE SUMMARY		
The name and address of the licensee or owner of the site	ES	ES-3
The location and address of the site	ES	ES-3
A brief description of the site and immediate environs	ES	ES-4
A summary of the licensed activities that occurred at the site	ES	ES-10
The nature and extent of contamination at the site	ES	ES-13
The decommissioning objective proposed by the licensee (i.e., restricted or unrestricted use)	ES	ES-17
The DCGLs for the site, the corresponding doses from these DCGLs, and the method that was used to determine the DCGLs <i>[Note that cleanup goals below the DCGLs are the criteria to be used for remediation activities in Phase 1. These are specified in Table ES-2.]</i>	Table ES-1 Table ES-2	ES-19 ES-20
A summary of the ALARA evaluations performed to support the decommissioning	ES	ES-21
If the licensee requests license termination under restricted conditions, the restrictions the licensee intends to use to limit doses as required in 10 CFR Part 20.1403 or 20.1404, and a summary of institutional controls and financial assurance	NA	NA
If the licensee requests license termination under restricted conditions or using alternate criteria, a summary of the public participation activities undertaken by the licensee to comply with 10 CFR Part 20.1403(d) or 20.1404(a)(4)	NA	NA
The proposed initiation and completion dates of decommissioning	ES	ES-21
Any post-remediation activities (such as ground water monitoring) that the licensee proposes to undertake prior to requesting license termination	ES	ES-21
A statement that the licensee is requesting that its license be amended to incorporate the DP	NA	NA

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CONTENT	SECTION	PAGE
1. Introduction		
<i>Because of the complexities of the project, DOE has included an Introduction section. It addresses matters such as the purpose of the plan and the scope of the Phase 1 decommissioning activities. It explains the background of the project, including the relationship between the plan and the Decommissioning EIS and the general responsibilities of the organizations involved. It describes the site conditions that will be in effect at the time the decommissioning activities begin, i.e., the interim end state. It explains the relationship between Phase 1 and Phase 2.</i>		
<i>The Introduction also briefly addresses the following matters covered by DOE procedures:</i>		
<ul style="list-style-type: none">• <i>Project management,</i>• <i>Health and safety,</i>• <i>Environmental monitoring and control, and</i>• <i>The radioactive waste management program.</i>		
II. FACILITY OPERATING HISTORY		
II.a. LICENSE NUMBER/STATUS/AUTHORIZED ACTIVITIES		
The radionuclides and maximum activities of radionuclides authorized and used under the current license	NA	NA
The chemical forms of the radionuclides authorized and used under the current license	NA	NA
A detailed description of how the radionuclides are currently being used at the site	NA	NA
The location(s) of use and storage of the various radionuclides authorized under current licenses	NA	NA
A scale drawing or map of the building or site and environs showing the current locations of radionuclide use at the site	NA	NA
A list of amendments to the license since the last license renewal	NA	NA
II.b. LICENSE HISTORY		
The radionuclides and maximum activities of radionuclides authorized and used under all previous licenses	2.1 Table 2-1 Table 2-2 Table 2-3	2-2 2-2 2-3 2-3

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CONTENT	SECTION	PAGE
The chemical forms of the radionuclides authorized and used under all previous licenses	Table 2-1	2-2
	Table 2-2	2-3
	Table 2-6	2-11
	Table 2-7	2-12
	Table 2-8	2-13
	Table 2-9	2-17
A detailed description of how the radionuclides were used at the site	2.1.1	2-5
	2.1.2	2-14
The location(s) of use and storage of the various radionuclides authorized under all previous licenses	2.1.1	2-5
	2.1.2	2-15
A scale drawing or map of the site, facilities, and environs showing previous locations of radionuclide use at the site	Figure 2-3	2-21
	Figure 2-4	2-22
II.c. PREVIOUS DECOMMISSIONING ACTIVITIES		
A list or summary of areas at the site that were remediated in the past <i>Also addresses additional remediation planned to achieve the interim end state.</i>	2.2	2-18
	Table 2-11	2-19
	Table 2-13	2-25
	Figure 2-5	2-23
A summary of the types, forms, activities, and concentrations of radionuclides that were present in previously remediated areas	Table 2-11	2-19
	Table 2-13	2-25
The activities that caused the areas to become contaminated	2.1.1	2-5
	2.1.2	2-14
The procedures used to remediate the areas, and the disposition of radioactive material generated during the remediation	2.2.1	2-19
	2.2.2	2-19
A summary of the results of the final radiological evaluation of the previously remediated area	Table 2-13	2-25
	2.2.2	2-29
	Table 4-5	4-16
	Table 4-6	4-17
A scale drawing or map of the site, facilities, and environs showing the locations of previous remedial activity	Table 4-8	4-19
	Figure 2-5	2-22
II.d. SPILLS		
<i>Does not include spills inside facilities that did not impact the environment.</i>		
A summary of areas at the site where spills (or uncontrolled releases) of radioactive material occurred in the past	2.3	2-32

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CONTENT	SECTION	PAGE
The types, forms, activities, and concentrations of radionuclides involved in the spill or uncontrolled release	Table 2-16 Table 2-17 Table 2-18	2-34 2-38 2-41
A scale drawing or map of the site, facilities, and environs showing the locations of spills <i>The locations of major spills are shown in the figures listed. The locations of minor spills are identified in Table 2-17 (page 2-39) and Table 2-18 (page 2-41).</i>	Figure 2-3 Figure 2-4 Figure 2-6 Figure 2-7	2-21 2-22 2-33 2-37
II.e. PRIOR ONSITE BURIALS		
A summary of areas at the site where radioactive material has been buried in the past	2.4	2-42
The types, forms, activities and concentrations of waste and radionuclides in the former burial	Table 2-19 Table 2-20 Table 2-21	2-43 2-44 2-45
A scale drawing or map of the site, facilities, and environs showing the locations of former burials	Figure 2-3 Figure 2-4	2-21 2-22
III. FACILITY DESCRIPTION		
<i>This section incorporates information from the DEIS. The SDA is not addressed.</i>		
III.a. SITE LOCATION AND DESCRIPTION		
The size of the site in acres or square meters	3.1.2	3-2
The State and county in which the site is located	3.1.1	3-2
The names and distances to nearby communities, towns, and cities	3.1.1 3.2.2	3-2 3-32
A description of the contours and features of the site	3.1.2 Figure 3-3 Figure 3-4	3-2 3-95 3-96
The elevation of the site	3.1.2	3-2
A description of property surrounding the site, including the location of all off-site wells used by nearby communities or individuals	3.1.4 3.2.1	3-27 3-29
The location of the site relative to prominent features such as rivers and lakes	Figure 3-1 Figure 3-2	3-93 3-94

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CONTENT	SECTION	PAGE
A map that shows the detailed topography of the site using a contour interval	Figure 3-3 Figure 3-4	3-95 3-96
The location of the nearest residences and all significant facilities or activities near the site	3.1.4	3-27
A description of the facilities (e.g., buildings, parking lots, and fixed equipment) at the site	3.1.3	3-3
III.b. POPULATION DISTRIBUTION		
A summary of the current population in and around the site, by compass vectors	3.2 Figure 3-44	3-29 3-130
A summary of the projected population in and around the site by compass vectors [<i>Projections not available by compass vector.</i>]	3.2.2	3-32
III.c. CURRENT/FUTURE LAND USE		
A description of the current land uses in and around the site	3.3.1 Figure 3-45	3-35 3-131
A summary of anticipated land uses	3.3.2	3-38
III.d. METEOROLOGY AND CLIMATOLOGY		
A description of the general climate of the region	3.4.1	3-40
Seasonal and annual frequencies of severe weather phenomena	3.4.2	3-41
Weather-related radionuclide transmission parameters	3.4.3	3-41
Routine weather-related site deterioration parameters	3.4.4	3-42
Extreme weather-related site deterioration parameters	3.4.4	3-42
A description of the local (site) meteorology	3.4.5	3-42
The National Ambient Air Quality Standards Category of the area in which the facility is located and, if the facility is not in a Category 1 zone, the closest and first downwind Category 1 Zone	3.4.5	3-47
III.e. GEOLOGY AND SEISMOLOGY		
A detailed description of the geologic characteristics of the site and the region around the site	3.5	3-47

