

## AR TARGET SHEET

The following document was too large to scan as one unit, therefore, it has been broken down into sections.

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TITLE:

CY 2000 Hanford Site Mixed  
Waste Land Disposal Restrictions  
Report (Volumes 1-2/2)

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SECTION:

4 of 4

**APPENDIX C**  
**POTENTIAL MIXED WASTE**

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## APPENDIX C

## POTENTIAL MIXED WASTE

The origin and definition of potential mixed waste is discussed in Section 2.3 of this volume. The content of each column is defined here:

Table C-1. Potential Mixed Waste Table Explanation.

Column	Column Title	Content Definition
A	Company, Project	Self-explanatory
B	Common Name or Description	Self-explanatory
C	Facility Number	Refer to the Hanford Site Atlas, BHI-01119, Rev-1, in print or at <a href="http://www.bhi-erc.com/projects/p_m/eis/hgis/hgis.htm">http://www.bhi-erc.com/projects/p_m/eis/hgis/hgis.htm</a>
D	Solid "Waste" with Potential for Mixed "Waste" not Integral to the Building or Structure (No Use)	Materials that are not currently in use and for which no future use is currently known, but for which the final disposition has not yet been determined. The materials are not currently defined as waste and may or may not currently be contaminated, but have the potential for becoming mixed "waste," depending on future decisions regarding their ultimate use and disposition. The materials are not integral to the building. "None" in this column indicates the project/facility contains no material known to be in this category.
E	Materials with Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Materials that are currently in "standby" and may at some point, if they become waste, designate as mixed waste. Provide details for standby equipment/material that has a clear use or path for reuse/recycling, but may at some point, if when it becomes waste, designate as mixed waste. <b>Columns D and E encompass contents of buildings and structures only. Floor sweepings, dust, etc., are not included. The structures themselves, including contaminated walls, floors, etc., are not included. Equipment and chemicals that are in use are not included.</b>
F	Assessment Method and Frequency	Lists any assessments performed to show that waste or material is in a condition protective of human health and the environment. Also lists the frequency of the assessment. Assessments can be related back to specific material categories (e.g., D, E) as appropriate.

Table C-1. Potential Mixed Waste Table Explanation.

Column	Column Title	Content Definition
G	Schedule for Handling Materials and Schedule for Investigation Plan Discussions	Includes any schedule information relative to materials detailed in these columns. Includes references to pertinent documents (closure plans, RODs) and identifies any applicable operable units or other Tri-Party Agreement drivers for remediation. Specifies a date for addressing any data gaps regarding the waste (e.g., whether it is mixed, quantity, characterization, path-forward decisions, other information that is needed to make negotiations realistic and productive). A separate date for starting negotiations with the regulators on a path forward for the materials also is included.
H	Integrating Factors	Include factors that should be considered when determining when negotiations should occur. These include factors such as relative threat to human health and the environment of no action, ties to other activities such as operable unit remediation, ties of action to facility missions, etc.

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Fluro Hanford, Inc. Hanford Site Operations	C8S5 (CAT) Substation	252U	Transformer	None	Weekly for removable rad., monthly for (rad.) dose	Not likely to be mixed waste. Planned determination date is FY 2002. Plan to fill data gaps: FY 2002. Starting negotiations: NA, material will be dispositioned per current practices if declared waste.	Oil has been drained, no PCBs
Fluro Hanford, Inc. Hanford Site Operations	Rad. Storage Bldg.	3711	None	Lead bricks	Weekly for removable rad., monthly for (rad.) dose	For use as shielding at 327. Alternative is to decontaminate if possible or recycle. Planned decision time-frame is FY 2002. Plan to fill data gaps: FY 2002. Starting negotiations: NA, material will be dispositioned per current practices if declared waste.	Stored indoors on pallet, double-bagged in plastic
Fluro Hanford, Inc. Hanford Site Operations	Waste Storage Bldg	2724WB	Radiators (from motor vehicles)	None	Weekly for removable rad., monthly for (rad) dose	Solder may cause radiators to become mixed waste. Planned determination date is FY 2002. Plan to fill data gaps: FY 2002. Starting negotiations: NA, material will be dispositioned per current practices if declared waste.	Stored indoors on pallet, double-bagged in plastic

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Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Fluor Hanford, Inc., Analytical Services	Waste Handling Facility	219S	Tank 103 and heel content	None	This building is locked and not assessed routinely because of the high radiation levels. Sump alarms are in place to detect leaks.	Tank 103 was flushed and has a remaining heel. The heel will be left in place until 219-S Facility undergoes RCRA closure as documented in the 222S Laboratory Part B Permit. Plan to fill data gaps: NA, previously characterized, see column H. Starting Negotiations: Completed as part of 222-S Part B NOD negotiations.	Tank 103 will be left in place and addressed during the closure of the 219-S tank system. The 222-S Laboratory Part B Application and resolution of NOD comments reflects Ecology agreement with this strategy. T103 contents were sampled before tank was emptied; it will be managed at closure as hazardous debris waste codes F001 through F005
Fluor Hanford, Inc., Nuclear Material Stabilization Project	216-Z-9 Crib Soil Removal Glovebox (inactive)	216Z9A	Soil Removal Glovebox. Air compressor (potential for regulated oil). Residual contamination within glovebox (potential for mixed wastes during cleanout). Inactive ventilation exhaust ductwork (potential for residual contamination). Note: Glovebox probably will function as containment when conducting facility cleanout/transition activities.	None	Annual RadCon/Fire Maintenance survey.	Facility to be addressed during deactivation/transition of PFP Complex. Plan to fill data gaps: To be determined in negotiations.. Starting negotiations: deactivation/transition milestones subject to Tri-Party Agreement Negotiations to start by November 1, 2001 (Tri-Party Agreement C/R 87-07.)	Data gaps not filled before negotiations because of negotiation timing.

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Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Fluor Hanford, Inc., Nuclear Material Stabilization Project	Waste Incinerator Facility (inactive)	232Z	Incinerator and Leaching Gloveboxes. Residual contamination within gloveboxes (potential for mixed waste during cleanout). Inactive portions of ventilation exhaust ductwork and control equipment (potential for residual contamination). Note: Gloveboxes to be maintained and used for containment when conducting facility cleanout/transition activities.	None	Other than routine radiological surveys, no other routine assessments performed. Ecology assessed 232-Z as part of PFP Facility Transition Assessment (June 27, 2000). DOE Assessment: January 2001	Baseline Milestone due date for completing Deactivation/Transition of the 232-Z Facility is FY 2013 (IPMP, HNF-3617, Rev. 0). Plan to fill data gaps: To be determined in negotiations. Starting negotiations: Deactivation/Transition milestones subject to Tri-Party Agreement Negotiations. Start of negotiations by November 1, 2001 (Tri-Party Agreement C/R M-83-01-02.)	Data gaps not filled before negotiations because of negotiation timing.

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Fluor Hanford, Inc., Nuclear Material Stabilization Project	Plutonium Finishing Plant	234-5Z	Inactive process tanks, piping, and control equipment (Remote Mechanical "A" & "C" Lines). Containment gloveboxes (Remote Mechanical "A" & "C" Lines). Lead-lined gloves (some older gloves may designate as TCLP leachable). Radioactive Acid Digestion Test Unit (RADTU) Gloveboxes (potential for residual contamination during cleanout). Inactive portions of HVAC exhaust ductwork (potential for mixed wastes during cleanout). Note: Gloveboxes to be maintained and used for containment when conducting facility cleanout/transition activities.	E1: Laboratory Reagents E2: Archive Laboratory Samples E3: PR cans that have lead liners. Some may be reused during transition to shutdown. E4: Low-grade SNM solutions not run through the magnesium hydroxide precipitation process, but with potential to become solid waste.	D: Facility is surveyed daily by operations personnel. Surveillance includes observations to detect leaks, spills, and hazardous conditions. E1 & E2: Inventory surveillance and routine evaluations for use performed as part of Chemical Management System. E3 & E4: Routine surveillance of material storage areas and containers performed subject to AEA requirements for the management of SNM. Material vs. waste determinations pending further evaluation and analysis. DOE Assessment: January 2001	Baseline Milestone due date for completing Deactivation/Transition of the 234-5Z Facility is FY 2016 (IPMP, HNF-3617, Rev. 0) Plan to fill data gaps: To be determined in negotiations below. Starting negotiations: Deactivation/Transition milestones subject to Tri-Party Agreement Negotiations. Start of negotiations by November 1, 2001 (Tri-Party Agreement C/R M-83-01-02.)	Data gaps not filled before negotiations because of negotiation timing.

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Fluor Hanford, Inc., Nuclear Material Stabilization Project	Plutonium Reclamation Facility	236Z	Pu nitrate reclamation tanks, piping, and control equipment. Miscellaneous treatment tanks, piping, and control equipment. Containment gloveboxes (reclamation and miscellaneous treatment). Chem prep tanks, piping, and control equipment. Residual contamination within inactive process equipment and gloveboxes (potential for mixed waste during cleanout). Potential for liquids within inactive tanks, vessels, and piping. Miscellaneous tools and maintenance equipment located within canyon cell. Note: Gloveboxes to be maintained and used for containment when conducting facility cleanout/transition activities.	None	Facility is surveyed daily by operations personnel. Surveillance includes observations to detect leaks, spills, and hazardous conditions. DOE Assessment: January 2001	Baseline milestone due date for completing deactivation/transition of the 236-Z Facility is FY 2012 (IPMP, HNF-3617, Rev. 0) Plan to fill data gaps: To be determined in negotiations below. Starting negotiations: deactivation/transition milestones subject to Tri-Party Agreement Negotiations. Start of negotiations by November 1, 2001 (Tri-Party Agreement C/R M-83-01-02.)	Data gaps not filled before negotiations because of negotiation timing.

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Table C-2. Potential Mixed Waste.

A Company, Project	B Common Name or Description	C Facility Number	D Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	E Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	F Assessment Method and Frequency	G Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	H Integrating Factors
Fluor Hanford, Inc., Nuclear Material Stabilization Project	MW Treatment and Storage Tanks	241Z	Tanks D-6, and D-9 ,associated piping, line flushing and sludge cleanout. Tank D-6 deactivated in 1972 because of failure. Waste transferred from tank and tank/piping isolated.	Treatment Chemicals	TSD unit is surveyed daily. Surveillance monitors data and alarm indications provided for leak detection. Surveillance includes monitoring for the Tank D-6 Cell. Level D DOE Storage Compliance Assessment (started 11/2000). Inventory surveillance and routine evaluations for use performed as part of Chemical Management System (E). DOE Assessment: January 2001	Tank D-6 and associated piping to be handled during closure of the 241-Z TSD Unit. Baseline Milestone for completing transition of 241-Z is FY 2016 (PFP IPMP, HNF-3617, Rev. 0) Plan to fill data gaps: To be determined in negotiations below Starting negotiations: Deactivation/transition milestones subject to Tri-Party Agreement negotiations. Start of negotiations by November 1, 2001 (Tri-Party Agreement C/R M-83-01-02).	Data gaps not filled before negotiations because of negotiation timing.
Fluor Hanford, Inc., Nuclear Material Stabilization Project	PFP Settling Tanks	241-Z-361	Tank containing waste from past practices	None	No assessments, tank is isolated and underground	CERCLA past-practice unit scheduled for conceptual design in 2002 and 2003, with final design for remediation to be completed no earlier than 2006. Plan to fill data gaps: Deactivation/transition milestones subject to Tri-Party Agreement negotiations. Starting negotiations: Deactivation/transition milestones subject to Tri-Party Agreement negotiations. Start of negotiations before November 1, 2001.	None

8-C

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Fluor Hanford, Inc., Nuclear Material Stabilization Project	Waste Treatment Facility (inactive)	242Z	Miscellaneous process tanks, first floor and mezzanine level. Process piping. Containment gloveboxes. Potential for liquids within tanks, vessels, and piping. Residual contamination within gloveboxes, tanks, and piping (potential for mixed waste during cleanout).	None	No assessments. Facility is currently sealed because of high levels of radioactive contamination resulting from cation exchange column explosion, August 1976.	Baseline milestone due date for completing deactivation/transition of the 242-Z Facility is FY 2015 (IPMP, HNF-3617, Rev. 0). Plan to fill data gaps: To be determined in negotiations. Starting negotiations: deactivation/transition milestones subject to Tri-Party Agreement negotiations. Start of negotiations by November 1, 2001 (Tri-Party Agreement C/R M-83-01-02).	Data gaps not filled before negotiations because of negotiation timing.
Fluor Hanford, Inc., Nuclear Material Stabilization Project	SNM Storage/ Repackaging	2736Z	None	"Residues" (SS&C, Ash, Other Combustibles, Compounds, Miscellaneous Oxides, Mixed oxides and alloys, including Pu alloys, <30 wt. percent SNM). Note: These materials were reported as potential solid waste to Ecology in April 2000 (ref: Memo, DOE-RL to Ecology, #00-OSS-273, dated April 3, 2000)	Routine surveillance of material storage areas and containers performed subject to AEA requirements for the management of SNM. DOE Assessment: January 2001	Baseline Milestone due date for completing deactivation/transition of the 2736-Z Facility is FY 2015 (IPMP, HNF-3617, Rev. 0) Plan to fill data gaps: To be determined in negotiations. Starting negotiations: Deactivation/Transition milestones subject to Tri-Party Agreement negotiations. Start of negotiations by June 1, 2001 (Tri-Party Agreement C/R M-83-01-02.)	Data gaps not filled before negotiations because of negotiation timing.

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Table C-2. Potential Mixed Waste.

A Company, Project	B Common Name or Description	C Facility Number	D Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	E Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	F Assessment Method and Frequency	G Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	H Integrating Factors
Fluor Hanford, Inc., River Corridor Project	Heavy Equipment Staging Area	2711E & 4734D	None	Heavy equipment components	Weekly for removable contamination and ground surveys and monthly for dose rate measurements	The equipment is being actively managed for reuse/recycle through 2006. Plan to fill data gaps: If during reuse/recycle activities, it becomes apparent that MW has been or will be generated, and it cannot be feasibly managed under RCRA requirements, negotiations will be initiated with Ecology as needed. Starting negotiations: 2006 (if necessary).	Equipment is actively managed. Has previously been discussed with Ecology.
Fluor Hanford, Inc., River Corridor Project	Rail Car Staging Area	212R Rail Spur	None	Rail car components (lead casks, liquids within the lead casks, bearings, and lubricants)	Monthly for removable contamination, ground surveys and dose rate measurements	The equipment is being actively managed for reuse/recycle through 2006. Plan to fill data gaps: If during reuse/recycle activities, it becomes apparent that MW has been or will be generated, and it cannot be feasibly managed under RCRA requirements, negotiations will be initiated with Ecology as needed. Starting negotiations: 2006 (if necessary).	Equipment is actively managed. Has previously been discussed with Ecology.

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Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Fluor Hanford, Inc., River Corridor Project	224-T (Includes TRUSAF)	224-T	<p>D1: Potential for liquid in vessels</p> <p>The presence or absence of mixed waste in the 224-T cells is not documented and the potential for waste was identified in the Silver List</p> <p>D2: There is a glovebox/hood in a plywood enclosure, but there aren't any vessels in the glovebox/hood and mixed waste is not expected to be found in the glovebox/hood</p>	None	<p>The practice was to flush to remove and account for special nuclear materials and to remove process solutions when operations were complete. However, no documentation is available demonstrating that. A one-time assessment is being planned to inspect the cells and vessels, but there is not sufficient funding for that to be completed this year.</p> <p>The assessment will entail determining if the vessels contain liquids, and if the contents would designate as dangerous waste.</p> <p>DOE assessment scheduled: August 2001.</p>	<p>D1: Facility deactivation is planned to be completed in FY 2014. Facility deactivation will include the disposition of potential mixed waste.</p> <p>Plan to fill data gaps: Characterization will be performed as necessary to support facility deactivation and the disposition of potential MW.</p> <p>Starting negotiations: Negotiations have been suspended indefinitely in accordance with a signed agreement among the parties. Negotiations will resume when the parties agree.</p> <p>D2: Potential mixed waste associated with the glovebox/hood will be dispositioned during facility deactivation. Facility deactivation is planned to be completed in FY 2014.</p> <p>Plan to fill data gaps: Characterization will be performed as necessary to support deactivation and the disposition of potential MW.</p> <p>Starting negotiations: Negotiations have been suspended indefinitely in accordance with a signed agreement among the parties. Negotiations will resume when the parties agree..</p>	<p>The potential for MW presence in the cells is a former Silver List issue that has not been closed out. Planning for a preliminary assessment of the 224-T cells is under way. Remote entries will be performed to determine the safety of personnel entries at a later date. Media that may designate as MW, if present, have been there for more than 35 years and are expected to be contained in stainless steel vessels. It is assumed that the media, if present, are stable and pose no threat to human health or the environment.</p> <p>D2: None.</p>

Table C-2. Potential Mixed Waste.

A Company, Project	B Common Name or Description	C Facility Number	D Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	E Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	F Assessment Method and Frequency	G Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	H Integrating Factors
Fluor Hanford, Inc., River Corridor Project	231Z	231Z	Liquid in vessels and chemicals in gloveboxes.	None	Quarterly surveillance inspections	<p>Facility deactivation is planned to be completed in FY 2014. Facility deactivation will include the disposition of potential mixed waste.</p> <p>Plan to fill data gaps: Characterization will be performed as necessary to support facility deactivation and the disposition of potential MW. If during characterization/ deactivation activities, it becomes apparent that MW has been or will be generated and it cannot be managed feasibly under RCRA requirements, negotiations will be initiated with Ecology as needed.</p> <p>Starting negotiations: 2014 (if necessary).</p>	<p>The potential for MW to be present is a former Silver List issue that has not been closed out. Media that may designate as MW, if present, are expected to be contained in stainless steel vessels. It is assumed that the media, if present, are stable and pose no threat to human health or the environment.</p>

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Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Fluor Hanford, Inc., River Corridor Project	324	324	Shielded glove box . Potential mixed waste residue. Former Silver List Item 11.8	None	Glovebox is subject to facility deactivation activities planned for FY 2003. Deactivation will include one-time evaluation of glovebox and any residual contamination/materials/residue. Any recoverable residual material will be evaluated and subject to waste designation and disposition per WAC 173-303.	Glovebox deactivation activities planned for FY 2002 through FY 2003. Plan to fill data gaps: Glovebox deactivation/cleanup and associated characterization activities will be completed in FY 2003. Starting negotiations: NA.	Any glove box contamination/residue is contained within the glove box. Condition is stable and does not represent a hazard or pose a threat to human health and environment. The proposed plan and schedule for glovebox deactivation, cleanup, and associated characterization activities is contingent upon agreements reached with Ecology concerning close-out of former Silver List Item 11.8.