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CONTENT	SECTION	PAGE
A discussion of the tectonic history of the region, regional geomorphology, physiography, stratigraphy, and geochronology	3.5	3-47
A regional tectonic map showing the site location and its proximity to tectonic structures	Figure 3-55	3-41
A description of the structural geology of the region and its relationship to the site geologic structure	3.5	3-47
A description of any crustal tilting, subsidence, karst terrain, landsliding, and erosion	3.5.3	3-52
A description of the surface and subsurface geologic characteristics of the site and its vicinity	3.5	3-47
A description of the geomorphology of the site	3.5.3	3-52
A description of the location, attitude, and geometry of all known or inferred faults in the site and vicinity	3.5.4	3-55
A discussion of the nature and rates of deformation	3.5.3	3-52
A description of any man-made geologic features such as mines or quarries	3.1.1	3-2
A description of the seismicity of the site and region	3.5.5	3-61
A complete list of all historical earthquakes that have a magnitude of 3 or more, or a modified Mercalli intensity of IV or more within 200 miles of the site	3.5.5 Table 3-15	3-61 3-61
III.f. SURFACE WATER HYDROLOGY		
A description of site drainage and surrounding watershed fluvial features	3.6.1	3-65
Water resource data including maps, hydrographs, and stream records from other agencies (e.g., U.S. Geological Survey and U.S. Army Corps of Engineers)	3.6.1 Figure 3-3	3-65 3-95
Topographic maps of the site that show natural drainages and man-made features	Figure 3-3 Figure 3-4	3-95 3-96
A description of the surface water bodies at the site and surrounding areas	3.6.1	3-65
A description of existing and proposed water control structures and diversions (both upstream and downstream) that may influence the site	none	-

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CONTENT	SECTION	PAGE
Flow-duration data that indicate minimum, maximum, and average historical observations for surface water bodies in the site areas	3.6.1	3-67
Aerial photography and maps of the site and adjacent drainage areas identifying features such as drainage areas, surface gradients, and areas of flooding	Figure 3-3 Figure 3-4	3-95 3-96
An inventory of all existing and planned surface water users, whose intakes could be adversely affected by migration of radionuclides from the site	3.6.4	3-68
Topographic and/or aerial photographs that delineate the 100-year floodplain at the site	Figure 3-4	3-96
A description of any man-made changes to the surface water hydrologic system that may influence the potential for flooding at the site	<i>No such changes</i>	-
III.g. GROUND WATER HYDROLOGY		
A description of the saturated zone	3.7.1	3-70
Descriptions of monitoring wells	3.7.2 4.2.8 Figure 4-12 Table B-15	3-72 4-58 4-63 B-41
Physical parameters	3.7.3	3-73
A description of ground water flow directions and velocities	3.7.1 Figure 3-62 Figure 3-63 Figure 3-64 Figure 3-65	3-71 3-148 3-149 3-150 3-151
A description of the unsaturated zone	3.7.4	3-73
Information on all monitor stations including location and depth	Table B-15	B-41
A description of physical parameters	3.7.3	3-73
A description of the numerical analyses techniques used to characterize the unsaturated and saturated zones	3.7.7	3-75
The distribution coefficients of the radionuclides of interest at the site	3.7.8 Table 3-20	3-77 3-80

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CONTENT	SECTION	PAGE
III.h. NATURAL RESOURCES		
A description of the natural resources occurring at or near the site	3.8	3-82
A description of potable, agricultural, or industrial ground or surface waters	3.8.3	3-84
A description of economic, marginally economic, or subeconomic known or identified natural resources as defined in U.S. Geological Survey Circular 831	3.8	3-82
Mineral, fuel, and hydrocarbon resources near and surrounding the site which, if exploited, would effect the licensee's dose estimates	<i>none</i>	-
IV. RADIOLOGICAL STATUS OF FACILITY		
<i>Information on residual radioactivity and radiation levels in facilities is provided at a summary level consistent with DOE having primary responsibility for the health and safety aspects of the facility removal activities. Additional characterization will be performed in connection with the decommissioning activities as specified in Section 9.</i>		
IV.a CONTAMINATED STRUCTURES		
A list or description of all structures at the facility where licensed activities occurred that contain residual radioactive material in excess of site background levels	4.1.2 Figure 4-1 Figure 4-2 Figure 4-3 Figure 4-4 Figure 4-5	4-5 4-7 4-8 4-9 4-10 4-11
A summary of the structures and locations at the facility that the licensee has concluded have not been impacted by licensed operations and the rationale for the conclusion	4.1.3	4-12
A list or description of each room or work area within each of these structures	NA	NA
A summary of the background levels used during scoping or characterization surveys	NA	NA
A summary of the locations of contamination in each room or work area	NA	NA
A summary of the radionuclides present at each location, the maximum and average radionuclide activities in dpm/100 cm², and, if multiple radionuclides are present, the radionuclide ratios	NA	NA
The mode of contamination for each surface (i.e., whether the radioactive material is present only on the surface of the material or if it has penetrated the material)	NA	NA

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CONTENT	SECTION	PAGE
— The maximum and average radiation levels in mrem/hr in each room or work area	NA	NA
— A scale drawing or map of the rooms or work areas showing the locations of radionuclide material contamination	NA	NA
IV.b. CONTAMINATED SYSTEMS AND EQUIPMENT		
— A list or description and the location of all systems or equipment at the facility that contain residual radioactive material in excess of site background levels	NA	NA
— A summary of the radionuclides present in each system or on the equipment at each location, the maximum and average radionuclide activities in dpm/100cm ² , and, if multiple radionuclides are present, the radionuclide ratios	NA	NA
— The maximum and average radiation levels in mrem/hr at the surface of each piece of equipment	NA	NA
— A summary of the background levels used during scoping or characterization surveys	NA	NA
— A scale drawing or map of the rooms or work areas showing the locations of the contaminated systems or equipment	NA	NA
IV.c. SURFACE SOIL CONTAMINATION		
<i>Information provided focuses on the project premises using existing data, which are not available for all locations on the project premises. Contamination in stream sediment is also addressed.</i>		
A list or description of all locations at the facility where surface soil contains residual radioactive material in excess of site background levels	4.2.3 Figure 4-6	4-29 4-32
A summary of the background levels used during scoping or characterization surveys	4.2.2 Table 4-11 Figure B-1 Table B-1	4-26 4-27 B-3 B-4
A summary of the radionuclides present at each location, the maximum and average radionuclide activities in pCi/gm, and, if multiple radionuclides are present, the radionuclide ratios	4.2.3 4.2.5	4-29 4-36
The maximum and average radiation levels in mrem/hr at each location <i>[Data are not available at sample locations.]</i>	4.2.6	4-49

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CONTENT	SECTION	PAGE
A scale drawing or map of the site showing the locations of radionuclide material contamination in surface soil	Figure 4-6	4-32
IV.d. SUBSURFACE SOIL CONTAMINATION		
<i>Information provided focuses on the project premises using existing data, which are not available for all locations on the project premises.</i>		
A list or description of all locations at the facility where subsurface soil contains residual radioactive material in excess of site background levels	4.2.4 Figure 4-7 Figure 4-8	4-31 4-33 4-35
A summary of the background levels used during scoping or characterization surveys	4.2.2	4-26
A summary of the radionuclides present at each location, the maximum and average radionuclide activities in pCi/gm, and, if multiple radionuclides are present, the radionuclide ratios	4.2.4 4.2.5	4-31 4-36
The depth of the subsurface soil contamination at each location	Figure 4-8 4.2.5	4-35 4-36
A scale drawing or map of the site showing the locations of subsurface soil contamination	Figure 4-7 Figure 4-8	4-33 4-35
IV.e. SURFACE WATER		
<i>[Information provided focuses on the project premises using existing data, which are not available for all locations on the project premises.]</i>		
A list or description of all surface water bodies at the facility that contain residual radioactive material in excess of site background levels	4.2.7 Figure 4-11	4-55 4-56
A summary of the background levels used during scoping or characterization surveys	Table 4-11	4-27
A summary of the radionuclides present in each surface water body and the maximum and average radionuclide activities in becquerel per liter (Bq/L) (picocuries per liter (pCi/L)	Table 4-24	4-57
IV.f. GROUND WATER		
<i>Information provided focuses on the project premises.</i>		
A summary of the aquifer(s) at the facility that contain residual radioactive material in excess of site background levels	4.2.8	4-58
A summary of the background levels used during scoping or characterization surveys	Table 4-11	4-27

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CONTENT	SECTION	PAGE
A summary of the radionuclides present in each aquifer and the maximum and average radionuclide activities in Becquerel per liter (Bq/L) (picocuries per liter (pCi/L))	Table 4-25	4-59
V. DOSE MODELING		
V.a. UNRESTRICTED RELEASE USING SCREENING CRITERIA		
<i>Screening criteria are not used.</i>		
V.a.1. Unrestricted Release Using Screening Criteria for Building Surface Residual Radioactivity		
The general conceptual model (for both the source term and the building environment) of the site	NA	NA
A summary of the screening method (i.e., running DandD or using the look-up Tables) used in the DP	NA	NA
V.a.2. Unrestricted Release Using Screening Criteria for Surface Soil Residual Radioactivity		
Justification on the appropriateness of using the screening approach (for both the source term and the environment) at the site	NA	NA
A summary of the screening method (i.e., running DandD or using the look-up Tables) used in the DP	NA	NA
V.b. UNRESTRICTED RELEASE USING SITE-SPECIFIC INFORMATION		
<i>Although no remediated areas will be released for unrestricted use during Phase 1, information specified in this subsection is provided for development of DCGLs and cleanup goals for surface soil, subsurface soil, and streambed sediment. The level of detail provided is similar to that in the Decommissioning EIS.</i>		
Source term information including nuclides of interest, configuration of the source, and areal variability of the source	5.1.2	5-2
Description of the exposure scenario including a description of the critical group	5.2.1 5.2.2 5.2.3 5.2.8 Figure 5-7 Figure 5-8 Figure 5-9 Figure 5-10 Figure 5-13	5-21 5-26 5-34 5-52 5-21 5-27 5-32 5-34 5-53

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CONTENT	SECTION	PAGE
Description of the conceptual model of the site including the source term, physical features important to modeling the transport pathways, and the critical group	5.2.1	5-21
	5.2.2	5-26
	5.2.3	5-34
	5.2.8	5-52
	Figure 5-7	5-21
	Figure 5-8	5-27
	Figure 5-9	5-32
	Figure 5-10 Figure 5-13	5-34 5-53
Identification/description of the mathematical model used (e.g., hand calculations, DandD Screen v1.0, and RESRAD v5.81)	5.2.4	5-38
	5.2.8	5-55
Description of the parameters used in the analysis	Table C-1	C-3
	Table C-2	C12
	Table E-1	E-10
	Table E-2	E-11
	Table E-3	E-12
	Table E-4	E-13
	Table E-5	E-14
	Table E-6	E-15
Discussion about the effect of uncertainty on the results	5.2.6	5-44
Input and output files or printouts, if a computer program was used	App C	C-1
	Related CD	
	App E	E-1
	Related CD	
V.c. RESTRICTED RELEASE USING SITE-SPECIFIC INFORMATION		
<i>Although Phase 1 decommissioning activities will not result in a restricted release, this plan provides a limited site-wide integrated dose assessment to help place the Phase 1 decommissioning activities involving remediation of soil in the WMA 1 and WMA 2 excavations into context with regard to supporting potential Phase 2 decommissioning alternatives. Information provided on the topics in this subsection is limited to that necessary to support this assessment. The level of detail is similar to that in the Decommissioning EIS.</i>		
Source term information including nuclides of interest, configuration of the source, areal variability of the source, and chemical forms	5.1.2	5-2
A description of the exposure scenarios, including a description of the critical group for each scenario	5.2.1	5-21
	5.2.2	5-26
	5.2.3	5-34
	5.2.8	5-52
	Figure 5-7	5-21
	Figure 5-8	5-27
	Figure 5-9	5-32
	Figure 5-10 Figure 5-13	5-34 5-53

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CONTENT	SECTION	PAGE
A description of the conceptual model(s) of the site that includes the source term, physical features important to modeling the transport pathways, and the critical group for each scenario	5.2.1	5-21
	5.2.2	5-26
	5.2.3	5-34
	5.2.8	5-52
	Figure 5-7	5-21
	Figure 5-8	5-27
	Figure 5-9	5-32
	Figure 5-10 Figure 5-13	5-34 5-53
Identification/description of the mathematical model(s) used (e.g., hand calculations and RESRAD v5.81)	5.2.4	5-38
	5.2.8	5-55
A summary of parameters used in the analysis	Table C-1	C-3
	Table C-2	C12
	Table E-1	E-10
	Table E-2	E-11
	Table E-3	E-12
	Table E-4	E-13
	Table E-5	E-14
	Table E-6	E-15
A discussion about the effect of uncertainty on the results	5.2.6	5-44
Input and output files or printouts, if a computer program was used	App C Related CD	C-1
	App E Related CD	E-1
V.d. RELEASE INVOLVING ALTERNATE CRITERIA		
<i>DOE will not use alternative criteria.</i>		
— Source term information including nuclides of interest, configuration of the source, areal variability of the source, and chemical forms	NA	NA
— A description of the exposure scenarios, including a description of the critical group for each scenario	NA	NA
— A description of the conceptual model(s) of the site that includes the source term, physical features important to modeling the transport pathways, and the critical group for each scenario	NA	NA
— Identification/description of the mathematical model(s) used (e.g., hand calculations and RESRAD v5.81)	NA	NA
— A summary of parameters used in the analysis	NA	NA
— A discussion about the effect of uncertainty on the results	NA	NA

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CONTENT	SECTION	PAGE
Input and output files or printouts, if a computer program was used	NA	NA
VI. ENVIRONMENTAL INFORMATION		
Environmental information described in NUREG-1748	3	3-1 ¹
For an EIS, the environmental information is reviewed by the EPAD EIS project manager	Noted	-
VII. ALARA ANALYSIS		
<i>The ALARA analysis focuses on the DCGLs for surface and subsurface soil and streambed sediment.</i>		
A description of how the licensee will achieve a decommissioning goal below the dose limit	6.2	6-3
A quantitative cost benefit analysis	6.3 6.4	6-6 6-12
A description of how costs were estimated	6.3.2	6-8
A demonstration that the doses to the average member of the critical group are ALARA	6.3 6.4	6-8 6-12
VIII. PLANNED DECOMMISSIONING ACTIVITIES		
<i>The remediation tasks are described in general terms. Every room and area is not addressed since decontamination will be limited and the facilities will be demolished. Typical remediation techniques to be used are described in Section 7.12, starting on page 7-48. More detail will be provided later in the Decommissioning Work Plan(s). Measures for preventing contamination or recontamination of the site due to decommissioning activities are addressed in Section 7.2.2 on page 7-6.</i>		
VIII.a. CONTAMINATED STRUCTURES		
A summary of the remediation tasks planned for each room or area in the contaminated structure, in the order in which they will occur	7.3.3 to 7.3.9	7-16 to 7-29
A description of the remediation techniques that will be employed in each room or area of the contaminated structure	7.12	7-47
A summary of the radiation protection methods and control procedures that will be employed in each room or area	NA	NA
A summary of the procedures already authorized under the existing license and those for which approval is being requested in the DP	NA	NA

¹ Section 3 provides a detailed description of the affected environment. All of the information specified in NUREG-1748 is contained in the Decommissioning EIS.