Table C-2. Potential Mixed Waste.

A Company, Project	B Common Name or Description	C Facility Number	D Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	E Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	F Assessment Method and Frequency	G Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	H Integrating Factors
Fluor Hanford, Inc., River Corridor Project	333 Building	333	Miscellaneous equipment, piping, and duct work	Miscellaneous equipment, piping, and duct work	Surveillance based on procedures. DOE assessment scheduled: November 2002	Deactivation is scheduled to be completed by 2008 in accordance with the 2012 plan. Facility deactivation will include the disposition of potential mixed waste. Plan to fill data gaps: If, during deactivation, it becomes apparent that MW has been or will be generated and it cannot be feasibly managed under RCRA requirements, negotiations will be initiated with Ecology as needed. Starting negotiations: 2008 (if necessary).	The schedule commitments are conditional on 2012 plan implementation.

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Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Fluor Hanford, Inc., River Corridor Project	Waste Neutralization Facility (340-Vault Tanks, Decon. Room, Control Room, Records, and Truck Dock)	340	340 Vault Tank heels and clean out residues may designate as MW.	Materials are currently contained in inactive systems pending deactivation or support for other 300 Area deactivation activities.	Routine operational surveillances. DOE assessment scheduled for July 2002.	Plan to fill data gaps: 340 Vault Tank heel removal and any residues resulting from the clean out of ancillary equipment are scheduled to be completed by September 30, 2006, in accordance with SCW Milestones M-92-14 through M-92-16. Characterization of SCW will be completed as necessary. Removal and characterization of the 340 Vault Tanks and ancillary equipment is presently scheduled to commence in FY 2009 in accordance with CERCLA requirements per the 2012 Plan. Starting Negotiations: NA.	NOTE: The Project Management Plan for the 300 Area Special Case Waste and associated Tri-Party Agreement Milestones M-92-14 through M-92-16 are subject to change through the Tri-Party Agreement milestone change process. In addition, equipment removal (e.g., tanks and process piping) schedules as identified in the 2012 Plan are totally dependant on yet-to-be-determined out-year funding cycles and are subject to change.

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Fluor Hanford, Inc., River Corridor Project	340-A Above Ground Storage Tanks	340A	340-A Tanks clean out residues may designate as MW.	Materials are currently contained in inactive systems pending deactivation or support for other 300 Area deactivation activities.	Routine operational surveillances. DOE assessment scheduled for July 2002.	Plan to fill data gaps: 340-A Tanks clean out and any residues resulting from the clean out of ancillary equipment is scheduled to be completed by September 30, 2006, in accordance with SCW Milestones M-92-14 through M-92-16. Characterization of SCW will be completed as necessary. Removal and characterization of the 340-A Tanks and ancillary equipment is presently scheduled to commence in FY 2009 in accordance with CERCLA requirements per the 2012 Plan. Starting negotiations: NA.	NOTE: The Project Management Plan for the 300 Area Special Case Waste and associated Tri-Party Agreement Milestones M-92-14 through M-92-16 are subject to change through the Tri-Party Agreement milestone change process. In addition, equipment removal (e.g., tanks and process piping) schedules as identified in the 2012 plan depend totally on yet-to-be-determined out-year funding cycles and are subject to change.

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Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Fluor Hanford, Inc., River Corridor Project	Waste load-out bldg.	340B	Process piping and ancillary equipment clean out residues may designate as MW.	Materials are currently contained in inactive systems pending deactivation or support for other 300 Area deactivation activities.	Routine operational surveillances. DOE Assessment scheduled for July 2002.	Plan to fill data gaps: Process piping and ancillary equipment clean out is scheduled to be completed by September 30, 2006, in accordance with SCW Milestones M-92-14 through M-92-16. Characterization of SCW will be completed as necessary. Process piping and ancillary equipment removal is scheduled to commence in Fiscal Year 2009 in accordance with CERCLA requirements per the 2012 Plan. Characterization of process piping and ancillary equipment removed will be completed as necessary. Starting Negotiations: NA.	<b>NOTE:</b> The Project Management Plan for the 300 Area Special Case Waste and associated Tri-Party Agreement Milestones M-92-14 through M-92-16 are subject to change through the Tri-Party Agreement milestone change process. In addition, equipment removal (e.g., tanks and process piping) schedules as identified in the 2012 Plan depend totally on yet-to-be-determined out-year funding cycles and are subject to change.
Fluor Hanford, Inc., River Corridor Project	300-RRLWS	RRLWS	Retired radioactive liquid waste sewer piping and ancillary structures may designate as MW.	None	Annual assessments.	Plan to fill data gaps: RRLWS remediation is scheduled to commence in 2009 in accordance with CERCLA requirements in accordance with the 2012 Plan. Characterization of the RRLWS will be completed as necessary. Starting Negotiations: NA.	<b>NOTE:</b> Equipment removal (e.g., tanks and process piping) schedules as identified in the 2012 Plan are totally dependant on yet-to-be-determined out-year funding cycles and are subject to change.

C-17

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Fluor Hanford, Inc., River Corridor Project	300-RLWS	RLWS	Isolated radioactive liquid waste sewer piping and ancillary equipment residues may designate as MW.	Materials in Column D are currently contained in inactive systems pending deactivation or support for other 300 Area deactivation activities.	Annual assessments. DOE Assessment scheduled for July 2002.	Plan to fill data gaps: radioactive liquid waste sewer piping and ancillary equipment clean out is scheduled to be completed by September 30, 2006, in accordance with SCW Milestones M-92-14 through M-92-16. Characterization of SCW will be completed as necessary. Removal and characterization of the radioactive liquid waste sewer piping and ancillary equipment is presently scheduled to commence in FY 2009 in accordance with CERCLA requirements per the 2012 Plan. Starting Negotiations: NA.	NOTE: The Project Management Plan for the 300 Area SCW and associated Tri-Party Agreement Milestones M-92-14 through M-92-16 are subject to change through the Tri-Party Agreement milestone change process. In addition, equipment removal (e.g., tanks and process piping) schedules as identified in the 2012 Plan are totally dependant on yet to be determined out-year funding cycles and are subject to change.
Fluor Hanford, Inc., Spent Nuclear Fuel	100 K Basins	105KW	None	Lead bricks, sheets	Weekly for removable radiation, monthly for (radiation) dose	For use as shielding at 100 K, alternative is to decontaminate if possible or recycle. Planned decision timeframe is FY 2002. Panned to fill data gaps: FY 2002 Starting negotiations: NA, material will be dispositioned in accordance with current practices if declared waste.	Stored outside in metal boxes and contents wrapped in plastic.

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Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Fluor Hanford, Inc., Waste Management Project	T Plant Canyon, RR Tunnel, Head-end	221T	For process cell inventory refer to "Historical Records for 221-T Facility," HNF-1982, as amended. Examples of inventory are jumpers, tanks, pumps, pump racks, centrifuges, fuel racks, fuel canisters, and agitators.	Cover blocks, lead shielding (including portable lead walls), hand tools and tool boxes, metal ramp, chokers and slings, hoists, railroad ties, portable fences, cutters (e.g., jaws), portable pumps and hoses, impact wrenches, spill pallets, HEPA vacuums, HEPA filter and duct work, torch cart and welding cart, work bench, portable exhauster, aqueous make-up tanks, drum crusher, plasma arc cutter.	Weekly/daily TSD unit inspections, worker assessments. DOE assessment scheduled: July 2003	Clear off 10 sections of canyon deck, clear off 8 canyon cells, and remove 4 large pieces of equipment by October 2002. Plan to fill data gaps: 2028, for materials not handled above. Starting negotiations: 2032, for materials not handled above.	None
Fluor Hanford, Inc., Waste Management Project	T Plant Complex IMUSTs	292-TK-1 and 292-TK-2	292-TK-1 and 292-TK-2 consist of 2 stainless steel 55-gallon drums encased in concrete. These tanks contain a mixture of irradiated fuel and nitric acid. The solutions in the tanks were then neutralized with equivalent molar amounts of sodium hydroxide.	None	This WIDS site (200-W-16) has periodic radiological surveys and an annual ECO Management Assessment. DOE assessment scheduled: July 2003	This WIDS site will be addressed as part of the CERCLA remediation activity. Plan to fill data gaps: Part of CERCLA remediation process, scheduled for completion of RI/FS process by Dec. 2008. Starting negotiations: Prioritization discussions have taken place (4/23/01). Specific M-13 milestone assignments anticipated by FY 2004.	None

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Table C-2. Potential Mixed Waste.

A Com- pany, Project	B Common Name or Description	C Facility Number	D Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	E Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	F Assessment Method and Frequency	G Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	H Integrating Factors
Fluor Hanford, Inc., Waste Management Project	2706-T Conex box	Conex box	None	Various decontamination equipment that will be used in the future	Periodic external inspection of Conex box. DOE Assessment Scheduled: 7/29/03	Equipment will be evaluated for use in support of liquid and other decontamination and treatment activities by September 2001. Plan to fill data gaps: NA Starting negotiations: NA, would be disposed under current pathways.	Useable liquid decontamination equipment.
Fluor Hanford, Inc., Waste Management Project	200 ETF	2025E	None	Thin film dryer rotor is being evaluated as to whether it will be rebuilt.	Weekly TSD Inspections DOE Assessment conducted 09/2000	Has not been declared waste and a job ticket is in place to rebuild this piece of equipment. If based on an engineering evaluation, it is not cost effective to rebuild the rotor, it will be declared waste and disposed of. Will be managed as waste when equipment has no use and no excess pathway is identified, in accordance with closure plan Plan to fill data gaps: NA. Starting negotiations: Not needed. Material can be handled under existing processes if declared waste. Note: Decision was made in June 2001 to rebuild the rotor.	None

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Fluor Hanford, Inc., Waste Management Project	242-A Evaporator	242A	None	Ion exchange column	Weekly TSD Inspections DOE assessment conducted 09/2000	The ion exchange column is in standby and has not been declared a waste. Life extension upgrades to the 242-A Evaporator include removal of the ion exchange column in FY2003. Plan to fill data gaps: Not applicable. Starting negotiations: Negotiations, if required, are expected to begin in FY 2002.	Note: FY 2003 date is part of CHG baseline, not FH.
Battelle Memorial Institute, Pacific Northwest National Laboratory	Radiochemical Processing Laboratory	325	Tank system formerly used for product materials used as feedstock for research projects. Tanks have been drained and flushed, but remain in place.	Hot cells, hoods, and gloveboxes used for radioactive materials and wastes analysis and research	Facility walkthroughs on weekly basis; radiological surveillance weekly. DOE assessment scheduled: October 2001	Plan to fill data gaps: Little if any additional information will be required. Starting negotiations: October 2025 (projected date of facility deactivation based on current life-cycle management.) As an active facility, 325 Building is not scheduled to be addressed by 2012 Plan or FF-2 cleanup.	Part of an active facility; no special hazards known.

C-21

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Battelle Memorial Institute, Pacific Northwest National Laboratory	3708	3708	Solid obsolete laboratory equipment	None	Quarterly management walkthroughs. Monthly rad. surveillance. DOE assessment scheduled: November 2002	The building may be cleaned up under a CERCLA removal action. The schedule for the removal action will be coordinated with the remedial action schedule for 300-FF-2 Operable Unit. No schedule for FF-2 work exists at the present time. Applicable Tri-Party Agreement milestones include M-16-03A, requiring a date to be set for all 300 Area remedial actions by 6/30/2002, and M-16-00, requiring all 300 Area remedial actions to be complete by 9/30/2018. 3708 also would be remediated pursuant to the 300 Area "2012 Plan" effort if DOE decides to pursue that effort. That schedule proposes work inside the industrial 300 Area (including 3708) to take place between 2008 and 2012. Plan to fill data gaps: See above Starting negotiations: See above	Negotiations will already be taking place in the near term due to the Tri-Party Agreement milestone and/or the 300 Area "2012 Plan" effort. No risk-based hazards are known that would indicate a need for expedited consideration of the wastes in the facility.

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Battelle Memorial Institute, Pacific Northwest National Laboratory	314	314	Large equipment previously used in the facility. Equipment may be radioactively contaminated and may also contain items such as asbestos insulation, thermostats, mercury switches, circuit boards, or lead solder that could render all or parts of the equipment as mixed waste. The extent of contamination on internal components is currently unknown.	None	Weekly rad. surveillance and quarterly management walkthroughs. DOE assessment scheduled: April 2002	Building and waste therein are listed in WIDS as part of Operable Unit 300-FF-2. The building may be cleaned up under a CERCLA removal action. The schedule for the removal action will be coordinated with the remedial action schedule for 300-FF-2 Operable Unit. No schedule for FF-2 work exists at the present time. Applicable Tri-Party Agreement milestones include M-16-03A, requiring a date to be set for all 300 Area remedial actions by 6/30/2002, and M-16-00, requiring all 300 Area remedial actions to be complete by 9/30/2018. 314 also would be remediated pursuant to the 300 Area 2012 Plan effort if DOE decides to pursue that effort. That schedule proposes work inside the industrial 300 Area (including 314) to take place between 2008 and 2012. Plan to fill data gaps: See above. Starting negotiations: See above.	Negotiations will already be taking place in the near term because of the Tri-Party Agreement milestone and/or the 300 Area 2012 Plan effort. No risk-based hazards are known that would indicate a need for expedited consideration of the waste in the facility.

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Battelle Memorial Institute, Pacific Northwest National Laboratory	Environmental Sciences Laboratory	3720	Laboratory equipment	Hoods and gloveboxes used for radioactive materials and waste analysis and research	Facility walkthroughs on weekly basis; radiological surveillance weekly. DOE assessment scheduled: February 2002	The building may be cleaned up under a CERCLA removal action. The schedule for the removal action will be coordinated with the remedial action schedule for 300-FF-2 Operable Unit. No schedule for FF-2 work exists at the present time. Applicable Tri-Party Agreement milestones include M-16-03A, requiring a date to be set for all 300 Area remedial actions by 6/30/2002, and M-16-00, requiring all 300 Area remedial actions to be complete by 9/30/2018. Building 3720 also would be remediated pursuant to the 300 Area "2012 Plan" effort if DOE decides to pursue that effort. That schedule proposes work inside the industrial 300 Area (including 3720) to take place between 2008 and 2012. Plan to fill data gaps: See above. Starting negotiations: See above.	Negotiations will already be taking place in the near term because of the Tri-Party Agreement milestone and/or the 300 Area "2012 Plan" effort. No risk-based hazards are known that would indicate a need for expedited consideration of the wastes in the facility. The facility is currently active.
CH2M HILL, Hanford Group, Inc., Tank Farms	Evaporators	242-S, T	Liquids/solids in process tanks and piping, debris	None	242-T is inspected annually, 242-S inspected daily. 242-T Evaporator DOE assessment conducted September, 2000. 242-S Evaporator DOE assessment conducted October 2000.	242-T and 242-S Evaporators are both forecast to be exceeded and will go through the LCAM process. Plan to fill data gaps: No data gaps. Starting negotiations: FY 2005.	None

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
CH2M HILL, Hanford Group, Inc., Tank Farms	701-A Ventilation Building	701-A	Mechanical equipment, e.g., HEPA filters, exhausters, etc.	None	Weekly rad inspections of the outside of the building. Annual environmental surveillance.	Plan to fill data gaps: To be determined as part of negotiations. Starting negotiations: Will start negotiations for determining the status of the waste in FY 2005.	None
CH2M HILL, Hanford Group, Inc., Tank Farms	Double-Shell Tank Farms	241-AN, AW, AP, AY, AZ, SY	Contaminated unusable equipment (e.g., ductwork, exhausters, piping, etc)	None	Daily, weekly, quarterly inspections of tank farm areas. DOE assessments of DST facilities conducted September to December 2000. Next assessment scheduled to be completed by December 2001.	Plan to fill data gaps: A baseline change request for a contaminated equipment management plan will be developed by July 2001. The equipment will be handled in accordance with the management plan. Starting negotiations: To be determined based on contaminated equipment management plan.	None
CH2M HILL, Hanford Group, Inc., Tank Farms	Single-Shell Tank Farms	241-A, AX, B, BX, BY, C, T, TX, TY, S, SX, U, 244-AR, 244-CR	Contaminated unusable equipment (e.g., ductwork, exhausters, piping, ion exchange columns, etc)	None	Daily, weekly, quarterly inspections of tank farm areas. DOE assessments of SST facilities conducted September to December 2000. Next SST farm assessments are scheduled to be completed by December 2001.	Plan to fill data gaps: A baseline change request for a contaminated equipment management plan will be developed by July, 2001. The equipment will be handled per the management plan. Starting negotiations: To be determined based on Contaminated Equipment Management Plan.	None

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Bechtel Hanford, Inc., Environmental Restoration	100-B Reactor Facilities	105-B, 111-B, 116-B, 119-B, 1608-B	None	Reactor core and equipment remaining in the facility.	Assessments performed in compliance with BHI Program Plan for Surveillance and Maintenance, BHI-01021	Disposition of the reactor core is addressed in the SPR EIS Plan to fill data gaps: Complete. Reactor has been characterized. Starting negotiations: Tri-Party Agreement Milestone M-93-14, 6/30/03.	Disposition of the reactor core is addressed in the SPR EIS. Although the EIS allows for a safe storage period of 75-years, the reactors will be decommissioned consistent with related activities under the Tri-Party Agreement. Tri-Party Agreement Milestone M-93-00 addresses final disposition of all 100 Area surplus reactor buildings

C-26

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Bechtel Hanford, Inc., Environmental Restoration	100-C Reactor Facility	105-C, 118-C-4	None	Reactor core and equipment remaining in the facility as part of ISS.	Once every 5 years. Further details of the facility surveillance program can be found in DOR/RL-98-44, Rev. 0, S&M Plan for the 105-C Reactor Safe Storage Enclosure	Disposition of the reactor core is addressed in the SPR EIS. Reactors will be decommissioned consistent with related activities under the Tri-Party Agreement Plan to fill data gaps: Complete. Data gaps were filled during ISS activities. Starting negotiations: Tri-Party Agreement Milestone M-93-14, 6/30/03.	Disposition of the reactor core is addressed in the SPR EIS. ISS has been completed. Although the EIS allows for a safe storage period of 75 years, the reactors will be decommissioned consistent with related activities under the Tri-Party Agreement. Tri-Party Agreement Milestone M-93-00 addresses final disposition of all 100 Area surplus reactor buildings

C-27

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Bechtel Hanford, Inc., Environmental Restoration	100-D and DR Reactor Facilities	103-D, 105-D, 105-DR, 117-DR, 190-DR	None	Reactor core and equipment remaining in the facility as part of the ISS.	Annual inspection of 105-DR Large Sodium Fire Facility (TSD) After ISS has been completed, the facility is expected to be inspected every 5 years, similar to the C Reactor ISS.	Disposition of the reactor core is addressed in the SPR EIS. Reactors will be decommissioned consistent with related activities under the Tri-Party Agreement. Plan to fill data gaps: Data gaps are filled during ISS activities. Tri-Party Agreement Milestones M-93-16-T01 and M-93-17-T01 address ISS of the 105-DR and 105-D reactors, respectively. Starting negotiations: Tri-Party Agreement Milestone M-93-14, 6/30/03.	ISS of both 105-D and 105-DR is ongoing. Disposition of the reactor core is addressed in the SPR EIS. Although the EIS allows for a safe storage period of 75 years, the reactors will be decommissioned consistent with related activities under the Tri-Party Agreement. Tri-Party Agreement Milestone M-93-00 addresses final disposition of all 100 Area surplus reactor buildings.