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A commitment to conduct decommissioning activities in accordance with written, approved procedures	7.2.2	7-5
A summary of any unique safety or remediation issues associated with remediating the room or area	7.2.2	7-5
For Part 70 licensees, a summary of how the licensee will ensure that the risks addressed in the facility's Integrated Safety Analysis will be addressed during decommissioning	NA	NA
VIII.b. CONTAMINATED SYSTEMS AND EQUIPMENT		
A summary of the remediation tasks planned for each system in the order in which they will occur, including which activities will be conducted by licensee staff and which will be performed by a contractor	7.3.3 to 7.3.9	7-16 to 7-29
A description of the techniques that will be employed to remediate each system in the facility or site	7-12	7-47
A description of the radiation protection methods and control procedures that will be employed while remediating each system	NA	NA
A summary of the equipment that will be removed or decontaminated and how the decontamination will be accomplished	7.3 7.4.2 7.5	7-16 7-31 7-38
A summary of the procedures already authorized under the existing license and those for which approval is being requested in the DP	NA	NA
A commitment to conduct decommissioning activities in accordance with written, approved procedures	7.2.2	7-5
A summary of any unique safety or remediation issues associated with remediating any system or piece of equipment	7.2.2	7-6
For Part 70 licensees, a summary of how the licensee will ensure that the risks addressed in the facility's Integrated Safety Analysis will be addressed during decommissioning	NA	NA
VIII.c. SOIL		
A summary of the removal/remediation tasks planned for surface and subsurface soil at the site in the order in which they will occur, including which activities will be conducted by licensee staff and which will be performed by a contractor	7.3.8 7.4.3 7.7.4	7-21 7-32 7-43

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CONTENT	SECTION	PAGE
A description the techniques that will be employed to remove or remediate surface and subsurface soil at the site	7.3.8 7.4.3 7.7.4 7.12	7-21 7-32 7-43 7-47
A description of the radiation protection methods and control procedures that will be employed during soil removal/ remediation	NA	NA
A summary of the procedures already authorized under the existing license and those for which approval is being requested in the DP	NA	NA
A commitment to conduct decommissioning activities in accordance with written, approved procedures	7.2.2	7-5
A summary of any unique safety or removal/remediation issues associated with remediating the soil	7.2.2	7-6
For Part 70 licensees, a summary of how the licensee will ensure that the risks addressed in the facility's Integrated Safety Analysis will be addressed during decommissioning	NA	NA
VIII.d. SURFACE AND GROUND WATER		
<i>Surface water removed from the lagoons will be remediated in Phase 1 of the decommissioning, and groundwater removed from the WMA 1 and WMA 2 excavations will be treated also.</i>		
A summary of the remediation tasks planned for ground and surface water in the order in which they will occur, including which activities will be conducted by licensee staff and which will be performed by a contractor	7.3.8 7.4.3	7-26 7-35
A description of the remediation techniques that will be employed to remediate the ground or surface water	7.3.8 7.4.3	7-26 7-32
A description of the radiation protection methods and control procedures that will be employed during ground or surface water remediation	NA	NA
A summary of the procedures already authorized under the existing license and those for which approval is being requested in the DP	NA	NA
A commitment to conduct decommissioning activities in accordance with written, approved procedures	7.2.2	7-5
A summary of any unique safety or remediation issues associated with remediating the ground or surface water	7.2.2	7-6

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CONTENT	SECTION	PAGE
VIII.e. SCHEDULES		
A Gantt or PERT chart detailing the proposed remediation tasks in the order in which they will occur	Figure 7-16	7-56
A statement acknowledging that the dates in the schedule are contingent upon NRC approval of the DP	7.13	7-55
A statement acknowledging that circumstances can change during decommissioning, and, if the licensee determines that the decommissioning cannot be completed as outlined in the schedule, the licensee will provide an updated schedule to NRC	7.13	7-55
If the decommissioning is not expected to be completed within the timeframes outlined in NRC regulations, a request for alternative schedule for completing the decommissioning	NA	NA
IX. PROJECT MANAGEMENT AND ORGANIZATION		
<i>This section focuses on project management and organization related to the final status surveys. Matters in this section are addressed by the DOE procedures identified in Section 1.6.</i>		
IX.a. DECOMMISSIONING MANAGEMENT ORGANIZATION		
A description of the decommissioning organization	NA	NA
A description of the responsibilities of each of these decommissioning project units	NA	NA
A description of the reporting hierarchy within the decommissioning project management organization	NA	NA
A description of the responsibility and authority of each unit to ensure that decommissioning activities are conducted in a safe manner and in accordance with approved written procedures	NA	NA
IX.b. DECOMMISSIONING TASK MANAGEMENT		
A description of the manner in which the decommissioning tasks are managed	NA	NA
A description of how individual decommissioning tasks are evaluated and how the Radiation Work Permits (RWPs) are developed for each task	NA	NA
A description of how the RWPs are reviewed and approved by the decommissioning project management organization	NA	NA

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CONTENT	SECTION	PAGE
— A description of how RWPs are managed throughout the decommissioning project	NA	NA
— A description of how individuals performing the decommissioning tasks are informed of the procedures in the RWP	NA	NA
IX.c. DECOMMISSIONING MANAGEMENT POSITIONS AND QUALIFICATIONS		
— A description of the duties and responsibilities of each management position in the decommissioning organization and the reporting responsibility of the position	NA	NA
— A description of the duties and responsibilities of each chemical, radiological, physical, and occupational safety-related position in the decommissioning organization and the reporting responsibility of each position	NA	NA
— A description of the duties and responsibilities of each engineering, quality assurance, and waste management position in the decommissioning organization and the reporting responsibility of each position	NA	NA
— The minimum qualifications for each of the positions describe above, and the qualifications of the individuals currently occupying the positions	NA	NA
— A description of all decommissioning and safety committees	NA	NA
IX.d. RADIATION SAFETY OFFICER		
— A description of the health physics and radiation safety education and experience required for individuals acting as the licensee's RSO	NA	NA
— A description of the responsibilities and duties of the RSO	NA	NA
— A description of the specific authority of the RSO to implement and manage the licensee's radiation protection program	NA	NA
IX.e. TRAINING		
— A description of the radiation safety training that the licensee will provide to each employee	NA	NA
— A description of any daily worker "jobsite" or "tailgate" training that will be provided at the beginning of each workday or job task to familiarize workers with job-specific procedures or safety requirements	NA	NA
— A description of the documentation that will be maintained to demonstrate that training commitments are being met	NA	NA

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CONTENT	SECTION	PAGE
IX.f. CONTRACTOR SUPPORT		
— A summary of decommissioning tasks that will be performed by contractors	NA	NA
— A description of the management interfaces that will be in place between the site's management and onsite supervisors, and contractor management and onsite supervisors	NA	NA
— A description of the oversight responsibilities and authority that the licensee will exercise over contractor personnel	NA	NA
— A description of the training that will be provided to contractor personnel by the licensee and the training that will be provided by the contractor	NA	NA
— A commitment that the contractor will comply with all radiation safety and license requirements at the facility	NA	NA
X. HEALTH AND SAFETY PROGRAM DURING DECOMMISSIONING: RADIATION SAFETY CONTROLS AND MONITORING FOR WORKERS		
<i>Matters in this section are addressed by the DOE procedures identified in Section 1.7.</i>		
X.a. AIR SAMPLING PROGRAM		
— A description which demonstrates that the air sampling program is representative of the workers breathing zones	NA	NA
— A description of the criteria which demonstrates that air samplers with appropriate sensitivities will be used, and that samples will be collected at appropriate frequencies	NA	NA
— A description of the conditions under which air monitors will be used	NA	NA
— A description of the criteria used to determine the frequency of calibration of the flow meters on the air samplers	NA	NA
— A description of the action levels for air sampling results	NA	NA
— A description of how minimum detectable activities (MDA) for each specific radionuclide that may be collected in air samples are determined	NA	NA
X.b. RESPIRATORY PROTECTION PROGRAM		
— A description of the process controls, engineering controls, or procedures to control concentrations of radioactive materials in air	NA	NA

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CONTENT	SECTION	PAGE
—A description of the evaluation which will be performed when it is not practical to apply engineering controls or procedures	NA	NA
—A description of the considerations used which demonstrates respiratory protection equipment is appropriate for a specific task based on the guidance on assigned protection factors	NA	NA
—A description of the medical screening and fit testing required before workers will use any respirator that is assigned a protection factor	NA	NA
—A description of the written procedures maintained to address all the elements of the respiratory protection program	NA	NA
—A description of the use, maintenance, and storage of respiratory protection devices	NA	NA
—A description of the respiratory equipment users training program	NA	NA
—A description of the considerations made when selecting respiratory protection equipment	NA	NA
X.c. INTERNAL EXPOSURE DETERMINATION		
—A description of the monitoring to be performed to determine worker exposure	NA	NA
—A description of how worker intakes are determined using measurements of quantities of radionuclides excreted from, or retained in the human body	NA	NA
—A description of how worker intakes are determined by measurements of the concentrations of airborne radioactive materials in the workplace	NA	NA
—A description of how worker intakes for an adult, a minor, and a declared pregnant woman (DPW) are determined using any combination of the measurements above, as may be necessary	NA	NA
—A description of how worker intakes are converted into committed effective dose equivalent	NA	NA
X.d. EXTERNAL EXPOSURE DETERMINATION		
—A description of the individual monitoring devices which will be provided to workers	NA	NA
—A description of the type, range, sensitivity, and accuracy of each individual monitoring device	NA	NA

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CONTENT	SECTION	PAGE
—A description of the use of extremity and whole body monitors when the external radiation field is non-uniform	NA	NA
—A description of when audible alarm dosimeters and pocket dosimeters will be provided	NA	NA
—A description of how external dose from airborne radioactive material is determined	NA	NA
—A description of the procedure to insure that surveys necessary to supplement personnel monitoring are performed	NA	NA
—A description of the action levels for worker's external exposure, and the technical bases and actions to be taken when they are exceeded	NA	NA
X.e. SUMMATION OF INTERNAL AND EXTERNAL EXPOSURES		
—A description of how the internal and external monitoring results are used to calculate TODE and TEDE doses to occupational workers	NA	NA
—A description of how internal doses to the embryo/fetus, which is based on the intake of an occupationally exposed DPW will be determined	NA	NA
—A description of the monitoring of the intake of a DPW, if determined to be necessary	NA	NA
—A description of the program for the preparation, retention, and reporting of records for occupational radiation exposures	NA	NA
X.f. CONTAMINATION CONTROL PROGRAM		
—A description of the written procedures to control access to, and stay time in, contaminated areas by workers, if they are needed	NA	NA
—A description of surveys to supplement personnel monitoring for workers during routine operations, maintenance, clean-up activities, and special operations	NA	NA
—A description of the surveys which will be performed to determine the baseline of background radiation levels and radioactivity from natural sources for areas where decommissioning activities will take place	NA	NA
—A description in matrix or Tableular form which describes contamination action limits (that is, actions taken to either decontaminate a person, place, or area, restrict access, or modify the type or frequency of radiological monitoring)	NA	NA

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CONTENT	SECTION	PAGE
— A description (included in the matrix or Table mentioned above) of proposed radiological contamination guidelines for specifying and modifying the frequency for each type of survey used to assess the reduction of total contamination	NA	NA
— A description of the procedures used to test sealed sources, and to insure that sealed sources are leaked tested at appropriate intervals	NA	NA
X.g. INSTRUMENTATION PROGRAM		
— A description of the instruments to be used to support the health and safety program	NA	NA
— A description of instrumentation storage, calibration, and maintenance facilities for instruments used in field surveys	NA	NA
— A description of the method used to estimate the MDC or MDA (at the 95 percent confidence level) for each type of radiation to be detected	NA	NA
— A description of the instrument calibration and quality assurance procedures	NA	NA
— A description of the methods used to estimate uncertainty bounds for each type of instrumental measurement	NA	NA
— A description of air sampling calibration procedures or a statement that the instruments will be calibrated by an accredited laboratory	NA	NA
X.h. NUCLEAR CRITICALITY SAFETY		
— A description of how the NCS functions, including management responsibilities and technical qualifications of safety personnel, will be maintained when needed throughout the decommissioning process	NA	NA
— A description of how an awareness of procedures and other items relied on for safety will be maintained throughout decommissioning among all personnel, with access to systems that may contain fissionable material in sufficient amounts for criticality	NA	NA
— A summary of the review of NCSA's or the ISA indicating either that the process needs no new safety procedures or requirements, or that new requirements or analysis have been performed	NA	NA
— A summary of any generic NCS requirements to be applied to general decommissioning, decontamination, or dismantlement operations, including those dealing with systems that may unexpectedly contain fissionable material	NA	NA

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X.i. HEALTH PHYSICS AUDITS, INSPECTIONS, AND RECORDKEEPING PROGRAM		
— A general description of the annual program review conducted by executive management	NA	NA
— A description of the records to be maintained of the annual program review and executive audits	NA	NA
— A description of the types and frequencies of surveys and audits to be performed by the RSO and RSO staff	NA	NA
— A description of the process used in evaluating and dealing with violations of NRC requirements or license commitments identified during audits	NA	NA
— A description of the records maintained of RSO audits	NA	NA
XI. ENVIRONMENTAL MONITORING AND CONTROL PROGRAM		
<i>Matters in this section are to be addressed by the DOE procedures identified in Section 1.8.</i>		
XI.a. ENVIRONMENTAL ALARA EVALUATION PROGRAM		
— A description of ALARA goals for effluent control	NA	NA
— A description of the procedures, engineering controls, and process controls to maintain doses ALARA	NA	NA
— A description of the ALARA reviews and reports to management	NA	NA
XI.b. EFFLUENT MONITORING PROGRAM		
— A demonstration that background and baseline concentrations of radionuclides in environmental media have been established through appropriate sampling and analysis	NA	NA
— A description of the known or expected concentrations of radionuclides in effluents	NA	NA
— A description of the physical and chemical characteristics of radionuclides in effluents	NA	NA
— A summary or diagram of all effluent discharge locations	NA	NA
— A demonstration that samples will be representative of actual releases	NA	NA
— A summary of the sample collection and analysis procedures	NA	NA
— A summary of the sample collection frequencies	NA	NA

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CONTENT	SECTION	PAGE
—A description of the environmental monitoring recording and reporting procedures	NA	NA
—A description of the quality assurance program to be established and implemented for the effluent monitoring program	NA	NA
XI.c. EFFLUENT CONTROL PROGRAM		
—A description of the controls that will be used to minimize releases of radioactive material to the environment	NA	NA
—A summary of the action levels and a description of the actions to be taken should a limit be exceeded	NA	NA
—A description of the leak detection systems for ponds, lagoons, and tanks	NA	NA
—A description of the procedures to ensure that releases to sewer systems are controlled and maintained to meet the requirements of 10 CFR 20.2003	NA	NA
—A summary of the estimates of doses to the public from effluents and a description of the method used to estimate public dose	NA	NA
XII. RADIOACTIVE WASTE MANAGEMENT PROGRAM		
<i>Matters in this section are to be addressed by the DOE procedures identified in Section 1.9.</i>		
XII.a. SOLID RADWASTE		
—A summary of the types of solid radwaste that are expected to be generated during decommissioning operations	NA	NA
—A summary of the estimated volume, in cubic feet, of each solid radwaste type summarized in Line 1 above	NA	NA
—A summary of the radionuclides (including the estimated activity of each radionuclide) in each estimated solid radwaste type summarized in Line 1 above	NA	NA
—A summary of the volumes of Class A, B, C, and Greater than Class C solid radwaste that will be generated by decommissioning operations	NA	NA
—A description of how and where each of the solid radwaste summarized in Line 1 above will be stored onsite prior to shipment for disposal	NA	NA