C-28

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Bechtel Hanford, Inc., Environmental Restoration	100-F Reactor Facilities	105-F	None	Reactor core and equipment remaining in the facility as part of the ISS.	After ISS has been completed, the facility is expected to be inspected every 5 years, similar to the C Reactor ISS.	Disposition of the reactor core is addressed in the SPR EIS. The reactors will be decommissioned consistent with related activities under the Tri-Party Agreement. Plan to fill data gaps: Data gaps were filled during ISS activities. Tri-Party Agreement Milestone M-93-11 addresses ISS of the F Reactor. Starting negotiations: Tri-Party Agreement Milestone M-93-14, 6/30/03.	ISS of the reactor is ongoing. Disposition of the reactor core is addressed in the SPR EIS. Although the EIS allows for a safe storage period of 75 years, the reactors will be decommissioned consistent with related activities under the Tri-Party Agreement. Tri-Party Agreement Milestone M-93-00 addresses final disposition of all 100 Area surplus reactor buildings.

C-29

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Bechtel Hanford, Inc., Environmental Restoration	100-H Reactor Facilities	105-H, 1720-HA, 1713-H	None	Reactor core and equipment remaining in the facility as part of the ISS.	After ISS has been completed, the facility is expected to be inspected every 5 years, similar to the C Reactor ISS.	Disposition of the reactor core is addressed in the SPR EIS. Decommissioning of the reactors will be performed consistent with related activities under the Tri-Party Agreement. Plan to fill data gaps: Gaps will be filled during ISS of the reactor. Tri-Party Agreement Milestone M-93-18-T01 addresses ISS of the H Reactor. Starting negotiations: Tri-Party Agreement Milestone M-93-14, 6/30/03.	Disposition of the reactor core is addressed in the SPR EIS. Although the EIS allows for a safe storage period of 75 years, the reactors will be decommissioned consistent with related activities under the Tri-Party Agreement. Tri-Party Agreement Milestone M-93-00 addresses final disposition of all 100 Area surplus reactor buildings.

C-30

Table C-2. Potential Mixed Waste.

A Company, Project	B Common Name or Description	C Facility Number	D Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	E Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	F Assessment Method and Frequency	G Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	H Integrating Factors
C-31 Bechtel Hanford, Inc., Environmental Restoration	100-KE and KW Reactor Facilities	167-K, 182-K, 183-K, 105-KE, 110-KE, 115-KE, 116-KE, 117-KE, 118-KE-2, 150-KE, 166-KE, 1713-KER, 105-KW, 110-KW, 115-KW, 116-KW, 117-KW, 118-KW-2, 119-KW, 150-KW, 165-KW, 166-KW, 181-KW, 183-KW, 190-KW	Miscellaneous contaminated material in the facility is being managed as part of ISS activities	Reactor core and equipment remaining in the facility as part of the ISS.	Assessments performed in compliance with BHI Program Plan for Surveillance and Maintenance, BHI-01021.	D: Waste will be generated as part of the ISS activities. E: Disposition of the reactor core is addressed in the SPR EIS. The reactors will be decommissioned consistent with related activities under the Tri-Party Agreement. Plan to fill data gaps: Characterization will be completed during ISS activities. Tri-Party Agreement Milestones M-93-21-T01 and M-93-22-T01 address ISS of 105-KW and 105-KE respectively. Starting negotiations: Tri-Party Agreement Milestone M-93-14, 6/30/03.	Disposition of the reactor core is addressed in the SPR EIS. Although the EIS allows for a safe storage period of 75 years, the reactors will be decommissioned consistent with related activities under the Tri-Party Agreement. Tri-Party Agreement Milestone M-93-00 addresses final disposition of all 100 Area surplus reactor buildings.
Bechtel Hanford, Inc., Environmental Restoration	100-N Reactor Facilities	See Table 1, S&M Plan for the 100-N Deactivated Facilities, DOE/RL-98-64, Rev. 0	None	Some remaining hazardous materials consisting of activated materials and fission products contained within the reactor block. (Further details are provided in DOE/RL-98-64, Rev. 0, S&M Plan for the 100-N Area Deactivated Facilities)	Surveillance activity and frequency is facility specific. Section 4 of DOE/RL-98-64, outlines the frequency of surveillance for each facility.	E: Tri-Party Agreement Milestone M-93-20-T01, complete N-Reactor ISS. The reactors will be decommissioned consistent with related activities under the Tri-Party Agreement. Plan to fill data gaps: Characterization was completed during N-Reactor decommissioning. Starting negotiations: Tri-Party Agreement Milestone M-93-14, 6/30/03.	Tri-Party Agreement Milestone M-93-00 addresses final disposition of all 100 Area surplus reactor buildings.

Table C-2. Potential Mixed Waste.

A Company, Project	B Common Name or Description	C Facility Number	D Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	E Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	F Assessment Method and Frequency	G Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	H Integrating Factors
Bechtel Hanford, Inc., Environmental Restoration	B Plant	207-BA, 211-B, 212-B, 217-B, 221-B, 221-BB, 221-BF, 221-BG, 271-B, 276-B, 291-BA, 291-B, 291-BB, 291-BD, 291-BF, 291-BG, 292-B, 2711-B, 2715-B, 270-E-1 (IMUST)	TSD Unit Tank System heels in Canyon Buildings and 270-E-1	Equipment and containers placed in standby until the facility is decommissioned. (Appendix A of DOE/RL-99-24, Rev. 0, S&M Plan for B Plant identifies hazardous material remaining in the facility.	F1. Quarterly RCRA TSD unit inspections per WAC (further details provided in DOE/RL-99-24, Section 2.3) F2. DOE Assessment performed in December 2000 Next DOE Environmental Assessment Scheduled: 4/2003.	D & E: As described in the S&M Plan, DOE/RL-99-24, Rev 0. Plan to fill data gaps: Characterization was completed as part of facility transition Starting negotiations: B Plant negotiations, in accordance with Section 8.7 of the Tri-Party Agreement, are scheduled to begin in 2018 (Richland ER Project Long Range Plan, DOE/RL-96-105).	B Plant is in the S&M phase of the facility decommissioning process, as described in Chapter 8.0 of the Tri-Party Agreement. Unless a decision on CDI accelerates final disposition of the facility, B Plant is scheduled to initiate the facility disposition, under Section 8.7 of the Tri-Party Agreement, in FY 2018. Final disposition of the IMUST and B Plant will be scheduled such that the activities are performed concurrently. See LSDSs for details regarding waste stored in Cell 4 and in the containment building.

Table C-2. Potential Mixed Waste.

A Com- pany, Project	B Common Name or Description	C Facility Number	D Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	E Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	F Assessment Method and Frequency	G Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	H Integrating Factors
Bechtel Hanford, Inc., Environmental Restoration	IMUSTs not associated with a building	216-BC-201, 216- BY-201, 216-TY- 201, 241-B-361, 241-U-361, 241-T-361	Tank system heels in each IMUST	None	Assessments performed in compliance with BHI Program Plan for Surveillance and Maintenance, BHI-01021.	Plan to fill data gaps: Part of CERCLA remediation process, scheduled for completion of RI/FS process by December 2008. Starting negotiations: Prioritization discussions took place 4/23/01. Specific M-13 milestone assignments are anticipated by FY 2004.	The IMUSTs will be disposed with their respective cribs. Further information regarding the remediation strategy can be found in DOE/RL-98-28, Rev. 0, <i>200 Areas Remedial Investigation/Feasibilit y Study Implementation Plan - Environmental Restoration Program.</i>

Table C-2. Potential Mixed Waste.

A Com- pany, Project	B Common Name or Description	C Facility Number	D Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	E Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	F Assessment Method and Frequency	G Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	H Integrating Factors
Bechtel Hanford, Inc., Environmental Restoration	PUREX	202-A, 203-A, 204-A, 206-A, 211-A, 212-A, 213-A, 214- A/B/C/D, 215-A, 216-A, 225-EC, 271-AB, 276-A, 281-A, 291-A, 291- AB/AC/AD/AE/ AG/AH/AJ/AK., 291-A-1, 292- AA/AB, 293-A, A93-AA, 294-A, 295-A, 295-AA/AB/AC/ AD/AE, 296-A-1, 296-A-2, 296-A-3, 296-A-5A/5B, 296- A-6/7/8/9/10/14/ 24, 2711-A-1, 2712-A, 2714-A/U, 217-A, 252-AC/AB, 216-A-5 (IMUST)	TSD unit tank system heels in Canyon Buildings and 216-A-5 contents	Remaining hazardous material within the facility is in the form of shielding or is part of remaining equipment. (Appendix A of DOE/RL- 98-35, Rev. 0, S&M Plan for the PUREX Facility, identifies hazardous material remaining in the PUREX facility).	Quarterly inspections are performed in accordance with DOE/RL-98-35, Rev. 0. DOE assessment scheduled: 3/12/03	D & E: As described in DOE/RL-98-35, Rev. 0. Plan to fill data gaps: Characterization was performed as part of facility transition. Starting negotiations: PUREX negotiations, in accordance with Section 8.7 of the Tri-Party Agreement, are scheduled to begin in 2023 (Richland ER Project Long Range Plan, DOE/RL-96-105)	PUREX is in the S&M phase of the facility decommissioning process described in Chapter 8.0 of the Tri- Party Agreement. Unless a decision on CDI accelerates final disposition of the facility, PUREX is scheduled to initiate the disposition phase, Section 8.7 of the Tri- Party Agreement, in FY 2023. Final disposition of the IMUST at PUREX will be scheduled such that the activities are performed concurrently. See the LSDS for TSD waste storage.

Table C-2. Potential Mixed Waste.

A Company, Project	B Common Name or Description	C Facility Number	D Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	E Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	F Assessment Method and Frequency	G Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	H Integrating Factors
Bechtel Hanford, Inc., Environmental Restoration	REDOX	202-S, 291-S, 292-S, 293-S, 2718-S, 211-S, 2711-S, 2715-S, 2904-SA, 2710-S, 2706-S, 276-S-141, 276-S-142	Hexone Tanks (276-S-141 and -142) and heel content and tank system heels in canyon buildings	Equipment and containers placed in standby until the facilities are decommissioned	Quarterly (details can be found in DOE/RL-98-19, Rev. 0, S&M Plan for REDOX). Hexone tanks (276-S) are inspected weekly in accordance with Notice of Correction dated May 26, 2000, BHI Docket Number 00NWP006. DOE assessment scheduled: 5/21/03	D: DOE is performing an interim stabilization activity of the tanks. E: Will be addressed as part of facility final disposition. Plan to fill data gaps: REDOX characterization is complete. Starting Negotiations: The hexone tank schedule will be included as part of the ongoing 200 Area strategy negotiations. REDOX Negotiations, in accordance with Section 8.7 of the Tri-Party Agreement, are scheduled to begin in 2032 (Richland ER Project Long Range Plan, DOE/RL-96-105)	REDOX is in the S&M phase of the facility decommissioning process described in Chapter 8.0 of the Tri-Party Agreement. Unless a decision on CDI accelerates final disposition of the facility, REDOX is scheduled to initiate the disposition phase, Section 8.7 of the Tri-Party Agreement, in FY 2032.
Bechtel Hanford, Inc., Environmental Restoration	Semi Works	241-CX-70, 241-CX-71, 241-CX-72, 276-C	241-CX Tank System (-70, -71, -72) and heel content	None	Monthly in accordance with Ecology memo dated July 7, 1994 (CCN003265).	D: In accordance with closure plan Plan to fill data gaps: A closure/postclosure plan for the 241-CX tank system is due to Ecology in February 2004 Starting negotiations: After the closure/postclosure plan is issued.	Tri-Party Agreement Milestone M-20-54 addresses closure/postclosure of the 241-CX Tank System. Schedule for closure of this unit could be addressed as part of the ongoing 200 Area remediation strategy negotiations.

Table C-2. Potential Mixed Waste.

A	B	C	D	E	F	G	H
Company, Project	Common Name or Description	Facility Number	Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	Assessment Method and Frequency	Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	Integrating Factors
Bechtel Hanford, Inc., Environmental Restoration	U Plant	221-U, 276-U, 211-UA, 291-U, 292-U, 241-WR-001, 241-WR-002, 241-WR-003, 241-WR-004, 241-WR-005, 241-WR-006, 241-WR-007, 241-WR-008, 241-WR-009, 2716-U, 2714-U	Residual materials may remain as heels in the tanks and piping systems (211-U, 211-UA Tank Farms, and 241-WR tanks)	Equipment and containers placed in standby until the facility is decommissioned	Quarterly (details can be found in DOE/RL-98-20, Rev. 1 of the U Plant S&M Plan)	D & E: U Plant is expected to be decommissioned in 2011 or later. Plan to fill data gaps: Characterization is ongoing as part of CDI Starting negotiations: feasibility study/proposed plan will be submitted to the regulators during FY 2002.	U Plant is identified in Chapter 8 of the Tri-Party Agreement, as one of the Hanford facilities under S&M. Discussions with the regulators are ongoing to perform CDI at U Plant. Final disposition of the WR vault and U Plant will be scheduled such that the activities are performed concurrently.
Bechtel Hanford, Inc., Environmental Restoration	UO3 Facility	224-U, 272-U, 2715-UA, 203-U, 203-UX, 211-U, 207-U, 270-W (IMUST)	D1: Approximately 2 L of solidified uranyl nitrate hexahydrate in the concrete-lined 203-U riser pit (30 ft below grade) D2: Tank system waste in 270-W	Equipment and containers placed in standby until the facility is decommissioned. The UO <sub>3</sub> S&M Plan describes the status of the facility.	Quarterly (details can be found in DOE/RL-98-22, Rev. 0 of the UO <sub>3</sub> Plant S&M Plan)	D & E: Addressed as part of facility final disposition. Plan to fill data gaps: Characterization is completed. Starting negotiations: UO <sub>3</sub> is scheduled to begin decommissioning in 2023 (Richland ER Long Range Plan, DOE/RL-96-105)	UO <sub>3</sub> is in the S&M phase of the facility decommissioning process described in Chapter 8.0 of the Tri-Party Agreement. Unless a decision on CDI accelerates final disposition of the facility, UO <sub>3</sub> is scheduled to initiate the disposition phase, per Section 8.7 of the Tri-Party Agreement, in 2023.

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Table C-2. Potential Mixed Waste.

A Com- pany, Project	B Common Name or Description	C Facility Number	D Solid Waste, with Potential for Mixed Waste, not Integral to the Building or Structure (No Use)	E Materials, With Potential to Become Solid Waste and Subsequently Mixed Waste (In Standby, Possible Use)	F Assessment Method and Frequency	G Schedule for Handling Column D and E Materials & Schedule for Investigation Plan Discussions	H Integrating Factors
Bechtel Hanford, Inc., Environmental Restoration	200 North Area	212-N, 212-P, 212-R	212-R contains a radiologically contaminated empty burial box, the 212-N transfer bay contains 14 wooden boxes of suspected TRU nuclear fuel refabrication equipment from the 308 Building, Room 213, moved in 1982 and a single wooden box from 308 Building, Room 212, transferred in 1983. No non-rad materials have been identified in this facility.	None	Assessments performed in compliance with BHI Program Plan for Surveillance and Maintenance, BHI-01021	Plan to fill data gaps: Gaps will be filled in accordance with the 100 Area remaining sites record of decision. Starting negotiations: See the 100 Area Remaining Sites Record of Decision.	Will be integrated with the 200 Area remediation strategy

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Table C-2. Potential Mixed Waste.

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Table C-2. Potential Mixed Waste.

BHI	Bechtel Hanford, Inc.	MW	mixed waste
CDI	Canyon Disposition Initiative	NOD	notice of decision
CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</i>	PCB	polychlorinated biphenyl
CHG	CH2M HILL Hanford Group, Inc.	PFPP	Plutonium Finishing Plant
CY	calendar year	PUREX	Plutonium-Uranium Extraction (process)
DOE	U.S. Department of Energy	RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
DST	double-shell tank	REDOX	Reduction-Oxidation (process)
Ecology	Washington State Department of Ecology	RI/FS	remedial investigation/feasibility study
EIS	environmental impact statement	RL	U.S. Department of Energy, Richland Operations Office
FH	Fluor Hanford, Inc.	S&M	surveillance and maintenance
FY	fiscal year	SCW	special-case waste
HEPA	high-efficiency particulate air (filter)	SPR EIS	Surplus Reactors Environmental Impact Statement
HVAC	heating, ventilation, and air conditioning	TCLP	toxicity characteristic leaching procedure
IMUST	inactive miscellaneous underground storage tank	TRUSAF	Transuranic Waste Storage and Assay Facility
IPMP	interim safe storage	Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>
ISS	interim safe storage	TSD	treatment, storage, and/or disposal
LCAM	life-cycle asset management	WAC	<i>Washington Administrative Code</i>
LSDS	location-specific data sheet	WIDS	Waste Information Data System

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# Calendar Year 2000 Hanford Site Land Disposal Restrictions Report

## Volume 2 of 2: Characterization and Treatment Plan

Date Published  
June 2001

"This document has been prepared, submitted, revised and approved as a primary document in response to the requirements of *Hanford Federal Facility Agreement and Consent Order* (HFFACO) milestone series M-26-01 and related *Resource Conservation and Recovery Act of 1976* Land Disposal Restrictions (LDR) and HFFACO requirements. As such, this document serves as a binding and enforceable document under the HFFACO."