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— A description of how the each of the solid radwastes summarized in Line 1 above will be treated and packaged to meet disposal site acceptance criteria prior to shipment for disposal	NA	NA
— If appropriate, how the licensee intends to manage volumetrically contaminated material	NA	NA
A description of how the licensee will prevent contaminated soil, or other loose solid radwaste, from being re-disbursed after exhumation and collection	7.2.2	7-6
— The name and location of the disposal facility that the licensee intends to use for each solid radwaste type summarized in Line 1 above	NA	NA
XII.b. LIQUID RADWASTE		
— A summary of the types of liquid radwaste that are expected to be generated during decommissioning operations	NA	NA
— A summary of the estimated volume, in liters, of each liquid radwaste type summarized in Line 1 above	NA	NA
— A summary of the radionuclides (including the estimated activity of each radionuclide) in each liquid radwaste type summarized in Line 1 above	NA	NA
— A summary of the estimated volumes of Class A, B, C, and Greater-than Class C liquid radwaste that will be generated by decommissioning operations	NA	NA
— A description of how and where each of the liquid radwastes summarized in Line 1 above will be stored onsite prior to shipment for disposal	NA	NA
— A description of how the each of the liquid radwastes summarized in Line 1 above will be treated and packaged to meet disposal site acceptance criteria prior to shipment for disposal	NA	NA
— The name and location of the disposal facility that the licensee intends to use for each liquid radwaste type summarized in Line 1 above	NA	NA
XII.c. MIXED WASTE		
— A summary of the types of solid and liquid mixed waste that are expected to be generated during decommissioning operations	NA	NA

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— A summary of the estimated volumes in cubic feet of each solid mixed waste type summarized in Line 1 above, and in liters for each liquid mixed waste	NA	NA
— A summary of the radionuclides (including the estimated activity of each radionuclide) in each type of mixed waste type summarized in Line 1 above	NA	NA
— A summary of the estimated volumes of Class A, B, C, and Greater than-Class-C mixed waste that will be generated by decommissioning operations	NA	NA
— A description of how and where each of the mixed wastes summarized in Line 1 above will be stored onsite prior to shipment for disposal	NA	NA
— A description of how each of the mixed wastes summarized in Line 1 above will be treated and packaged to meet disposal site acceptance criteria prior to shipment for disposal	NA	NA
— The name and location of the disposal facility that the licensee intends to use for each mixed waste type summarized in Line 1 above	NA	NA
— A discussion of the requirements of all other regulatory agencies having jurisdiction over the mixed waste	NA	NA
— A demonstration that the licensee possesses the appropriate EPA or State permits to generate, store, and/or treat the mixed wastes	NA	NA
XIII. QUALITY ASSURANCE PROGRAM		
<i>This section focuses on characterization surveys, the final status survey, engineering data, calculations, and dose modeling.</i>		
XIII.a. ORGANIZATION		
A description of the QA program management organization	8.1 Figure 8-1	8-2 8-2
A description of the duties and responsibilities of each unit within the organization and how delegation of responsibilities is managed within the decommissioning program	8.1.1 8.1.2	8-3 8-4
A description of how work performance is evaluated	8.2	8-4
A description of the authority of each unit within the QA program	8.1.1 8.1.2	8-3 8-4
An organization chart of the QA program organization	Figure 8-1	8-2

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XIII.b. QUALITY ASSURANCE PROGRAM		
A commitment that activities affecting the quality of site decommissioning will be subject to the applicable controls of the QA program and activities covered by the QA program are identified on program defining documents	8.3.1	8-7
A brief summary of the company's [DOE's] corporate QA policies	8.3.1	8-7
A description of provisions to ensure that technical and quality assurance procedures required to implement the QA program are consistent with regulatory, licensing, and QA program requirements and are properly documented and controlled	8.3	8-6
A description of the management reviews, including the documentation of concurrence in these quality-affecting procedures	8.1.1	8-3
	8.2.1	8-5
	8.2.2	8-6
A description of the quality-affecting procedural controls of the principal contractors	8.2.1	8-4
	8.2.2	8-5
	8.2.3	8-6
	8.3.2	8-7
A description of how NRC will be notified of changes (a) for review and acceptance in the accepted description of the QA program as presented or referenced in the DP before implementation and (b) in organizational elements within 30 days after the announcement of the changes	8.3.1	8-7
A description is provided of how management regularly assesses the scope, status, adequacy, and compliance of the QA program	8.8	8-12
A description of the instruction provided to personnel responsible for performing activities affecting quality	8.2.1	8-4
	8.2.2	8-5
	8.2.3	8-6
	8.3.2	8-8
A description of the training and qualifications of personnel verifying activities	8.3.1	8-7
For formal training and qualification programs, documentation includes the objectives and content of the program, attendees, and date of attendance	8.9	8-13
A description of the self-assessment program to confirm that activities affecting quality comply with the QA program	8.8	8-13
A commitment that persons performing self-assessment activities are not to have direct responsibilities in the area they are assessing	8.8	8-13

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CONTENT	SECTION	PAGE
A description of the organizational responsibilities for ensuring that activities affecting quality are (a) prescribed by documented instructions, procedures, and drawings and (b) accomplished through implementation of these documents	8.1.1	8-3
	8.1.2	8-4
A description of the procedures to ensure that instructions, procedures, and drawings include quantitative acceptance criteria and qualitative acceptance criteria for determining that important activities have been satisfactorily performed	8.3.1	8-7
XIII.c. DOCUMENT CONTROL		
A summary of the types of QA documents that are included in the program	8.4	8-11
A description of how the licensee develops, issues, revises, and retires QA documents	8.4	8-11
XIII.d. CONTROL OF MEASURING AND TEST EQUIPMENT		
A summary of the test and measurement equipment used in the program	8.5	8-12
A description of how and at what frequency the equipment will be calibrated	8.5 9.4.3	8-12 9-11
A description of the daily calibration checks that will be performed on each piece of test or measurement equipment	8.5	8-12
A description of the documentation that will be maintained to demonstrate that only properly calibrated and maintained equipment was used during the decommissioning	8.5	8-12
XIII.e. CORRECTIVE ACTION		
A description of the corrective action procedures for the facility, including a description of how the corrective action is determined to be adequate	8.7	8-12
A description of the documentation maintained for each corrective action and any follow-up activities by the QA organization after the corrective action is implemented	8.7	8-12
XIII.f. QUALITY ASSURANCE RECORDS		
A description of the manner in which the QA records will be managed	8.9	8-13
A description of the responsibilities of the QA organization	8.1.1	8-3

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A description of the QA records storage facility	8.9	8-14
XIII.g. AUDITS AND SURVEILLANCES		
A description of the audit program	8.8	8-14
A description of the records and documentation generated during the audits and the manner in which the documents are managed	8.8	8-14
A description of all follow-up activities associated with audits or surveillances	8.8	8-14
A description of the trending/tracking that will be performed on the results of audits and surveillances	8.8	8-14
XIV. FACILITY RADIATION SURVEYS		
XIV.a. RELEASE CRITERIA		
<i>The Phase 1 DP focuses on DCGLs for surface soil, subsurface soil, and streambed sediment. DCGLs are provided in Section 5 only to avoid duplication. Note that cleanup goals below the DCGLs are specified in Section 5 in Table 5-14 on page 5-61 – these are the criteria to be used for remediation activities in Phase 1.</i>		
A summary Table or list of the DCGL _W for each radionuclide and impacted media of concern [Table 5-14 provides the cleanup goals.]	Table 5-14	5-62
If Class 1 survey units are present, a summary Table or list of area factors that will be used for determining a DCGL _{EMC} for each radionuclide and media of concern	Table 9-1	9-3
	Table 9-2	9-3
	Table 9-3	9-4
If Class 1 survey units are present, the DCGL _{EMC} values for each radionuclide and medium of concern	Table 5-14	5-62
If multiple radionuclides are present, the appropriate DCGL _W for the survey method to be used [A DCGL _W for a surrogate radionuclide will be developed if practicable after additional characterization data are obtain during Phase 1 decommissioning activities.]	NA	NA
XIV.b. CHARACTERIZATION SURVEYS		
A description and justification of the survey measurements for impacted media	9.2.4	9-6
	9.4	9-8
	9.7	9-30
A description of the field instruments and methods that were used for measuring concentrations and the sensitivities of those instruments and methods	9.4 Table 9-4	9-11 9-11