**United States  
Department of Energy**

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## TERMS

ATG	Allied Technology Group, Inc.
CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</i>
CDD	critical design document
CFR	<i>Code of Federal Regulations</i>
CH	contact handled
CWC	Central Waste Complex
D&D	decontamination and decommissioning
DOE	U. S. Department of Energy
DST	double-shell tank
DU	depleted uranium
Ecology	Washington State Department of Ecology
EIS	environmental impact statement
EPA	U. S. Environmental Protection Agency
ERDF	Environmental Restoration Disposal Facility
ETF	Effluent Treatment Facility
F&R	functions and requirements
FDC	functional design criteria
FFCA	<i>Federal Facilities Compliance Act of 1976</i>
FY	fiscal year
HL	high level
HLW	high-level waste
HWTU	Hazardous Waste Treatment Unit
IHLW	immobilized high-level waste
ILAW	immobilized low-activity waste
LDR	land disposal restrictions
LERF	Liquid Effluent Retention Facility
LLMW	low-level mixed waste (same as MLLW)
LLW	low-level waste
MLLW	mixed low-level waste
MW	mixed waste
NA	not applicable
NDA	nondestructive assay
NDE	nondestructive examination
NPL	National Priorities List
O/C	organic/carbonaceous
ORP	U. S. Department of Energy, Office of River Protection

OU	operable unit
PCB	polychlorinated biphenyl
PEIS	programmatic environmental impact statement
PFP	Plutonium Finishing Plant
PMP	project management plan
PSTF	Purgewater Storage and Treatment Facility
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
REC	radiochemical engineering cell
RH	remote handled
RI/FS	remedial investigation/feasibility study
RL	U. S. Department of Energy, Richland Operations Office
ROD	record of decision
RPP	River Protection Project
SALDS	State-Approved Land Disposal Site
SCW	special-case waste
SST	single-shell tank
SWIFT	Solid Waste Integrated Forecast Technical (Report)
TBD	to be determined
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>
TRU	transuranic (waste)
TRUM	transuranic mixed (waste)
TSD	treatment, storage, and/or disposal
TWRS	Tank Waste Remediation System
UHC	underlying hazardous constituent
WAC	<i>Washington Administrative Code</i>
WESF	Waste Encapsulation and Storage Facility
WIPP	Waste Isolation Pilot Plant
WMA	Waste Management Area
WRAP	Waste Receiving and Processing
WTP	Waste Treatment Plant

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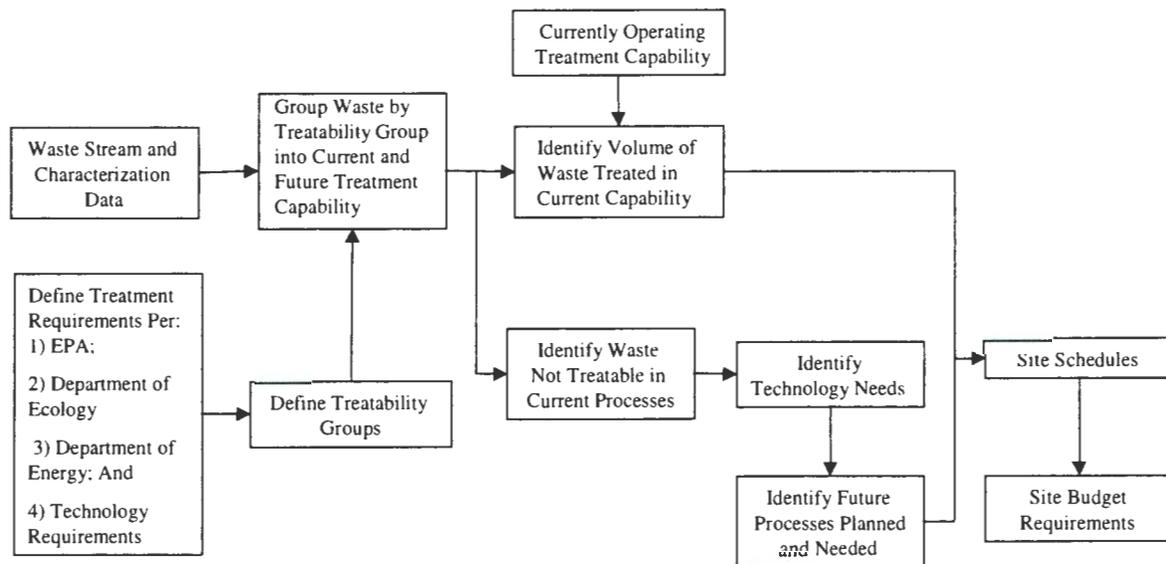
## 1.0 INTRODUCTION

The *Calendar Year 2000 Hanford Mixed Waste Land Disposal Restrictions Report* (LDR Report) has been divided into two volumes. The first volume addresses the storage of mixed waste, waste generation, waste minimization, and potential mixed waste. It also contains the information on the existing and expected volumes of waste for each treatability group. The second volume of the Hanford Site LDR report discusses characterization, treatment and disposal actions, and plans for managing the Hanford Site's mixed waste. Waste characterization and treatment activities at the Hanford Site continue to increase as waste management facilities are completed and funded to process and/or treat the waste. This chapter briefly describes the development process for the treatment plan and identifies other reports that can be consulted for additional information about the Hanford Site and expected waste treatment activities. The report has been organized to be similar to most of the site treatment plans prepared by other U.S. Department of Energy (DOE) sites under the *Federal Facility Compliance Act of 1992* (FFCA) requirements.

### 1.1 SITE TREATMENT PLAN ACTIVITIES

The overall information needs and relationships for the report are shown in Figure 1-1. Initial activities include identifying waste streams and available and needed characterization data associated with those streams, and defining the regulatory treatment requirements. The treatment requirements define the treatment categories and technologies that will be needed for each waste type. The physical, chemical, and radiological characteristics of the waste determine the treatability group in which it will be included. Hanford Site treatment, storage, and/or disposal (TSD) units and available commercial processes for treating the mixed waste also are identified along with their capabilities. Then, knowing the treatment processes' capabilities and the treatment requirements for each treatability group, each treatability group can be assigned to either existing treatment capacity or to future processes. For the current processes, Hanford Site schedules can be determined based on anticipated budgets and overall Site needs. These schedules confirm the need for operations funding. For the future processes, the waste that requires further characterization determines the types of technology needs and, subsequently, the requirements and capabilities. The future processes then can be scheduled and operated as budgets allow.

Figure 1-1. Outline of Activities to Complete Treatment Plan.



## 1.2 RELATIONSHIP TO OTHER MAJOR DOE AND HANFORD SITE ACTIVITIES AND DOCUMENTS

The characterization and treatment plan is influenced by numerous other Hanford Site activities. Some of the activities and their resulting reports are identified in the following list. Additional details can be obtained from the referenced reports. Some of the reports provide additional information on waste stream characterization and evaluation of alternatives, and identify the likely effects of managing the mixed waste on the Hanford Site. These reports include the following:

- ***Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement)***. This report fulfills Tri-Party Agreement Milestone M-26-01K. The Tri-Party Agreement also contains many treatment characterization milestones.
- ***Final Environmental Impact Statement for the Tank Waste Remediation System***. This environmental impact statement (EIS) and its associated record of decision (ROD) provide details on the alternative treatments for HLW.
- ***Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Wastes***. This EIS and its associated RODs provide the overall evaluation of treatment and disposal alternatives for all the DOE sites
- The Hanford Site Solid (Radioactive and Hazardous)Waste Program EIS is being written. A draft is expected to be issued in 2002.

- The **Solid Waste Integrated Forecast Technical Report (SWIFT)**. This program provides the Site a waste generation volume forecast.
- ***Project Management Plan for Low-Level Mixed Waste and Greater-Than-Category-3 Waste per Tri-Party Agreement Milestone M-91-10***. This document addressed treatment of oversized boxed, Greater-than-Category-3, and remote-handled (RH) waste.
- ***Project Management Plan for Transuranic and Transuranic Mixed Waste per Tri-Party Agreement Milestone M-91-03***. This document addresses processing of remote-handled and large-container contact-handled (CH) transuranic (TRU) waste.
- ***Final Hanford Comprehensive Land-Use Plan Environmental Impact Statement***. This EIS and its associated RODs identify areas of the Hanford Site that will be used for managing and disposing of mixed waste.

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## 2.0 WASTE STREAMS AND TREATABILITY GROUPS

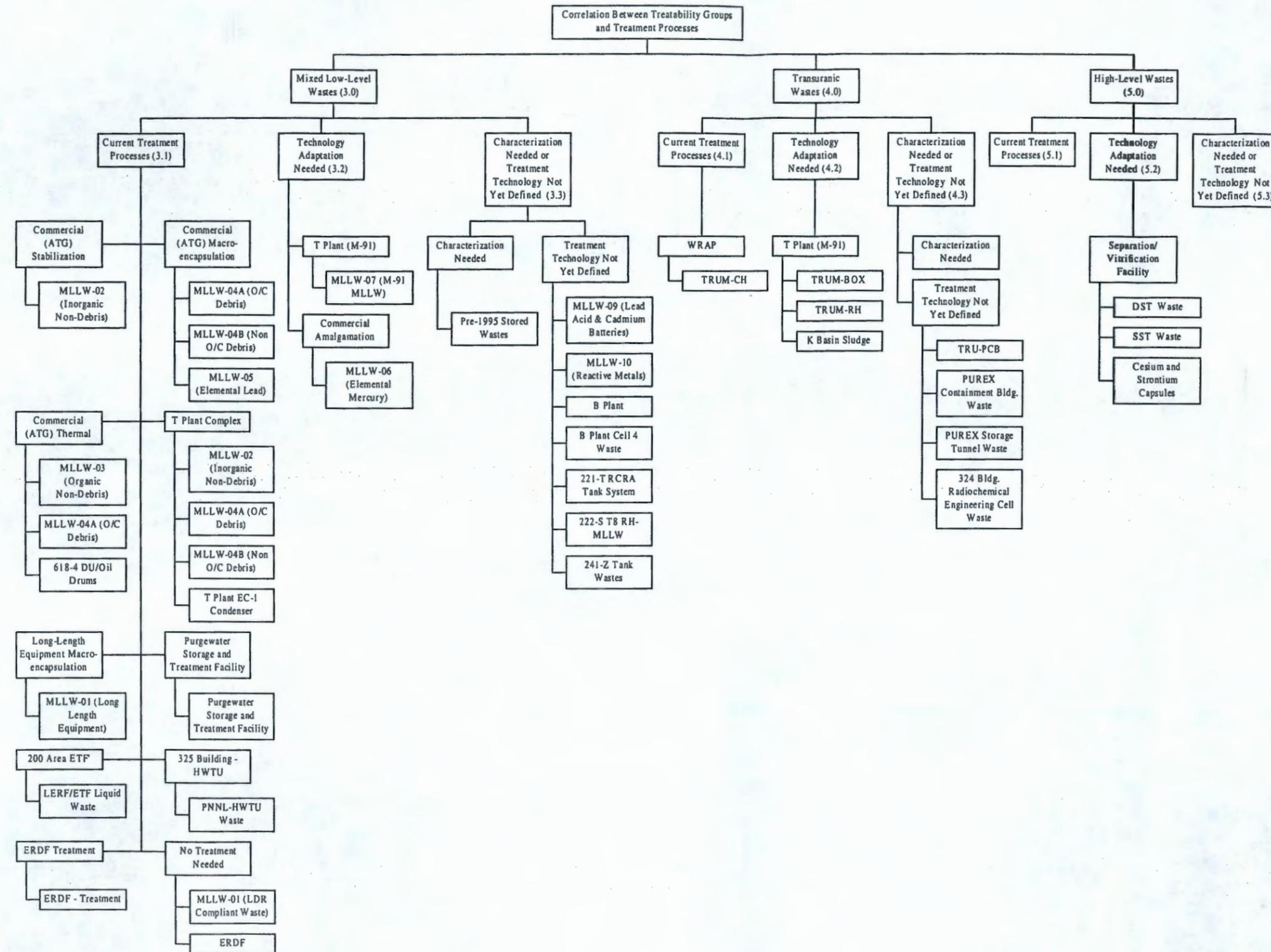
Each waste treatability group will be assigned to a specific treatment process. These assignments are based on the treatment and/or characterization requirements of the treatability group and the treatment process capability. Figure 2-1 summarizes the layout of the treatability groups and identifies where each group is expected to be treated. The upper levels of the chart show the waste type (e.g., mixed low-level waste [MLLW]) and whether or not the treatment capacity exists. The information is presented first for existing processes, then for planned processes, and finally for treatability groups for which further characterization is required to determine the treatment process or for which a treatment technology has not been selected.

Figure 2-1 also indicates the characterization needs for the waste. Waste to be treated under existing processes typically is characterized sufficiently to designate the waste and ensure that it is categorized correctly and safely stored. Any further characterization of this waste that must be done is planned as part of the treatment preparation. Waste to be treated under planned processes and processes not yet defined is characterized sufficiently to know the designation and appropriate treatment category. Because treatment is not planned for waste requiring processes not yet defined, additional characterization may occur as part of the design and development of the proposed treatment units.

The schedule and means for reporting waste characterization data are outlined in Section 9.6 of the Tri-Party Agreement (Ecology et al. 1989). This section states that DOE will make available to the Washington State Department of Ecology (Ecology) and the U.S. Environmental Protection Agency (EPA) all relevant electronic data and databases. All validated data will be entered into the selected database in accordance with the data delivery schedule in Tri-Party Agreement Section 9.6.6.

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Figure 2-1. Correlation Between Treatability Groups and Treatment Facilities.



### 3.0 MIXED LOW-LEVEL WASTE STREAMS

Site disposition maps shown in Figures 3-1 and 3-2 present an overview of the planned treatment and disposal of mixed low-level waste (MLLW) streams. Figure 3-1 shows the major waste treatability groups and the associated treatment processes (Section 3.1) with existing capabilities. Figure 3-2 shows a flowsheet for the treatability groups contained in the adaptation-needed category (Section 3.2). Because the treatment plan for the remaining MLLW treatability groups is not well developed, a flowsheet for these groups is not included. As noted in Figure 3-1, some treatability groups (MLLW-01, -02, -04A, and -04B) could be treated in more than one location. These treatability groups also are shown in multiple locations in Figure 2-1.

Figure 3-1. Site Disposition Map for MLLW.

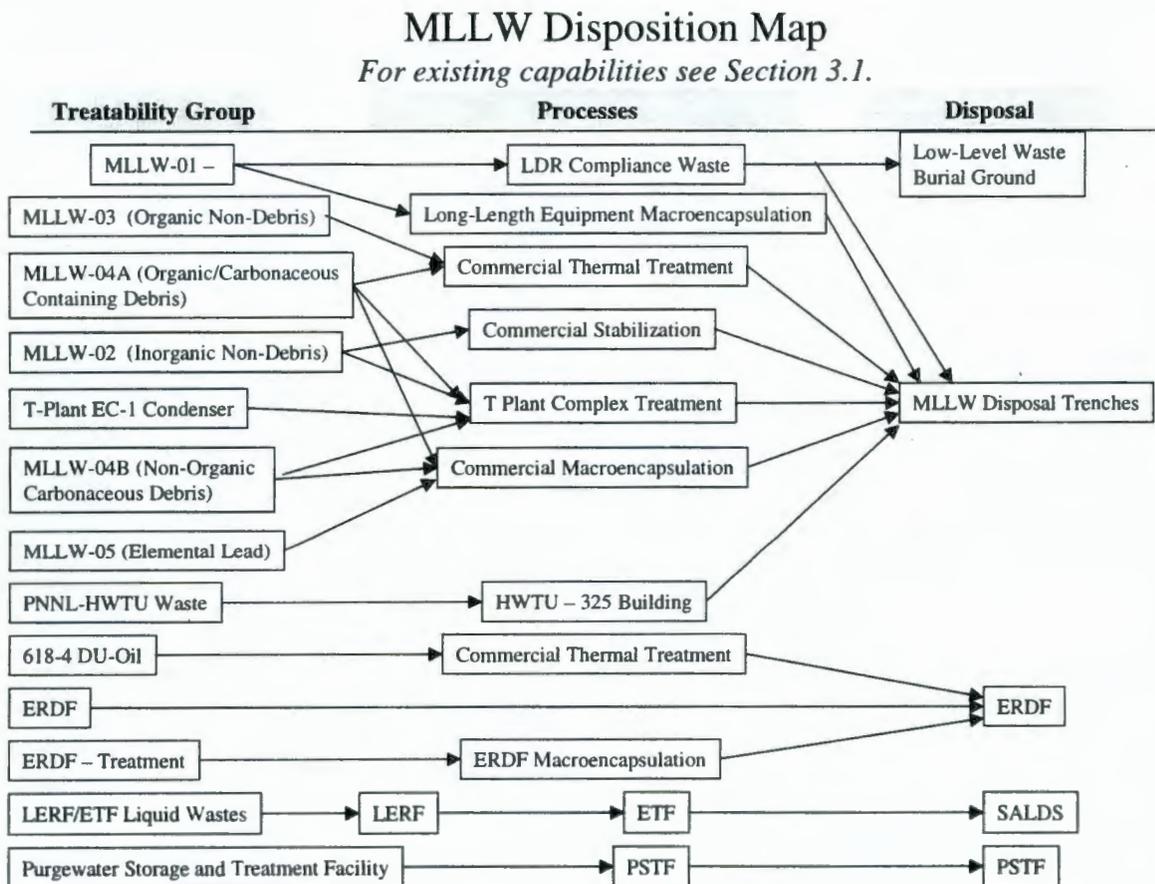
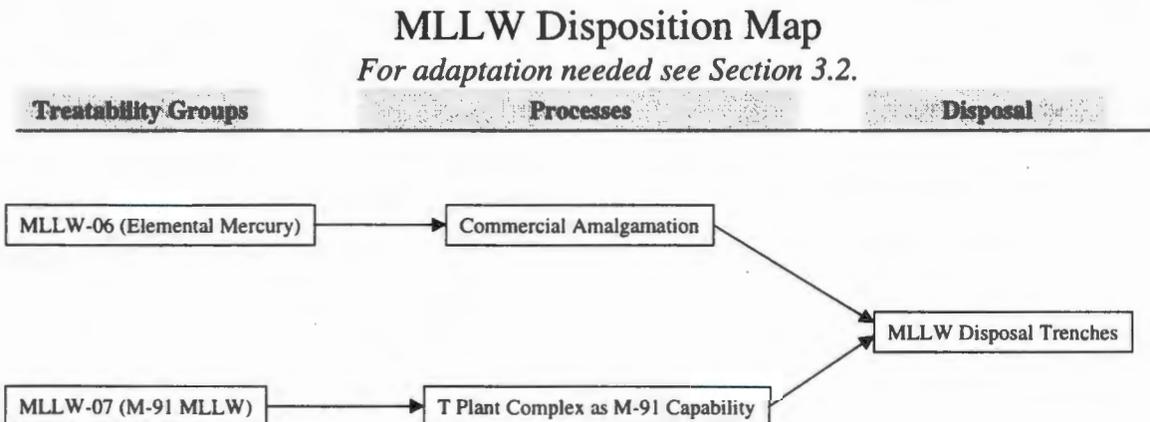


Figure 3-2. Disposition Map for Treatability Groups Needing Facilities Adapted to Allow Waste Treatment.