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CONTENT	SECTION	PAGE
A description of the laboratory instruments and methods that were used for measuring concentrations and the sensitivities of those instruments and methods	9.4.1	9-11
	9.4.3	9-15
	Table 9-5	9-12
The survey results, including tables or charts of the concentrations of residual radioactivity measured <i>[The report of additional characterization to be performed early in Phase 1 of the decommissioning will present data in tables and figures similar to those in Section 2 and Section 4.]</i>	Table 2-10	2-18
	Table 2-19	2-43
	Table 4-3	4-15
	Table 4-4	4-16
	Table 4-5	4-16
	Table 4-6	4-17
	Table 4-8	4-19
	Table 4-9	4-21
Maps or drawings of the site, area, or building, showing areas classified as non-impacted or impacted <i>[The drawings provided in Section 4 will be confirmed or revised when additional characterization data become available early in Phase 1 of the decommissioning.]</i>	Figure 4-1	4-7
	Figure 4-2	4-8
	Figure 4-3	4-9
	Figure 4-4	4-10
	Figure 4-5	4-11
Justification for considering areas to be non-impacted <i>[The justification provided in Section 4 will be confirmed or revised when additional characterization data become available early in Phase 1 of the decommissioning.]</i>	4.1.3	4-12
A discussion of why the licensee considers the characterization survey to be adequate to demonstrate that it is unlikely that significant quantities of residual radioactivity have gone undetected <i>[The subsections of Section 9.7 provide justification for both previous and planned characterization measurements by WMA.]</i>	9.7	9-30
For areas and surfaces that are inaccessible or not readily accessible, a discussion of how they were surveyed or why they did not need to be surveyed	9.7.1	9-32
For sites, areas, or buildings with multiple radionuclides, a discussion justifying the ratios of radionuclides that will be assumed in the final status survey or an indication that no fixed ratio exists and each radionuclide will be measured separately	9.4.1	9-9
XIV.c. IN-PROCESS SURVEYS		
A description of field screening methods and instrumentation	9.5	9-20
A demonstration that field screening should be capable of detecting residual radioactivity at the DCGL <i>[As indicated in Section 9.5, methods and instruments for in-process surveys will be similar to those used during characterization and final status surveys. The field instruments suitable for scanning soil will not be able to detect non-gamma emitting radionuclides.]</i>	9.5 Table 9-7	9-20 9-21

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XIV.d. FINAL STATUS SURVEY DESIGN		
<i>Phase 1 final status surveys will be performed in cases where the decommissioning activities will make an area inaccessible for later final status surveys and confirmatory surveys. These surveys will be managed as final status surveys although a potential for recontamination may exist in certain areas. Details will be provided in the Phase 1 Final Status Survey Plan. Appendix G describes the conceptual framework for the Phase 1 Final Status Survey Plan.</i>		
A brief overview describing the final status survey design	9.6.1	9-24
A description and map or drawing of impacted areas of the site, area, or building classified by residual radioactivity levels (Class 1, 2, or 3) and divided into survey units with an explanation of the basis for division into survey units <i>[Survey units will be specified in the Final Status Survey Plan as indicated in Section 9.6.1 on page 9-17.]</i>	9.6.1	9-24
A description of the background reference areas and materials, if they will be used, and a justification for their selection <i>[Details will appear in the Final Status Survey Plan.]</i>	9.6.1	9-25
A summary of the statistical tests that will be used to evaluate the survey results <i>[Details will appear in the Final Status Survey Plan.]</i>	9.3 9.6.1	9-8 9-28
A description of scanning instruments, methods, calibration, operational checks, coverage, and sensitivity for each media and radionuclide	Table 9-8 9.6.1	9-26 9-26
For in-situ sample measurements made by field instruments, a description of the instruments, calibration, operational checks, sensitivity, and sampling methods, with a demonstration that the instruments and methods have adequate sensitivity <i>[The only field instruments planned for use are the instruments in Table 9-5 on page 9-18.]</i>	Table 9-8 9.6.1	9-26 9-26
A description of the analytical instruments for measuring samples in the laboratory, as well as calibration, sensitivity, and methods with a demonstration that the instruments and methods have adequate sensitivity	9.6.1 Table 9-5	9-26 9-12
A description of how the samples to be analyzed in the laboratory will be collected, controlled, and handled	9.6.1	9-27
A description of the final status survey investigation levels and how they were determined	Appen G	G-9
A summary of any significant additional residual radioactivity that was not accounted for during site characterization	9.6.1	9-24

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A summary of direct measurement results and/or soil concentration levels in units that are comparable to the DCGL, and if data is used to estimate or update the survey unit	9.6.1	9-28
A summary of the direct measurements or sample data used to both evaluate the success of remediation and to estimate the survey unit variance	9.6.1	9-28
XIV.e. FINAL STATUS SURVEY REPORT		
<i>DOE is addressing each checklist topic as a requirement for the report.</i>		
An overview of the results of the final status survey	9.8.1	9-45
A discussion of any changes that were made in the final status survey from what was proposed in the DP or other prior submittals	9.8.2	9-45
A description of the method by which the number of samples was determined for each survey unit	9.8.3	9-46
A summary of the values used to determine the number of samples and a justification for these values	9.8.4	9-46
The survey results for each survey unit include:	9.8.5	9-46
— The number of samples taken for the survey unit;	9.8.5	9-46
— A description of the survey unit, including (a) a map or drawing of the survey unit showing the reference system and random start systematic sample locations for Class 1 and 2 survey units and random locations shown for Class 3 survey units and reference areas, and (b) a discussion of remedial actions and unique features;	9.8.5	9-46
— The measured sample concentrations in units that are comparable to the DCGL;	9.8.5	9-46
— The statistical evaluation of the measured concentrations;	9.8.5	9-46
— Judgmental and miscellaneous sample data sets reported separately from those samples collected for performing the statistical evaluation;	9.8.5	9-46
— A discussion of anomalous data, including any areas of elevated direct radiation detected during scanning that exceeded the investigation level or measurement locations in excess of DCGL _w ; and	9.8.5	9-46

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— A statement that a given survey unit satisfied the DCGL _W and the elevated measurement comparison if any sample points exceeded the DCGL _W .	9.8.5	9-46
A description of any changes in initial survey unit assumptions relative to the extent of residual radioactivity (e.g., material not accounted for during site characterization)	9.8.6	9-46
A description of how ALARA practices were employed to achieve final activity levels	9.8.5	9-46
If a survey unit fails, a description of the investigation conducted to ascertain the reason for the failure and a discussion of the impact that the failure has on the conclusion that the facility is ready for final radiological surveys and that it satisfies the release criteria	9.8.7	9-46
If a survey unit fails, a discussion of the impact that the reason for the failure has on other survey unit information	9.8.8	9-47
XV. FINANCIAL ASSURANCE		
<i>This matter is not applicable to the Phase 1 DP consistent with 10 CFR 30.35(f)(4).</i>		
XV.a. COST ESTIMATE		
— A cost estimate that appears to be based on documented and reasonable assumptions	NA	NA
XV.b. CERTIFICATION STATEMENT		
— The certification statement is based on the licensed possession limits and the applicable quantities specified in 10 CFR 30.35, 40.36, or 70.25	NA	NA
— The licensee is eligible to use a certification of financial assurance and, if eligible, that the certification amount is appropriate	NA	NA
— The financial assurance mechanism supplied by the licensee consists of one or more of the following instruments:	NA	NA
— Trust fund;		
— Escrow account;		
— Government fund;		
— Certificate of deposit;		
— Deposit of government securities;		
— Surety bond;		

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— Letter of credit;		
— Line of credit;		
— Insurance policy;		
— Parent company guarantee;		
— Self guarantee;		
— External sinking fund;		
— Statement of intent; or		
— By special arrangements with a government entity assuming custody or ownership of the site.		
XV.c. FINANCIAL MECHANISM		
— The financial assurance mechanism is an originally signed duplicate	NA	NA
— The wording of the financial assurance mechanism is identical to the recommended wording provided in Appendix F of this document	NA	NA
— For a licensee regulated under 10 CFR Part 72, a means is identified in the DP for adjusting the financial assurance funding level over any storage and surveillance period	NA	NA
— The amount of financial assurance coverage provided by the licensee for site control and maintenance is at least as great as that calculated using the formula provided in this NUREG	NA	NA
XVI. RESTRICTED USE/ALTERNATE CRITERIA		
<i>Because there will be no facility or property release associated with the Phase 1 of the decommissioning, this section does not apply.</i>		
XVI.a. RESTRICTED USE		
XVI.a.1. Eligibility Demonstration		
— A demonstration that the benefits of dose reduction are less than the cost of doses, injuries, and fatalities	NA	NA
— A demonstration that the proposed residual radioactivity levels at the site are ALARA	NA	NA
XVI.a.2. Institutional Controls		
<i>DOE will continue to manage the project premises and provide for monitoring and maintenance until the actions required by the WVDP Act have been completed. DOE's site management plan for the post-Phase 1 period will provide de facto institutional control of the site during this period. Accordingly, DOE will briefly describe this plan, addressing the topics identified as applicable</i>		

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<i>below as they apply to the post-Phase 1 period under DOE control.</i>		
A description of the legally enforceable institutional control(s) and an explanation of how the institutional control is a legally enforceable mechanism	NA	NA
A description of any detriments associated with the maintenance of the institutional control(s)	NA	NA
A description of the restrictions on present and future landowners	NA	NA
A description of the entities enforcing, and their authority to enforce, the institutional control(s)	App D	D-32
A description of the design features of the site that support institutional controls	App D	D-32
A discussion of the durability of the institutional control(s), including the performance of any engineered barriers used	App D	D-8
A description of the activities that the entity with the authority to enforce the institutional controls may undertake to enforce the institutional control(s)	NA	NA
A description of the manner in which the entity with the authority to enforce the institutional control(s) will be replaced if that entity is no longer willing or able to enforce the institutional control(s) (this may not be needed for Federal or State entities)	NA	NA
A description of the duration of the institutional control(s), the basis for the duration, the conditions that will end the institutional control(s), and the activities that will be undertaken to end the institutional control(s)	NA	NA
A description of the plans for corrective actions that may be undertaken in the event the institutional control(s) fail	NA	NA
A description of the records pertaining to the institutional controls, how and where will they will be maintained, and how the public will have access to the records	NA	NA
XVI.a.3. Site Maintenance and Financial Assurance		
A demonstration that an appropriately qualified entity has been provided to control and maintain the site	NA	NA
A description of the site maintenance and control program and the basis for concluding that the program is adequate to control and maintain the site	App D	D-18

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CONTENT	SECTION	PAGE
— A description of the arrangement or contract with the entity charged with carrying out the actions necessary to maintain control at the site	NA	NA
— A demonstration that the contract or arrangement will remain in effect for as long as feasible, and include provisions for renewing or replacing the contract	NA	NA
— A description of the manner in which independent oversight of the entity charged with maintaining the site will be conducted and what entity will conduct the oversight	NA	NA
— A demonstration that the entity providing the oversight has the authority to replace the entity charged with maintaining the site	NA	NA
— A description of the authority granted to the third party to perform, or have performed, any necessary maintenance activities	NA	NA
— Unless the entity is a government entity, a demonstration that the third party is not the entity holding the financial assurance mechanism	NA	NA
— A demonstration that sufficient records evidencing to official actions and financial payments made by the third party are open to public inspection	NA	NA
— A description of the periodic site inspections that will be performed by the third party, including the frequency of the inspections	NA	NA
— A copy of the financial assurance mechanism provided by the licensee	NA	NA
— A demonstration that the amount of financial assurance provided is sufficient to allow an independent third party to carry out any necessary control and maintenance activities	NA	NA
XVI.a.4. Obtaining Public Advice		
<i>This section does not apply because public advice is not being sought under the provisions of 10 CFR 20.1403(d) to support license termination under restricted conditions.</i>		
— A description of how individuals and institutions that may be affected by the decommissioning were identified and informed of the opportunity to provide advice to the licensee	NA	NA
— A description of the manner in which the licensee obtained advice from these individuals or institutions	NA	NA
— A description of how the licensee provided for participation by a broad cross-section of community interests in obtaining the advice	NA	NA
— A description of how the licensee provided for a comprehensive, collective discussion on the issues by the participants represented	NA	NA

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CONTENT	SECTION	PAGE
— A copy of the publicly available summary of the results of discussions, including individual viewpoints of the participants on the issues, and the extent of agreement and disagreement among the participants	NA	NA
— A description of how this summary has been made available to the public	NA	NA
— A description of how the licensee evaluated the advice, and the rationale for incorporating or not incorporating the advice from affected members of the community into the DP	NA	NA
XVI.a.5. Dose Modeling and ALARA Demonstration		
— A summary of the dose to the average member of the critical group when radionuclide levels are at the DCGL with institutional controls in place, as well as the estimated doses if they are no longer in place	NA	NA
— A summary of the evaluation performed pursuant to Chapter 6 of Volume 2 of this NUREG series, demonstrating that these doses are ALARA	NA	NA
— If the estimated dose to the average member of the critical group could exceed 100 mrem/y (but would be less than 500 mrem/y) when the radionuclide levels are at the DCGL, a demonstration that the criteria in 10 CFR 20.1403(e) have been met	NA	NA
XVI.b. ALTERNATE CRITERIA		
— A summary of the dose in TEDE(s) to the average member of the critical group when the radionuclide levels are at the DCGL (considering all man-made sources other than medical)	NA	NA
— A summary of the evaluation performed pursuant to Chapter 6 of Volume 2 of this NUREG series demonstrating that these doses are ALARA	NA	NA
— An analysis of all possible sources of exposure to radiation at the site and a discussion of why it is unlikely that the doses from all man-made sources, other than medical, will be more than 1 mSv/y (100 mrem/y)	NA	NA
— A description of the legally enforceable institutional control(s) and an explanation of how the institutional control is a legally enforceable mechanism	NA	NA
— A description of any detriments associated with the maintenance of the institutional control(s)	NA	NA
— A description of the restrictions on present and future landowners	NA	NA

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CONTENT	SECTION	PAGE
— A description of the entities enforcing and their authority to enforce the institutional control(s)	NA	NA
— A discussion of the durability of the institutional control(s)	NA	NA
— A description of the activities that the party with the authority to enforce the institutional controls will undertake to enforce the institutional control(s)	NA	NA
— A description of the manner in which the entity with the authority to enforce the institutional control(s) will be replaced if that entity is no longer willing or able to enforce the institutional control(s)	NA	NA
— A description of the duration of the institutional control(s), the basis for the duration, the conditions that will end the institutional control(s), and the activities that will be undertaken to end the institutional control(s)	NA	NA
— A description of the corrective actions that will be undertaken in the event the institutional control(s) fail	NA	NA
— A description of the records pertaining to the institutional controls, how and where they will be maintained, and how the public will have access to the records	NA	NA
— A description of how individuals and institutions that may be affected by the decommissioning were identified and informed of the opportunity to provide advice to the licensee	NA	NA
— A description of the manner in which the licensee obtained advice from affected individuals or institutions	NA	NA
— A description of how the licensee provided for participation by a broad cross-section of community interests in obtaining the advice	NA	NA
— A description of how the licensee provided for a comprehensive, collective discussion on the issues by the participants represented	NA	NA
— A copy of the publicly available summary of the results of discussions, including individual viewpoints of the participants on the issues and the extent of agreement and disagreement among the participants	NA	NA
— A description of how this summary has been made available to the public	NA	NA
— A description of how the licensee evaluated advice from individuals and institutions that could be affected by the decommissioning and the manner in which the advice was addressed	NA	NA

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References

- NRC 2006, NUREG-1757, *Consolidated Decommissioning Guidance*, Volume 1, Revision 2. U.S. Nuclear Regulatory Commission, Washington, D.C., September 2006.
- NRC 2008, *Summary of a Meeting Between NRC and DOE on the WVDP Phase 1 Decommissioning Plan*, May 19, 2008.