### 3.1 MIXED WASTE STREAMS FOR WHICH TREATMENT TECHNOLOGY EXISTS

This section generally describes each treatment process and information about the process identified in Figure 3-1. It also provides information on which waste treatability groups will be treated by each process, including the volume of waste treated during the past year and the anticipated volume of waste to be treated in CYs 2001 through 2006.

In reviewing the tables in this section for each treatment process, it will become apparent that, in many of the tables, a common value for "Projected volume of MLLW to be treated by the end of CY 2006" is presented. This common value, 7795 m<sup>3</sup>, represents the baseline plan treatment volume through the end of 2006, for the following MLLW categories: MLLW-01, MLLW-02, MLLW-03, MLLW-04A, MLLW-04B, MLLW-05, MLLW-06, MLLW-07, MLLW-09, and MLLW-10.

The planning baseline indicates that sufficient capacity exists to treat this volume of MLLW using the identified treatment process and alternatives (Allied Technologies Group [ATG] commercial stabilization, ATG thermal treatment, T Plant Complex, Broad Spectrum Contract, etc.). However, the exact distribution of the 7795 m<sup>3</sup> among these treatment process has not yet been finalized. This allows the Hanford Site to optimize its use of funds (minimize unit costs), to react to changing conditions and capabilities at the treatment processes, and to use emerging national treatment contracts.

Through the use of Broad Spectrum Contracts, DOE waste generators have the opportunity to participate in this nationwide privatization initiative for treating and disposing of legacy and currently generated MLLW. The broad spectrum contracts have been awarded to Materials and Energy Corporation, Waste Control Specialists, and ATG). This gives DOE sites several options with unique capabilities for treating a wide range of MLLW streams.

### 3.1.1 Commercial Stabilization

MLLW that does not have a significant organic content and is not debris waste is expected to be stabilized. Waste currently in storage has been sufficiently characterized for proper designation and storage on the Hanford Site. Additional characterization likely will be needed for much of this waste before treatment. This stabilization processing will be conducted in commercial facilities under contract to DOE.

Stabilization is a treatment technology for non-debris waste that contains heavy metals or other specific hazardous components. Most non-debris waste will be solid, but stabilization could be used to neutralize and solidify some liquid waste. The objective of stabilization is to immobilize the hazardous component through fixation into low-solubility materials, and by encapsulation to reduce the potential for future releases. Usually, stabilization is accomplished by mixing the waste with Portland cement or pozzolanic materials at a preselected ratio, but stabilization also can include mixing with polymer materials. This treatment prepares the waste to meet the disposal requirements. For this report, waste is expected to be treated under an existing contract at the Allied Technology Group (ATG) facility near the Hanford Site. Existing contracts do not cover all the waste types nor all forecast volumes, so additional contracts are expected to be placed with commercial treatment contractors. The processes available at the ATG facility are described in the environmental assessment (EA) for the ATG operations. For stabilization treatments, the ATG facilities include pretreatment processes of drying, shredding, screening, and chemical treatments. For final stabilization the ATG facility uses either cements or polymers. Table 3-1 contains information on the commercial stabilization process.

Table 3-1. Commercial Stabilization Process Summary.

Type of Information	Information
Treatability group that the process is expected to treat	MLLW—02, Inorganic Non-Debris
Tri-Party Agreement milestones related to this treatability group	None
Volume of Hanford Site mixed waste treated during CY 2000	0
Projected volume of MLLW to be treated between CY 2001 and the end of CY 2006	7795 m <sup>3</sup> . This is the total of treatment for MLLW treatability groups, including MLLW 01, MLLW-02, MLLW-03, MLLW-04A, MLLW-04B, MLLW-05, MLLW-06, MLLW-07, MLLW-09, MLLW-10.
Treatment capacity	Sufficient capacity exists to treat this volume of MLLW using the identified treatment processes and alternatives (ATG commercial stabilization, ATG thermal treatment, T Plant Complex, Broad Spectrum Contracts, etc.)
ATG regulatory status information:	

Table 3-1. Commercial Stabilization Process Summary.

Type of Information	Information
- Date of RCRA permit	1999
- Date treatment contract established	1995
- Date facility construction started	1999
- Date system testing started	1999
- Date operations begin	1999
- Current regulatory status	Permitted and operating
Budget status for continued operations	Funding has been requested in the FY 2001 through FY 2002 budgets and currently is planned to be requested through the FY 2006 budgets to provide for treatment of 7,795 m <sup>3</sup> of MLLW.
Planned completion of treatment using this process	The baseline plan anticipates that the majority of this treatability group will be processed using the commercial facilities. Stored inventories are expected to decrease with anticipated processing rates. Because waste generation is expected to continue through the life of Hanford Site cleanup operations, continued treatment will be needed into the foreseeable future.
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility.	The T Plant Complex and the HWTU also have stabilization capability and could be used to supplement commercial capacity.

ATG	Allied Technology Group
CY	calendar year
FY	fiscal year
HWTU	Hazardous Waste Treatment Unit
MLLW	mixed low-level waste
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>

### 3.1.2 Commercial Macroencapsulation

Macroencapsulation consists of applying a surface coating of polymeric organics or using a jacket of inert inorganic materials (e.g., cement) to substantially reduce surface exposure to potential leaching media. Plans are for the near-term waste to be treated under an existing contract at the ATG facilities near the Hanford Site. Existing contracts do not cover all the waste streams, so it is expected that some waste will be treated on the Hanford Site, or that additional

commercial contracts will be competitively awarded as needed to meet future needs. The processes available at the ATG facility are described in the EA for the facility. For macroencapsulation of debris, the ATG facilities provide pretreatment processes of sorting, cutting/shearing, compaction, and supercompaction. Decontaminated lead can be recycled or reused. Other lead waste is encapsulated by polymer extrusion. Table 3-2 contains information about the commercial macroencapsulation process.

Other immobilization treatment technologies may be used to treat some of the Hanford Site's MLLW debris. Macroencapsulation of nonorganic/carbonaceous debris is being planned for the last half of fiscal year (FY) 2001 and into FY 2002 for some large-size nonorganic/carbonaceous debris items.

Table 3-2. Commercial Macroencapsulation Process Summary.

Type of Information	Information
Treatability groups that the process is expected to treat	MMLW-04A, Organic/Carbonaceous Debris; MLLW-04B, Non Organic/Carbonaceous Hazardous Debris; and MLLW-05, Elemental Lead.
Tri-Party Agreement milestones related to these Treatability groups	None
Volume of Hanford Site mixed waste treated during CY 2000	1204 m <sup>3</sup>
Projected volume of MLLW to be treated between CY 2001 and the end of CY 2006	7,795 m <sup>3</sup> . This is the total of treatment for MLLW categories, including MLLW-01, MLLW-02, MLLW-03, MLLW-04a, MLLW-04b, MLLW-05, MLLW-06, MLLW-07, MLLW-09, and MLLW-10.
Treatment capacity	Sufficient capacity exists to treat this volume of MLLW using the identified treatment processes and alternatives (ATG commercial stabilization, ATG thermal treatment, T Plant Complex, Broad Spectrum Contracts, etc.)
ATG regulatory status information:	
- Date of RCRA permit application	1999
- Date treatment contract established	1995
- Date facility construction started	1999
- Date system testing started	1999
- Date operations begin	1999
- Current regulatory status	Permitted and operating
Budget status for continued operations	Funding has been requested in the FY 2000 through FY 2002 budgets and currently is

Table 3-2. Commercial Macroencapsulation Process Summary.

Type of Information	Information
	planned to be requested through the FY 2006 budgets to provide for treatment of 7,795 m <sup>3</sup> of MLLW.
Planned completion of treatment using this facility	The baseline plan anticipates that the majority of these treatability groups will be processed using the ATG facilities. Stored inventories are expected to decrease with anticipated processing rates. Because waste generation is expected to continue through the life of the Hanford Site cleanup operations, continued treatment will be needed into the foreseeable future.
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility.	The T Plant Complex and the HTWU also have macroencapsulation capability and could be used to supplement the ATG facility. Other commercial facilities also could be used in the future.

ATG	Allied Technology Group
CY	calendar year
FY	fiscal year
HTWU	Hazardous Waste Treatment Unit
MLLW	mixed low-level waste
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>

### 3.1.3 Thermal Treatment of Organics

Macroencapsulation is being used to treat hazardous debris containing organic/carbonaceous (O/C) constituents. The Hanford Site has been allowed to treat the O/C constituents using macroencapsulation in accordance with a Sitewide 1,000-mile inapplicability certification for the Washington State O/C LDRs. The status of the 1,000-mile inapplicability certification will need to be discussed in the near future as ATG begins to demonstrate thermal treatment capacity. DOE would like to continue treating O/C hazardous debris using immobilization technologies after the 1,000-mile inapplicability certification expires. Discussions on this subject began with Ecology in December 2000. DOE needs to continue these discussions to identify the vehicle to accomplish this.

MLLW containing organic materials will be thermally treated when sufficient capability has been demonstrated for the Hanford Site waste. Until such time, only organics will be treated under any existing capacity. The material may be debris waste, other solid waste, or liquid waste. Waste currently in storage has been sufficiently characterized for proper designation and storage on the Hanford Site. Additional characterization likely will be needed for much of this waste before treatment.

The thermal treatment process destroys organic materials by oxidation, combustion, and/or pyrolysis. During CY 2000 20 m<sup>3</sup> of the waste in this treatability group was treated at the Waste Experimental Reduction Facility (WERF) incineration facility at the Idaho National Environmental Engineering Laboratory (INEEL) site. However, that facility has been closed and is not expected to operate again. For this report, future thermal treatment will be in a commercial system at the ATG facility for the existing contract period. Additional commercial processing contracts will be competitively awarded as needed to meet future needs. The thermal treatment system installed at the ATG facility uses the gasification-vitrification (GASVIT) treatment process. Gasification removes the organic materials and vitrification converts the residual solids into a stable leach-resistant glass-like material suitable for disposal. The process and its potential environmental impacts are described in the EA for ATG operations. Pretreatment processes for the GASVIT system include sorting and size reduction. The pretreatment process for liquids can include liquid consolidation, liquid treatments (e.g., neutralization), filtration, and ultraviolet (UV) oxidation. The GASVIT process includes the necessary off-gas cleanup systems that can produce small amounts of secondary waste. Table 3-3 contains information about the ATG thermal treatment facility.

Table 3-3. Commercial Thermal Treatment Process Summary.

Type of Information	Information
Treatability groups the process is expected to treat	MLLW-03, Organic Non-Debris, and MLLW-04A, Organic/Carbonaceous Debris
Tri-Party Agreement milestones related to this treatability group	M-91-12A, Complete thermal treatment and disposal of 240 m <sup>3</sup> of waste by 12/31/2002. M-91-12, Complete thermal treatment and disposal of an additional 360 m <sup>3</sup> of waste by 12/31/2005
Volume of Hanford Site mixed waste treated during CY 2000	0
Projected volume of MLLW to be treated between CY 2001 and the end of CY 2006	7795 m <sup>3</sup> . This is the total of treatment for MLLW categories, including MLLW-01, MLLW-02, MLLW-03, MLLW-04A, MLLW-04B, MLLW-05, MLLW-06, MLLW-07, MLLW-09, and MLLW-10. At least 600 m <sup>3</sup> will be thermal treatment (M-91-12).
Treatment capacity	Sufficient capacity exists to treat this volume of MLLW using the identified treatment processes and alternatives (ATG commercial stabilization, ATG thermal treatment, T Plant Complex, Broad Spectrum Contracts, etc.)
ATG regulatory status information:	
- Date of RCRA permit application	1999
- Date treatment contract established	1995

Table 3-3. Commercial Thermal Treatment Process Summary.

Type of Information	Information
- Date facility construction started	1999
- Date system testing started	2000
- Date operations begin	2001
- Current regulatory status	Permitted, and operating
Budget status for continued operations	Funding has been requested in the FY 2000 through FY 2002 budgets and currently is planned to be requested through the FY 2006 budgets to provide for treatment of 7,795 m <sup>3</sup> of MLLW.
Planned completion of treatment using this facility	The baseline plan anticipates that the majority of this treatability group will be processed with the ATG commercial facilities because other DOE or commercial thermal treatment capability is lacking. Stored inventories are expected to decrease with anticipated processing rates. Because waste generation is expected to continue through the life of Hanford Site cleanup operations, continued treatment will be needed into the foreseeable future.
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility.	Other treatment technologies will be available for treating this waste stream, although they are not as far along as the ATG GASVIT process. Examples include: molten salt oxidation at ATG and direct chemical oxidation under the Broad Spectrum Contract.

ATG	Allied Technology Group
CY	calendar year
FY	fiscal year
GASVIT	gasification-vitrification
MLLW	mixed low-level waste
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>
WERF	Waste Experimental Reduction Facility

### 3.1.4 Commercial Thermal Treatment of 618-4DU/Oil Waste

The ATG thermal treatment system also will be used for treating the 618-4DU/Oil wastes. The 618-4 DU/Oil treatability group consists of waste from uranium machining. Uranium fines and chips can be pyrophoric and were immersed in oil in drums and then disposed of in the 618-4 burial ground. Table 3-4 provides information with respect to the treatment of this waste stream.

Table 3-4. Commercial *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* Thermal Treatment Summary.

Type of Information	Information
Treatability group that the process is expected to treat	618-4 DU/Oil
Tri-Party Agreement milestones related to this treatability group	M-16-03F
Volume of Hanford Site mixed waste treated during CY 2000	0
Projected volume of MLLW to be treated by end of CY 2006	111 m <sup>3</sup>
Treatment capacity	ATG reports the thermal treatment capacity to be 350 lb/hr
ATG regulatory status information:	
- Date of RCRA permit application	1999
- Date treatment contract established	1995
- Date facility construction started	1999
- Date system testing started	2000
- Date operations begin	2001
- Current regulatory status	Permitted and operating.
Budget status for continued operations	Treatment and disposal of the 618-4 drums is budgeted and scheduled to be performed in FY 2002-2003 in accordance with the Richland Environmental Restoration Project FY 2001-2003 Detailed Work Plan
Planned completion of treatment using this facility	The baseline plan anticipates that this treatability group will be processed using the ATG facilities. Treatment of the 618-4 waste stream is expected to be performed during FY 2002-2003.

Table 3-4. Commercial *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* Thermal Treatment Summary.

Type of Information	Information
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility.	Other treatment technologies have been assessed for this waste stream including in situ vitrification.

ATG	Allied Technology Group
FY	fiscal year
MLLW	mixed low-level waste
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>

### 3.1.5 T Plant Complex

The commercial stabilization and macroencapsulation treatment may be supplemented or replaced by capability that exists within the T Plant Complex. While the T Plant canyon is being planned for use in treating remote-handled (RH) waste (See Section 3.2.1), it also has been used to open, inspect, segregate, and repackage mixed waste. The 2706-T Building within the T Plant Complex is a decontamination facility with the capability to open, sample, sort, treat, and repackage CH boxes and drums of mixed waste. Some of the waste planned to go to commercial treatment facilities will be inspected in the 2706-T Building before being shipped for treatment and some will be inspected following treatment. Table 3-5 contains information on the T Plant Complex.

Table 3-5. T Plant Complex Treatment Activities Summary.

Type of Information	Information
Treatability groups that the process is expected to treat	MLLW-02, Inorganic Non-Debris, and MLLW-04B, Non-Organic/ -Carbonaceous Debris and T Plant EC-1 Condenser.
Tri-Party Agreement milestones related to these treatability groups	None
Volume of Hanford Site mixed waste treated during CY 2000	0
Projected volume of MLLW to be treated between CY 2001 and the end of CY 2006	7795 m <sup>3</sup> . This is the total of treatment for MLLW including MLLW-01, MLLW-02, MLLW-03, MLLW-04A, MLLW-04B, MLLW-05, MLLW-06, MLLW-07, MLLW-09, and MLLW-10
Treatment capacity	Permitted capacity is 150 metric tons per day
Regulatory status information:	

Table 3-5. T Plant Complex Treatment Activities Summary.

Type of Information	Information
- Date of RCRA permit application	To be submitted in 2002
- Date treatment contract established	NA
- Date facility construction started	1944
- Date system testing started	NA
- Date operations begin	Mixed waste operations under interim status, began 8/19/87.
- Current regulatory status	Operating under interim status to a current Part A Permit Application.
Budget status for continued operations	Funding has been requested in the FY 2000 through FY 2002 budgets and currently is planned to be requested through the FY 2006 budgets to provide for treatment of 7,795 m <sup>3</sup> of MLLW.
Planned completion of treatment using this facility	The baseline plan anticipates that the majority of this treatability group will be processed with the ATG facility; however, significant treatment activities have occurred and could occur at T Plant Complex. Stored inventories are expected to decrease with anticipated processing rates. Because waste generation is expected to continue through the life of the Hanford Site cleanup operations, continued treatment will be needed into the foreseeable future.
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility.	The primary treatment processes are expected to be the commercial treatment facilities described in Sections 3.1.1 and 3.1.2. The EC-1 Condenser is expected to be macroencapsulated or microencapsulated. Recycle of the condenser is being considered. The HTWU has some permitted capability to perform several treatment processes that could supplement the treatment planned for T Plant.

FY	fiscal year
HTWU	Hazardous Waste Treatment Unit
MLLW	mixed low-level waste unit
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>

### 3.1.6 Long-Length Contaminated Equipment Macroencapsulation

Long-length contaminated equipment consists of equipment more than 12 ft long that is removed from underground waste tanks. The equipment is installed and removed through risers that connect the ground surface with the tank. Examples of such equipment are mixer pumps, transfer pumps, air lances, and monitoring equipment. The equipment may contain some residual waste and will require remote handling.

Macroencapsulation is currently planned as the treatment option for this equipment; the technique has been demonstrated in several different configurations. The River Protection Project (RPP) includes this planned treatment in its baseline plan. Details on the process can be found in *Long-Length Contaminated Equipment Disposal Process Path* (DOE 1998). The basic process involves pulling the debris into a flexible receiver bag, then filling the void with grout, then sealing the waste inside a burial container. The processing will be done on the basis of "treatment by generator," with the generator performing the debris macroencapsulation of the long-length equipment as it is generated. The macroencapsulated waste then will be sent directly for disposal in the Hanford Site mixed waste trenches. Shipment will be via a shielded transport trailer. Table 3-6 provides information on the long-length contaminated equipment macroencapsulation activities.

Table 3-6. Long-Length Contaminated Equipment Macroencapsulation Summary.

Type of Information	Information
Treatability groups that the process is expected to treat	MLLW-01C, LDR Compliant Waste
Tri-Party Agreement milestones related to this treatability group	No direct milestone but it is included in M-91-10, Project Management Plan
Volume of Hanford Site mixed waste treated during CY 2000	No MW was treated by RPP
Projected volume of MLLW to be treated by the end of CY 2006	65 m <sup>3</sup>
Treatment capacity	Treatment will not be limited by treatment capacity.
Regulatory status information:	
- Date of RCRA permit application	No permit required. Treatment will be done under treatment by generator provisions.
- Date treatment contract established	No contract is needed.
- Date facility construction started	NA
- Date system testing started	NA
- Date for commencement of operations	NA

Table 3-6. Long-Length Contaminated Equipment Macroencapsulation Summary.

Type of Information	Information
- Current regulatory status	NA
Budget status for continued operations	Funding is available for continued operations.
Planned completion of treatment using this facility	On completion of retrieval of mixed waste from SST and DST systems.
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility.	The primary alternative to this treatment by generator is the T Plant Complex.

CY	calendar year
DST	double-shell tank
MLLW	mixed low-level waste
MW	mixed waste
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
RPP	River Protection Project
SST	single-shell tank
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>

### 3.1.7 Environmental Restoration Disposal Facility Treatment

Approximately 0.2 percent of the environmental restoration waste is anticipated to be mixed waste that needs to be treated before disposal in ERDF. This is based on 2 percent of the ERDF waste being mixed waste and one-tenth of the mixed waste requiring treatment. This chromium- and lead-contaminated waste is treated by grouting or macroencapsulating within the disposal trenches. Specific information on the ERDF treatment activities is included in Table 3-7.

Table 3-7. ERDF Treatment Activities Summary.

Type of Information	Information
Treatability groups that the process is expected to treat	ERDF - Treatment
Tri-Party Agreement milestones related to this treatability group	Treated as generated in compliance with regulatory time frame. No compliance agreement required
Volume of Hanford Site mixed waste treated during CY 2000	35 m <sup>3</sup>

Table 3-7. ERDF Treatment Activities Summary.

Type of Information	Information
Projected volume of MLLW to be treated during CY 2001 through CY 2005	2100 m <sup>3</sup> (estimated based on historical information, 0.2% of ERDF waste)
Treatment capacity	NA
Regulatory status information:	
- Date of RCRA permit application	NA
- Date facility construction started	NA
- Date operations begin	1996
- Current regulatory status	Facility is operating under a CERCLA ROD issued in 1995, amended in 1997 and 1999
Budget status for continued operations	Funding is included as part of the Richland Environmental Restoration Project.
Planned completion of treatment using this facility	2046
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility.	Commercial macroencapsulation may be possible for some waste at significantly increased costs.

CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</i>
CY	calendar year
ERDF	Environmental Restoration Disposal Facility
FY	fiscal year
MLLW	mixed low-level waste
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
ROD	record of decision
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>

### 3.1.8 200 Area Effluent Treatment Facility and Liquid Effluent Retention Facility

Numerous Hanford Site activities generate low-level aqueous waste. Radioactive effluents are generated primarily in the 200 Area. The Liquid Effluent Retention Facility (LERF) consists of three *Resource Conservation and Recovery Act of 1976* (RCRA)-compliant surface impoundments for storing low-level aqueous waste. The LERF provides segregation of RCRA- and *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA)-regulated feed and equalization of the flow and pH of the feed to the 200 Area Effluent Treatment Facility (ETF). Each LERF basin has a capacity of 30 million L (7.8 million gal). A truck unloading station allows receipt of liquid effluents from other projects for transfer either to the LERF for storage or directly to the ETF for treatment.

Liquid effluents stored in the LERF are treated in the ETF to remove toxic metals, radionuclides, and ammonia, and to destroy organics. The ETF treatment process constitutes best available technology (BAT) treatment and includes pH adjustment, filtration, ultraviolet light/peroxide destruction of organics, reverse osmosis, degassification, and ion exchange. Storage tanks allow for hold-up of the treated effluent to verify that the waste has been treated to concentration levels in the permit before discharge. The treated effluent is discharged under a *Washington Administrative Code* (WAC) 173-216 State Waste Discharge Permit to a state-approved land disposal site (SALDS) north of the 200 West Area after being delisted (40 *Code of Federal Regulations* [CFR] 261, Appendix IX, Table 2). Table 3-8 contains information on the ETF.

The purgewater agreement between DOE, Ecology, and the EPA is being renegotiated. Currently, aqueous waste from wells is received at the Purgewater Storage and Treatment Facility (PSTF) and is treated via solar evaporation. The aqueous waste is from sampling, well maintenance, and well drilling. Under the revised agreement, this waste could be sent to ETF for treatment and disposal. For this report, the 2001 to 2005 purgewater forecast is maintained in the Purgewater Storage and Treatment Facility treatability group. The forecast will be revised to reflect the transfer to the ETF treatability group in the report for CY 2001.

Table 3-8. ETF Summary.

Type of Information	Information
Treatability Groups that the process is expected to treat	LERF/ETF liquid waste
Tri-Party Agreement milestones related to this treatability group	M-26-05H, 8/31/2001 M-26-05J, 8/31/2003; M-26-05L, 8/31/2005; Prepare biennial tritium treatment technology report.
Volume of Hanford Site mixed waste treated during CY 2000	88,600 m <sup>3</sup> (23.4 million gal)
Projected volume of MLLW to be treated by end of CY 2006	Facility will process up to 337,000 m <sup>3</sup> (89 million gal) of effluent from various generators. The exact volume of effluent processed will depend on the actual volumes transferred to the LERF/ETF from the generators.
Treatment capacity	210,000 m <sup>3</sup> /yr
Regulatory status information:	
- Date of RCRA permit	1997 (final status)
- Date facility construction started	1992
- Date system testing started	1994

Table 3-8. ETF Summary.

Type of Information	Information
- Date operations begin	1995
- Current regulatory status	Operating under a final status RCRA permit
Budget status for continued operations	Funded for minimum safe operations
Planned completion of treatment using this facility	2032
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility	None

CY	calendar year
ETF	Effluent Treatment Facility
LERF	Liquid Effluent Retention Facility
MLLW	mixed low-level waste
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>

### 3.1.9 Hazardous Waste Treatment Unit

The Hazardous Waste Treatment Unit (HWTU) is a permitted treatment, storage, and/or disposal (TSD) unit used to perform tank- and bench-scale treatment of mixed waste and investigate other treatment technologies. The HWTU is located in the 325 Building in the 300 Area and is intended to treat small volumes of mixed waste to meet Central Waste Complex (CWC) waste acceptance criteria for storage. Waste is not LDR compliant for disposal. Table 3-9 contains information on the HTWU.

Table 3-9. HWTU Summary.

Type of Information	Information
Treatability groups that the process is expected to treat	PNNL- HWTU waste
Tri-Party Agreement milestones related to this treatability group	None
Volume of Hanford Site mixed waste treated during CY 2000	3.1 m <sup>3</sup>
Projected volume of MLLW to be treated by end of CY 2006	10.4 m <sup>3</sup>
Treatment capacity	14.088 m <sup>3</sup> /day
Regulatory status information:	

Table 3-9. HWTU Summary.

Type of Information	Information
- Date of RCRA permit (final status)	1998 (Part A application 1988)
- Date facility construction started	1952
- Date system testing started	1991
- Date operations begin	1991
- Current regulatory status	Final permit
Budget status for continued operations	Funding has been included in the current 8-year plan
Planned completion of treatment using this facility	2025
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility	Commercial treatment facilities may have capacity to treat some of the waste streams

CY	calendar year
HWTU	Hazardous Waste Treatment Unit
MLLW	mixed low-level waste
PNNL	Pacific Northwest National Laboratory
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>

### 3.1.10 Waste That Currently Meets Disposal Requirements

Some mixed waste does not require treatment to meet LDR requirements before disposal. The largest volume of this mixed waste is generated by the environmental restoration activities conducted under CERCLA and is transferred directly to the ERDF. This waste falls under the ERDF treatability group. A second treatability group that does not require treatment is MLLW-01, LDR Compliant Waste. Most of the LDR-compliant waste will go to the mixed waste trenches, however the macroencapsulated long-length equipment will be disposed of in the mixed waste trenches. A fraction of the waste in this LDR Compliant Waste treatability group currently does not meet DOE requirements for disposal, but eventually will be treated to meet those requirements. Waste not meeting disposal requirements is stored. Section 3.5 summarizes the information for the ERDF and mixed waste trenches.

### 3.2 MIXED WASTE STREAMS FOR WHICH TECHNOLOGY EXISTS BUT NEEDS ADAPTATION

#### 3.2.1 T-Plant Complex For M-91 Capability

Processing will be needed for the RH waste currently on the Hanford Site and for the RH waste expected to be generated in the future. In the previous evaluation of alternatives (Bounini 2000), modifying the T Plant Complex is identified as the lowest cost alternative. The modified portion of the T Plant Complex is known on the Hanford Site as the "M-91 Capability," named for the M-91 Tri-Party Agreement milestone that requires it. The M-91 Capability also is anticipated to provide for processing of the RH TRU waste and the CH waste that cannot be accepted into the Waste Receiving and Processing (WRAP) Facility. These will be discussed in more detail in the TRU section. Table 3-10 contains information on the M-91 Capability for MLLW.

Table 3-10. Summary of the M-91 Capability at the T Plant Complex.

Type of Information	Information
Treatability groups that the process is expected to treat	MLLW-07, M-91-CH/RH MLLW
Tri-Party Agreement milestones related to this treatability group	M-91-10, MLLW Project Management Plan; M-091-14-T01, Award Commercialization Contracts for Treatment of RH and Large-Size MLLW (2003); M-91-15, Complete Acquisition of Facilities to Initiate Treatment of RH and Large-Container MLLW (2008)
Technology needed for facility	Technology needs for processing all this waste are expected to be complex ; it is anticipated that in addition to developing existing technology capabilities, further technology demonstrations and deployments will be required.
Projected volume of MLLW to be treated by end of CY 2006	Processing not included in baseline funding through 2006
Treatment capacity	To be determined based on design reports
Regulatory status information:	
- Design reports	FDC, 9/2009; CDD, 6/2010

Table 3-10. Summary of the M-91 Capability at the T Plant Complex.

Type of Information	Information
- Submittal of RCRA permit application	Expected to be a modification to T Plant Permit 6/2013
- Date design and construction contract to be awarded	6/2013
- Date facility construction to be started	6/2013
- Date operations begin	10/2016
- Current regulatory status	No status
Budget status for design, construction, and operations	Included in long-range budgets, but not within the 2006 window of this report
Estimated date of completion of treatment with the assumption of available funding.	RH waste will continue to be produced through the operation and D&D of the tank farms and vitrification facilities, therefore treatment will continue through at least 2032
Alternatives for treating this waste.	Several alternatives have been considered over the past 5 years. The most attractive alternative is construction of a new modular treatment facility for these and other difficult-to-treat waste groups

CDD	Conceptual design document
CY	calendar year
D&D	decontamination and decommissioning
FDC	functional design criteria
MLLW	mixed low-level waste
TBD	to be determined
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>

### 3.2.2 Commercial Amalgamation

Mercury waste requires the amalgamation of the mercury as the best demonstrated available technology (BDAT) treatment. Mercury can be present as a small-percentage component in some waste, but also can be present in high concentrations.

The Hanford Site inventory of mercury-bearing waste is relatively small, as is the case with the inventories at other sites across the DOE Complex. As part of an effort to increase the

efficiency of the treatment and disposal of this waste across the Complex, the Transuranic and Mixed Waste Focus Area is leading an effort to assess the magnitude of the need for mercury-bearing waste treatment across the Complex and to develop a national contract for treatment of this waste. In the Hanford Site baseline, the plan is to focus on larger volume waste categories for which treatment capability or contracts exist and await the outcome of this national coordination effort before implementing treatment of mercury-bearing waste.

Several commercial technologies have been reported to be available for some types of mercury waste. (For more information, see the Idaho National Environmental Engineering Laboratory website listed in Chapter 9.)

Table 3-11. Commercial Amalgamation Summary.

Type of Information	Information
Treatability group that the process is expected to treat	MLLW-06, Elemental Mercury
Tri-Party Agreement milestones related to this treatability group	None
Technology needed for facility	Commercial amalgamation
Projected volume of MLLW to be treated by end of CY 2006	Mixed waste will continue to be accumulated to obtain a more economical contract for its treatment.
Treatment capacity	Treatment capacity to support the Hanford Site needs is expected to be <math>10 \text{ m}^3</math> per year. Actual treatment capacity from the national integration effort will be determined later.
Regulatory status information:	
- Design reports	NA
- Submittal of permit application	NA
- Date design and construction contract to be awarded	NA
- Date facility construction begins	NA
- Date operations begin	2005
- Current regulatory status	NA
Budget status for design, construction, and operations	Included in long-range budgets, but not in 2006 window for this report.

Table 3-11. Commercial Amalgamation Summary.

Type of Information	Information
Estimated date of completion of treatment with the assumption of available funding.	Existing inventory estimated to be treated by 2007. Because waste generation is expected to continue through the life of Hanford Site cleanup operations, continued treatment will be needed through the foreseeable future.
Alternatives for treatment of this waste.	Several alternative technologies exist and will be the primary alternatives. A national effort is under way to assess needs and develop a nationwide procurement for mercury amalgamation services. An alternative would be to build the capacity for amalgamation into the M-91 capability.

CY                      calendar year  
 MLLW                mixed low-level waste  
 Tri-Party Agreement    *Hanford Federal Facility Agreement and Consent Order*

### 3.3 MIXED WASTE TREATABILITY GROUPS REQUIRING FURTHER CHARACTERIZATION, OR FOR WHICH TECHNOLOGY DOES NOT EXIST OR A TECHNOLOGY ASSESSMENT HAS NOT BEEN DONE

Treatment planning for these waste treatability groups is less complete and continues.

#### 3.3.1 Treatability Groups for which Further Characterization is needed

Many of the waste groups currently in storage were placed in storage before the current characterization and classification systems were implemented in 1995. The waste acceptance process at that time emphasized safe storage, and the information collected on the waste was to ensure its safe storage. Specific information required for treating the waste was not collected. For this waste, the adequacy of the existing characterization information needs to be reassessed. The information will need to be supplemented as necessary before waste treatment and disposal.

The current baseline assumes that waste requiring additional characterization will be characterized in sequence with and near its planned treatment and disposal dates. The close

coordination of waste characterization schedules with planned treatment and disposal dates has the following benefits.

- It avoids long lag times between characterization and treatment and disposal, minimizing the potential need to recharacterize waste as acceptance, treatment, and disposal criteria evolve.
- It allows for closer matching of characterization efforts with budget constraints.

Table 3-12 provides the anticipated waste characterization schedule of mixed waste accepted into the CWC before 1995.

Table 3-12. Characterization Schedule for Mixed Waste Accepted into the CWC before 1995 Needing Further Characterization (m<sup>3</sup>).

Treatability Group	Inventory 12/31/00	FY01	FY02	FY03	FY04	FY05	FY06
MLLW-01 Compliant Solids	296			296			
MLLW-02 Inorganic Solids	212			186			
MLLW-03 Organic Solids	275		275				
MLLW-04 Debris	1149		55	373	441	280	
MLLW-05 Elemental Lead	287			143		143	
MLLW-06 Elemental Mercury	7					7	
MLLW-07 M-91 CH/RH	39						

CWC Central Waste Complex  
FY fiscal year

### 3.3.2 Treatability Groups For Which Treatment Technology Has Not Been Selected

Some waste streams in storage have not had technology assessments or selection completed so they can be assigned to treatability groups for treatment in existing treatment processes. When the technology assessments for the waste in this category have been completed, many of them probably can be treated in one of the existing processes. Waste treatability groups for which treatment technologies have not been selected include the following:

- MLLW-9, Lead Acid and Cd Batteries
- MLLW-10, Reactive Metals
- B Plant Cell 4 Waste
- B Plant
- 222S T8 RH MLLW
- 221-T RCRA Tank System
- PUREX Storage Tunnel
- PUREX Containment Building.

Some of these waste categories, such as MLLW-9, Lead-Acid and Cd Batteries, and MLLW-10, Reactive Metals (Table 3-13a), represent relatively small volumes. As was the case with the inventory of mercury-bearing waste at the Hanford Site, these waste categories are

common with waste categories at other sites across the DOE Complex. As part of the effort to increase the efficiency of treatment and disposal of these waste categories across the Complex, the Transuranic and Mixed Waste Focus Area is leading an effort to assess the need for battery and reactive metal treatment and develop a national contract for treating this waste. In the Hanford Site baseline, the plan is to focus on larger volume waste categories for which treatment capability or contracts exist and await the outcome of the national coordination effort before treating this waste.

Table 3-13a. Information for Treatability Groups for Which Treatment Technology Assessments Have not Been Completed.

Type of Information	Information
Treatability groups included in this category	MLLW-09, Lead-Acid and Cd Batteries; MLLW-10, Reactive Metals
Tri-Party Agreement milestones related to these treatability groups	M-91-00
Technology needed for facility	
Characterization status information	
- Characterization needed defined	NA
- Characterization milestones	NA
Treatment status information:	
- Treatability testing	NA
- Feasibility analysis and reports	NA
- Bench- and pilot-scale testing reports	NA
- Research, development, and demonstration projects	NA
- Design reports	NA
- Permitting milestones	NA
- Treatment milestones	Estimated to begin treatment in 2008
Budget status for testing, development, design, construction, and operations	Priorities within the next 5-year window are not sufficient to begin work on these treatment processes
Estimated completion date for treatment of treatability groups with the assumption of available funding.	Existing inventory estimated to be treated by 2014. Because waste generation is expected to continue through the life of Hanford Site cleanup operations, continued treatment will be needed through the foreseeable future

MLLW                      mixed low-level waste  
TBD                        to be determined  
Tri-Party Agreement    *Federal Facility Agreement and Consent Order*

The waste included in the B Plant Cell 4 and B Plant Containment Building treatability groups is stored in a facility managed under regulator-approved long-term S&M plan. Therefore, active management of the waste is not planned in the near term. Ongoing S&M activities for the B Plant treatability groups will be conducted in accordance with the approved S&M plan and associated Tri-Party Agreement commitments until DOE Headquarters decides to initiate the disposition phase or other actions required under the terms of the *Tri-Party Agreement Action Plan*, Section 8.1 or 8.3.3.

In the resolution negotiations for the Notices of Deficiency to the 222S Part B Permit Application, Ecology agreed that the 222S T8 RH MLLW can remain in 222-S until closure. The current schedule reflects initiating cleanout of 222-S in FY 2033 and transition to facility disposition in FY 2035.

Information about the 221-T RCRA Tank System Waste is included in Table 3-13b.

Table 3-13b. Information for the 221-T RCRA Tank System Waste for Which Treatment Technology Assessments Have not Been Completed.

Type of Information	Facility Information
Treatability group included in this category	221-T RCRA Tank System Waste
Tri-Party Agreement milestones related to this treatability group	None
Technology needed for facility	
Characterization status information	
- Characterization needed defined	Potential exists for additional sampling to evaluate waste for long-term storage and UHCs
- Characterization milestones	NA
Treatment status information:	
- Treatability testing	NA
- Feasibility analysis and reports	NA
- Bench- and pilot-scale testing reports	NA
- Research, development, and demonstration projects	NA
- Design reports	NA
- Permitting milestones	Complete (M-20-51)
- Treatment milestones	12/2007 for evaporation of liquid fraction only. Solids proposed to be handled with canyon disposition, in accordance with RL to Ecology letter #01-RCA-192, dated 3/29/01
Budget status for testing, development, design, construction, and operations	Priorities within the next 5-year window are not sufficient to begin work on this waste group

Table 3-13b. Information for the 221-T RCRA Tank System Waste for Which Treatment Technology Assessments Have not Been Completed.

Type of Information	Facility Information
Estimated completion date for treatment of treatability group with the assumption of available funding	See above

Ecology	Washington State Department of Ecology
MLLW	mixed low-level waste
RL	U.S. Department of Energy, Richland Operations Office
Tri-Party Agreement	<i>Federal Facility Agreement and Consent Order</i>
UHC	underlying hazardous constituents

### 3.4 RADIONUCLIDE SEPARATION PLANS

For MLLW, the only process that involves extensive separation is aqueous waste treatment in the ETF. No separation activities are specifically planned for any other MLLW treatability group.

### 3.5 MIXED WASTE DISPOSAL

MLLW is disposed of in the mixed waste trenches, the ERDF, and Trench 94 for defueled naval reactor compartments. The mixed waste trenches and the ERDF will be discussed in this section. Trench 94 is not included in the scope of this report. Disposal facilities to be used for the disposal of low-activity waste from the vitrification of HLW are discussed in Section 5.6. Plans have been made for a trench to support disposal of spent melters from the vitrification plant. The spent melters are mixed waste.

#### 3.5.1 Mixed Waste Trenches

The mixed waste trenches (218-W-5, Trenches 31 and 34) have been constructed to provide disposal capabilities for a substantial portion of the the Hanford Site's RCRA mixed waste. Waste for disposal in these units must meet the Hanford Site Solid Waste Acceptance Criteria. Each disposal trench has a capacity of about 24,000 m<sup>3</sup> air volume. The Hanford Site mixed waste trenches are RCRA compliant. In future years the two existing trenches for mixed waste are expected to be filled. In addition to the facilities mentioned in Section 3.5, a new RCRA-compliant trench will be constructed. This trench will be used for disposal of the remaining portion of the Hanford Site's RCRA mixed waste. Table 3-14 provides additional information on the mixed waste disposal trenches.

Table 3-14. Summary for Mixed Waste Trenches.

Type of Information	Information
Treatability groups going to this disposal unit.	RCRA waste that can meet the acceptance requirements
Tri-Party Agreement milestones related to this disposal unit	M-091-13 – Completed in CY 1999
Current combined capacity of the two existing trenches	48,000 m <sup>3</sup> air volume capacity; actual waste volume disposed of will be less
Volume of waste disposed of during past year (1/1-12/31/2000)	670.0 m <sup>3</sup>
Total volume of waste disposed of since operations began	852.7 m <sup>3</sup>
Regulatory status information	
- Date of RCRA or other permit	Currently operating under interim status, Part B Application scheduled to be certified in 2002
- Date construction started	1994
- Date disposal started	September 15, 1999 (Storage operations began in 1997)
- Date operations scheduled to end	2035
Budget status for testing, development, design, construction, and operations	Ongoing operations
Expansion plans or alternatives	The Nevada Test Site was an alternative considered in the PEIS. Expansion likely will be required to support Hanford Site waste disposal

DOE, 1997, *Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Mixed Wastes*, U.S. Department of Energy, Washington, D.C.

CY                      calendar year  
ERDF                  Environmental Restoration Disposal Facility  
PEIS                    *Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Mixed Wastes*  
RCRA                  *Resource Conservation and Recovery Act of 1976*  
Tri-Party Agreement   *Hanford Federal Facility Agreement and Consent Order*

### 3.5.2 Environmental Restoration Disposal Facility

The ERDF is a RCRA-compliant landfill that is authorized under CERCLA. The landfill is used for disposal of environmental restoration waste being generated from cleanup activities.

ERDF is designed to receive and dispose of low-level radioactive waste or mixed waste generated through remediation of the Hanford Site. The original two cells have been filled since the landfill opened in 1996. Cells 3 and 4 were constructed and are now in use. Table 3-15 summarizes the facility information.

Table 3-15. Information for Environmental Restoration Disposal Facility.

Type of Information	Information
Treatability groups going to this disposal unit.	ERDF
Tri-Party Agreement milestones related to this disposal facility	M-70-00, M-16-92B
Capacity of current units (Cells 3 and 4)	1,217,400 m <sup>3</sup>
Waste disposed of during past year (Cells 3 and 4)	228,000 m <sup>3</sup> total; 5500 of total is MLLW
Volume of waste disposed of since start of operations (Cells 1 through 4)	1,173,913 total; 23,480 m <sup>3</sup> of total is MLLW
Estimated volume of capacity to be constructed by 2005 (Cells 5 and 6)	1,217,400 m <sup>3</sup>
Volume of waste expected to be disposed of from 2001 through 2005. <sup>1</sup>	18,290 m <sup>3</sup> of MLLW
Regulatory status information	Unit is operating under a CERCLA ROD
- Date of RCRA or other permit	CERCLA ROD issued January 1995, amended in September 1997 and March 1999
- Date construction started	1995
- Date disposal started	July 1996
- Date for end of operations	2046
Budget status for continued operations	ERDF operations are budgeted as part of the Richland Environmental Restoration Project. ERDF operations and cell construction are included in the project's budget requests.
Expansion plans or alternatives	Additional cells are constructed as needed.

<sup>1</sup>The volume identified in these rows are the total volume of waste forecast to be disposed of at ERDF. The location-specific data sheets report only the mixed waste fraction of waste disposed of at ERDF. Historically, mixed waste accounts for only 2% of the total waste disposed of at ERDF.

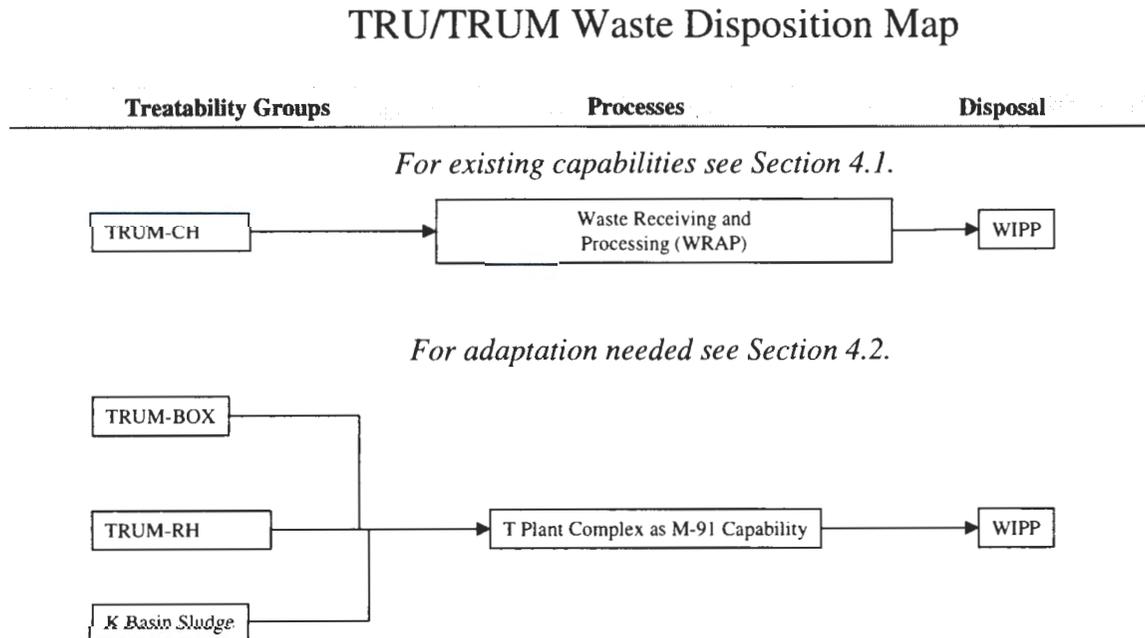
CERCLA *Comprehensive Environmental Response, Compensation, and Liability Act of 1980*  
ERDF *Environmental Restoration Disposal Facility*  
ROD *record of decision*  
Tri-Party Agreement *Hanford Federal Facility Agreement and Consent Order*

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#### 4.0 TRU/TRUM WASTE STREAMS

At the Hanford Site all newly generated small-container CH TRU/TRUM will be certified through the Hanford Site TRU Program. Functions in support of certification are conducted predominantly at the WRAP facility, but some functions are performed at other locations, including T Plant, the analytical laboratories, and the generating facilities. Oversized and RH waste streams generate near term (e.g., K Basins sludge) will be stored to await processing via the M-91 capability and certification through the Hanford Site TRU Program. The Site disposition map in Figure 4-1 shows an overview of the anticipated processing of TRU/TRUM treatability groups. This figure shows the major waste treatability groups and the planned process for each group.

Figure 4-1. Site Disposition Map for TRUM Treatability Groups.



#### 4.1 TRU/TRUM WASTE STREAMS FOR WHICH PROCESSING TECHNOLOGY EXISTS - WRAP

WRAP's primary purpose is to certify waste to Waste Isolation Pilot Plant (WIPP) acceptance criteria for shipment to WIPP. WRAP provides capabilities to receive waste; confirm drummed and standard waste boxes' contents; repackage, inspect, and certify the waste to WIPP waste acceptance criteria; it also can provide limited processing of some specific waste types. WRAP can process only CH waste in drums or standard waste boxes. Table 4-1 provides

WRAP can process only CH waste in drums or standard waste boxes. Table 4-1 provides information about WRAP. The WRAP Part B permit application contains additional information.

Table 4-1. Information about the WRAP Process.

Type of Information	Facility-Specific Information
Treatability group that the process is expected to treat	TRUM-CH
Tri-Party Agreement milestones related to this treatability group	Completed
Volume of Hanford Site TRU/TRUM waste processed during CY 2000	149 m <sup>3</sup> through NDE, 225 m <sup>3</sup> through NDA, and 6.4 m <sup>3</sup> through the gloveboxes (all nonmixed).
Projected volume of TRU/TRUM to be processed by end of CY 2006	1020 m <sup>3</sup>
Treatment capacity	Permitted capacity is 12.9 m <sup>3</sup> /day
Regulatory status information:	
- Date of RCRA permit application	6/99
- Date treatment contract established	NA
- Date facility construction started	Groundbreaking 4/18/94
- Date system testing started	ATPs initiated on 2/13/96
- Date for commencement of operations	Phase I operations (shipping and receiving and NDE/NDA) initiated 3/12/97 Phase II operations (Process Area) initiated 9/9/98
- Current regulatory status	Operating under interim status; transition to final status stayed on appeal
Budget status for continued operations	Funding has been requested in the FY 2000 through FY 2002 budgets and currently is planned to be requested through the FY 2006 budgets.
Planned completion of treatment using this process	2032

Table 4-1. Information about the WRAP Process.

Type of Information	Facility-Specific Information
Alternative processes that could be used in place of this process or to supplement capacity for this process.	No single facility within the DOE Complex embraces the scope of the WRAP capabilities. The complete set of processes is available, though, at several other DOE locations: INEEL, Rocky Flats, SRS, and Los Alamos. In addition, repackaging and characterization capabilities have been developed that can be deployed at sites, using temporary rather than permanent installation.
ATP	acceptance test procedure
CY	calendar year
DOE	U.S. Department of Energy
INEEL	Idaho National Environmental Engineering Laboratory
Los Alamos	Los Alamos National Laboratory
NDE	nondestructive examination
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>
SRS	Savannah River Site
TBD	to be determined
WRAP	Waste Receiving and Processing

#### 4.2 TRU/TRUM TREATABILITY GROUPS FOR WHICH CHARACTERIZATION AND PROCESSING TECHNOLOGIES DO NOT EXIST

Current planning includes modifying the T Plant Complex to provide treatment capability to meet the Milestone M-91 requirements. The requirements are to provide for the processing of RH TRU and oversize boxes of TRU. The T Plant Complex (M-91 Capability) also is anticipated to be modified to provide for processing of unique TRU/TRUM waste streams such as the sludge from the K Basins. The RH and sludge waste processing will need to use remote processing methods and technologies. Existing technologies need to be adapted and better technologies developed to improve operational efficiency. The technology information will be needed as the process designs are developed. Table 4-2 provides information for the T Plant Complex modification.

Table 4-2. Information for Modifications of T Plant Complex to meet M-91 Processing Commitments.

Type of Information	Information
Treatability group that the process is expected to treat	TRUM-BOX; TRUM-RH, and K Basin Sludge
Tri-Party Agreement milestones related to these treatability groups	M-91-01, M-91-14-T01, M-91-15, M-91-18, M-91-19-T01, M-91-20, M-91-21-T01, M-91-22

Table 4-2. Information for Modifications of T Plant Complex to meet M-91 Processing Commitments.

Type of Information	Information
Technology needed for facility	Remote-handling and processing technologies
Projected volume of TRU/TRUM to be treated by end of CY 2006	Processing not included in baseline funding through 2006.
Treatment capacity	To be determined by design reports
Regulatory status information:	
- Design reports	Conceptual design document (sludge) 6/29/2001 Functional design criteria (RH and boxes) 2007 Conceptual design report (RH and boxes) 2008
- Submittal of permit application	To be determined during design
- Date design and construction contract to be established	6/2013
- Date facility construction to be started	6/2013
- Date for commencement of operations	10/2016
- Current regulatory status	In planning
Budget status for design, construction, and operations	Included in long-range budgets, but not within the 2006 window of this report.
Estimated date of processing completion of treatability groups with the assumption of available funding.	2032
Alternatives for processing of this waste.	Construction of a new facility or a set of modules.

CY           calendar year  
 RH           remote handled  
 TRU         transuranic  
 TRUM       transuranic mixed

### **4.3 TRU WASTE TREATABILITY GROUPS WITH PROCESSING TECHNOLOGY NOT YET SELECTED**

This section covers treatability groups that do not have a processing method. Before a processing method can be specified for these media, additional technology assessments will need to be performed and/or further characterization must occur. Process planning for these treatability groups continues. These treatability groups include the following:

- PUREX Containment Building Waste
- PUREX Storage Tunnels Waste
- 324 Building REC
- TRU-PCB.

The media associated with these treatability groups will need to be characterized to meet WIPP waste acceptance criteria. RH handling equipment and techniques will be needed to support characterization of most of the waste. Also, for the polychlorinated biphenyl (PCB)-contaminated waste, thermal treatment may be required to destroy the PCB content.

#### **4.3.1 PUREX Storage Tunnels Waste**

The PUREX tunnels are a RCRA-regulated storage unit and are subject to Hanford Facility RCRA permit conditions. Waste in the PUREX Storage Tunnels treatability group is being stored as a final status miscellaneous unit. Under the Hanford Facility RCRA permit, closure of the PUREX tunnels must be coordinated with the final closure plan for the PUREX Containment Building. Therefore, PUREX Storage Tunnel waste disposition will be coordinated with PUREX Facility closure discussed in Section 4.3.2.

#### **4.3.2 PUREX Containment Building Waste**

Ongoing S&M activities for the PUREX Containment Building treatability group will be conducted in accordance with the approved S&M plan and associated Tri-Party Agreement commitments until DOE Headquarters decides to initiate the disposition phase or actions required by the lead regulatory agency pursuant to the terms of the *Tri-Party Agreement Action Plan*, Sections 8.1 or 8.3.3. The waste included in the PUREX Containment Building treatability group is stored in a facility managed under regulator-approved long-term S&M plans. Therefore, active management of the waste is not planned in the near term.

#### **4.3.3 324 Building TRU and TRUM**

The 324 Building REC TRU and TRUM waste is being dispositioned in accordance with Tri-Party Agreement Milestone M-89-00 due October 31, 2005. Under this milestone, TRU and TRUM PCB waste is removed from the 324 Building and transferred to Hanford Site solid waste (SW) management units.

Waste transfers to Hanford Site SW management units are performed in accordance with HNF-EP-0063. This document specifies waste characterization criteria necessary to support proper interim storage and future processing, storage, and/or disposal requirements for TRU and TRUM waste. Future Hanford Site TRU and TRUM waste management requirements (i.e., processing, storage, and/or disposal) are subject to Tri-Party Agreement Milestone M-91-00 (due date TBD).

#### 4.4 DISPOSAL OF TRU/TRUM WASTE

As noted in Figure 4-1, the current plan is to ship certified TRU/TRUM waste to WIPP. Waste being disposed of in the WIPP must meet the WIPP waste acceptance requirements. Waste will be shipped to WIPP in appropriate containers and special packages. Table 4-4 provides specific information on the disposal of TRU/TRUM waste.

Table 4-4. Information for the Disposal of TRU/TRUM Waste in WIPP.

Type of Information	Information
Treatability groups going to this disposal facility.	TRUM-RH, TRU-BOX, TRU-CH, K Basin Sludge, and TRU PCB. Treatability groups for TRU waste with processing technologies not yet selected, also will need to be sent to WIPP as they qualify.
Tri-Party Agreement milestones related to this disposal facility	None
Hanford Site waste disposed of during CY 2000 (1/1-12/31)	~36 m <sup>3</sup> (173 55-gal drums) (nonmixed)
Volume of waste expected to be certified for disposal through 2006.	~300 m <sup>3</sup> (nonmixed)
Regulatory status information	
- Date of RCRA or other permit	1999
- Date construction started	NA
- Date disposal started	1999
- Date operations end	2035 (Based on projected WIPP Closure Date)
Budget status for testing, development, design, construction, and operations	WIPP budget is not part of Hanford Site's Budget.

Table 4-4. Information for the Disposal of TRU/TRUM Waste in WIPP.

Type of Information	Information
Expansion plans or alternatives	NA
CH	contact handled
CY	calendar year
HLW	high-level waste
PCB	polychlorinated biphenyl
RH	remote handled
SNF	spent nuclear fuel
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>
TRU	transuranic
WIPP	Waste Isolation Pilot Plant
WRAP	Waste Receiving and Processing

#### 4.5 RADIONUCLIDE SEPARATION PLANS

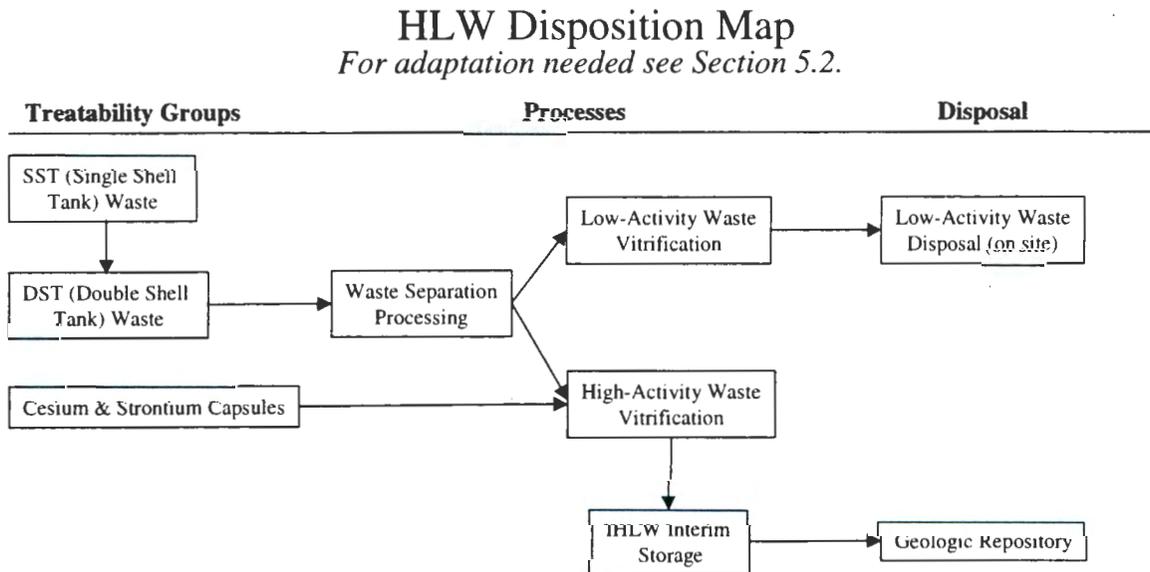
No plans exist for radionuclide separation as a processing step for TRU/TRUM waste because radionuclide separation is not required for these treatability groups to meet disposal criteria.

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## 5.0 HIGH-LEVEL WASTE STREAMS

Figure 5-1 shows an overview of the anticipated treatment of HLW treatability groups. The basic process is for the single-shell tank (SST) system waste to be moved to the double-shell tank (DST) system as space becomes available. The waste is then moved from the DSTs to a waste pretreatment or separation unit where most of the high-activity material is removed and sent to the high-activity vitrification unit. The larger volume of remaining low-activity waste is sent to a separate low-activity vitrification unit. The vitrification process converts the waste into a stable glass-like material for interim storage and eventual disposal. It has been determined per the framework Agreement for Management of PCBs in Hanford Tank Waste, dated August 31, 2001, that some DSTs contain PCB remediation waste. The risk-based disposal approval process will address the disposal of PCB remediation waste through the waste treatment plant where it has been addressed as a constituent of concern. Figure 5-1 shows the HLW treatability groups and the planned treatment process.

Figure 5-1. Site High-Level Waste Disposition Map.



### 5.1 EXISTING TREATMENT PROCESSES

No HLW LDR treatment processes are currently available for treating the Hanford Site waste. The Hanford Site does have HLW evaporators that have been used for many years to concentrate the high-level waste in the tanks and to make tank space available for new or transferred waste. The 242-A Evaporator operation is not LDR treatment; however it results in sending a portion of the tank waste (condensate) to LDR treatment at LERF/ETF. 242-A Evaporator operation is not covered in this LDR report.

## 5.2 WASTE STREAMS FOR WHICH TREATMENT TECHNOLOGY IS NEEDED

The LDR-specified treatment technology for high-level waste is vitrification. Planning for vitrification processes for the Hanford Site has been under way and is a high priority on the Site. During the past year, the Site approach changed from using a privatization contract to functioning as a government-owned, contractor-operated facility. The contractor for the process recently was selected and further planning is under way. Details of the contract for completion of the design and construction of the treatment units for the HLW are available on the Internet<sup>1</sup>. Additional details of the planning for HLW management also are available on the Internet<sup>1</sup>. Table 5-1 summarizes the key information.

Table 5-1. Information for HLW Vitrification.

Type of Information	Information
Treatability groups that the process is expected to treat	DST waste, SST waste, and Cs and Sr capsules
Tri-Party Agreement milestones related to these treatability groups	M-044-00, Issue Characterization Deliverables; M-062-00, Complete Pretreatment Processing/Vitrification; M-92-00, Acquisition of New Facilities; M-90-00, New Facilities for IHLW and ILAW; M-20-00, Permitting for Canister Storage Building/ILAW
Technology needed for facility	Vitrification technology has been used at both SRS and West Valley, but needs some modifications to be applicable to Hanford Site waste.
Projected volume of HLW to be treated by end of CY 2006	0 – First processing of HLW is scheduled for 2007.
Treatment capacity	To be determined by final design.
Regulatory status information:	
- Submittal of RCRA permit application	WTP: April 2000 DST: Part B Application expected 1/2000 WESF: TBD under M-20 milestone
- Date design and construction contract established	2000
- Date facility construction begins	TBD
- Date operations to begin	2007

<sup>1</sup> Internet addresses are given in the reference list (Chapter 10).

Table 5-1. Information for HLW Vitrification.

Type of Information	Information
- Current regulatory status	WESF: Operating under interim status DST: Operating under interim status SST: Operating under interim status WTP: In design
Budget status for design, construction, and operations	Funding is available for FY 2001 to continue design and plans for construction. Funding for FY 2002 and beyond is contingent on Congressional budgets and actions.
Estimated treatment completion date of treatability group with the assumption of available funding.	2028 (M-62-00)
Alternatives for treatment of this waste.	None

CY	calendar year
DST	double-shell tank
FY	fiscal year
HLW	high-level waste
IHLW	immobilized high-level waste
ILAW	immobilized low-activity waste
SRS	Savannah River Site
SST	single-shell tank
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>
WESF	Waste Encapsulation and Storage Facility
WTP	Waste Treatment Plant

### 5.3 RADIONUCLIDE SEPARATION

The tank waste will be sent to the Waste Treatment Plant where it will be separated into high-level and low-level fractions and will be treated to meet LDR standards.

### 5.4 STORAGE OF VITRIFIED WASTE

Initial canisters of vitrified HLW will be in interim storage in the existing Canister Storage Building, pending final disposal. Additional modules of the Canister Storage Building will be built as needed. The maximum need will be determined at a later date and will depend on both the vitrification rate and the ability to ship waste from the Hanford Site to a national repository.

## 5.5 SHIPMENT OF HIGH-LEVEL WASTE TO A NATIONAL REPOSITORY

A national repository is expected to be prepared for the HLW and for the spent nuclear fuel that is accumulating at commercial nuclear power plants. Shipments dates are uncertain at this time, but will become more specific when a site eventually is selected licensed and constructed as the national repository and prepared to receive the HLW. These activities are beyond the scope of this report.

## 5.6 DISPOSAL OF THE LOW-ACTIVITY WASTE ON SITE

The vitrified low-activity waste will be disposed of on the Hanford Site in a RCRA subtitle C TSD unit. The *Tank Farm Supplemental Environmental Impact Statement (SEIS)* will constrain the start of definitive design of the ILAW trench. Start of definitive design cannot proceed until the preferred alternative is selected and the record of decision is issued. The current status of the TSD unit is shown in Table 5-2.

Table 5-2. Information for Low-Activity Waste Disposal.

Type of Information	Specific Information
Treatability groups going to this disposal facility.	Low-activity fraction from SST and DST waste
Tri-Party Agreement milestones related to this disposal facility	M-090-00, New Facilities for IHLW and ILAW; M-20-00, Permitting for ILAW
Regulatory status information	
- Date of RCRA or other permit	Subject to completion of the SEIS and Tri-Party Agreement negotiations
- Date construction started	Subject to completion of the SEIS and Tri-Party Agreement negotiations
- Date disposal starts	2008 after the start of the Waste Treatment Plant
- Date for end of operations	~2025 (M-60-00) Complete immobilization of ILAW in 2024
Budget status for testing, development, design, construction, and operations	Budget currently exists to start the SEIS

Table 5-2. Information for Low-Activity Waste Disposal.

Type of Information	Specific Information
Expansion plans or alternatives	Being evaluated for SEIS
DST	double-shell tank
IHLW	immobilized high-level waste
ILAW	immobilized low-activity waste
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
SEIS	supplemental environmental impact statement
SST	single-shell tank
TBD	to be determined
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>

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## **6.0 TREATMENT OF POTENTIAL MIXED WASTE**

Potential mixed waste is identified in Volume 1, Appendix C, of this report. Some of the materials as they are managed in the future, may result in the generation of mixed waste, which then would be assigned to one of the treatability groups. If the material is assigned to an existing treatability group, its treatment can be considered along with that of the other location-specific waste streams within that treatability group. Other potential mixed waste will require new or modified treatment processes. Treatment plans for these waste streams will be further defined when they are determined to be mixed waste. Other materials will be determined to not be mixed waste and will be handled accordingly.

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## 7.0 SUMMARY OF CHARACTERIZATION INFORMATION

As part of generation of any waste, a generator must take steps necessary to confirm the proper management of their waste. This includes identifying proper radioactive classification, understanding the physical matrix, properly designating the waste, and, where applicable, identifying the appropriate underlying hazardous constituents. Types of information that can be used to characterize waste can include data from analysis of the waste and knowledge of the materials and/or process used to generate the waste. The information must be sufficient to quantify constituents of regulatory concern and determine waste characteristics and unit-specific acceptance criteria.

This section discusses and summarizes the waste treatability groups and the planned characterization activities for the wastes. Waste must be sufficiently characterized so that it can be stored and managed properly. In addition, waste must be sufficiently characterized prior to treatment to assure that the proper treatment processes is applied and that the resultant treated waste meets LDR standards. Table 7-1 summarizes the planned characterization activities for each of the treatability groups. Additional detail can be found on the individual location-specific data sheets.

Table 7-1. Summary of Characterization Information for Each Treatability Group.

ID	Name	Report Section	Additional Characterization Activities	Planned Characterization Schedule	Related Tri-Party Agreement Milestone
221-T RCRA Tank System	T Plant Complex Waste	3.3.2	Additional characterization may be required to support waste treatment .	Will be done in conjunction with T Plant Canyon disposition	Completed
222-S T8 RH-MLLW	222-S Laboratory Complex T8 tunnel waste	3.3.2	As required to initiate cleanout of 222-S	2033	None
324 Bldg. Radiochemical Engineering Cell Waste	324 Building Radiochemical Engineering Cells	4.3.1	No further characterization planned for shipment to CWC. Additional characterization may be required to meet WIPP WAC	Completed	M-89-00
618-4 DU/Oil Drums	Depleted Uranium in Oil from 618-4 Burial Ground	3.1.4	Characterization was performed in 1998. No further characterization is necessary.	Completed	M-16-03F
B Plant	B Plant Containment Building Storage	3.3.2	To be determined under Tri-Party Agreement Section 8	To be determined under Tri-Party Agreement Section 8	Addressed under Section 8 of the Tri-Party Agreement

Table 7-1. Summary of Characterization Information for Each Treatability Group.

ID	Name	Report Section	Additional Characterization Activities	Planned Characterization Schedule	Related Tri-Party Agreement Milestone
B Plant Cell 4 Waste	B Plant Complex Cell 4 Waste	3.3.2	To be determined under Tri-Party Agreement Section 8	To be determined under Tri-Party Agreement Section 8	Addressed under Section 8 of the Tri-Party Agreement
Cesium and Strontium Capsules	Cesium and Strontium Capsules	5.2	None	Completed	None
DST Waste	DST Waste	5.2	No further characterization planned for waste designation. Additional characterization may be required to support waste treatment plant needs.	2008-2028 per M-50	M-50, M-51, M-61, M-62, M-90
ERDF	ERDF	3.5.2	Characterized as generated.	Ongoing	M-16-00
ERDF – Treatment	ERDF – Treatment	3.1.7	Characterized as generated.	Ongoing	M-16-00
K Basin Sludge	K Basin Sludge	4.2	No further characterization planned for shipment to T Plant. Additional characterization may be required to meet WIPP WAC.	Prior to WIPP Closure (~2035)	M-91
LERF/ETF Liquid Waste	LERF/ETF Liquid Waste	3.1.8	Characterization performed as generated.	Ongoing	M-26-05 H, J, & L
MLLW-01	LDR-Compliant Waste	3.1.10 and 3.1.6	Characterization performed as generated <sup>1</sup> .	Ongoing	Proposed
MLLW-02	Inorganic Non-Debris	3.1.1	As necessary to meet treatment facility waste acceptance criteria <sup>1</sup> .	Ongoing	Proposed
MLLW-03	Organic Non-Debris	3.1.3	As necessary to meet treatment facility waste acceptance criteria <sup>1</sup> .	Ongoing	M-91-12a, M-91-12
MLLW-04A	O/C Debris	3.1.3	As necessary to meet treatment facility waste acceptance criteria <sup>1</sup> .	Ongoing	Proposed
MLLW-04B	Non-O/C Debris	3.1.2	As necessary to meet treatment facility waste acceptance criteria <sup>1</sup> .	Ongoing	Proposed

Table 7-1. Summary of Characterization Information for Each Treatability Group.

ID	Name	Report Section	Additional Characterization Activities	Planned Characterization Schedule	Related Tri-Party Agreement Milestone
MLLW-05	Elemental Lead	3.1.2	As necessary to meet treatment facility waste acceptance criteria <sup>1</sup> .	Ongoing	Proposed
MLLW-06	Elemental Mercury	3.2.2	As necessary to meet treatment facility waste acceptance criteria <sup>1</sup> .	Ongoing	Proposed
MLLW-07	M-91 MLLW	3.2.1	As necessary to meet treatment facility waste acceptance criteria <sup>1</sup> .	Ongoing	M-91
MLLW-09	Lead Acid & Cadmium Batteries	3.3.2	As necessary to meet treatment facility waste acceptance criteria <sup>1</sup> .	Ongoing	Proposed
MLLW-10	Reactive Metals	3.3.2	As necessary to meet treatment facility waste acceptance criteria <sup>1</sup> .	Ongoing	Proposed
PNNL-HWTU	PNNL Laboratory Waste	3.1.9	Characterization performed as generated.	Ongoing	None
PUREX Containment Building Waste	PUREX Containment Building	4.3.1	To be determined under Tri-Party Agreement Section 8	To be determined under Tri-Party Agreement Section 8	Addressed under Section 8 of the Tri-Party Agreement.
PUREX Storage Tunnel Waste	PUREX Storage Tunnels	4.3.1	As necessary to meet WIPP WAC	2027	None
Purgewater Storage and Treatment Facility	PSTF	3.1.8	Characterization performed as generated.	Ongoing	Addressed under Appendix F of the Tri-Party Agreement in WHC-MR-0039, Strategy for Handling and Disposing of Purgewater at the Hanford Site, Washington
SST Waste	Single Shell Tank System	5.2	No further characterization planned for waste or LDR designation.	2008-2028 per M-50	M-50, M-51, M61, M-62, M-90
T Plant EC-1 Condenser	T Plant Complex EC-1 Condenser	3.1.5	Completed	Completed	None
TRUM-Box	M-91 T Plant TRUM, large boxed	4.2	As necessary to meet WIPP WAC	Prior to WIPP Closure (~2035)	None

Table 7-1. Summary of Characterization Information for Each Treatability Group.

ID	Name	Report Section	Additional Characterization Activities	Planned Characterization Schedule	Related Tri-Party Agreement Milestone
TRUM-CH	WRAP TRUM	4.1	As necessary to meet WIPP WAC	Ongoing	None
TRUM-RH	M-91 T Plant TRUM, RH	4.2	As necessary to meet WIPP WAC	Prior to WIPP Closure (~2035)	None
TRU-PCB	PCB TRUM and/or PCB TRU, CH	4.3	As necessary to meet WIPP WAC	Prior to WIPP Closure (~2035)	None

<sup>1</sup> Newly generated waste in these categories is fully characterized as it is generated. For waste in inventory before 1995, characterization schedule is given in Table 3-12.

CH	Contact handled	RH	Remote handled
DST	double-shell tank	SST	Single-shell tank
ERDF	Environmental Restoration Disposal Facility	TRU	transuranic
LDR	land disposal restrictions	WESF	Waste Encapsulation and Storage Facility
O/C	Organic/carbonaceous	WIPP	Waste Isolation Pilot Plant
PCB	polychlorinated biphenyl	WRAP	Waste Receiving and Processing
PUREX	Plutonium-Uranium Extraction (Plant or Process)		

## **8.0 SUMMARY OF TREATMENT AND DISPOSAL INFORMATION**

This section summarizes the waste treatability groups and the volume of waste that will be treated for eventual disposal. Table 8-1 contains information on treatment and Table 8-2 contains the information on disposal of the waste. The treatability groups are organized in alphabetical order.

Table 8-1. Summary of Treatment Information for Each Treatability Group.

ID	Name	Report Section	Treatment Process	Volume Currently Stored (m <sup>3</sup> )	Projected Generation Volume 2001 through 2005 (m <sup>3</sup> )	Projected Volume to be Treated 2001 through 2005 (m <sup>3</sup> )	Planned Treatment Period	Tri-Party Agreement Milestone
221-T RCRA Tank System	T Plant Complex Waste	3.3.2	Not yet decided	74.0	0.0	0.0	2025	None. See 222-S Closure Plan
222-S T8 RH-MLLW	222-S Laboratory Complex T8 tunnel waste	3.3.2	Not yet decided	0.2	0.0	0.0	2033	None
324 Bldg. Radiochemical Engineering Cell Waste	324 Building Radiochemical Engineering Cells	4.3.1	Not yet decided	50.0	64.4	0.0	Before WIPP Closure (~2035)	M-89-00
618-4 DU/Oil	Depleted Uranium in Oil from 618-4 Burial Ground	3.1.4	Commercial-thermal	55	56	111	2002/2003	M-16-03F
B Plant	B Plant Containment Building Storage	3.3.2	Not yet decided	294,000 kg	0.0	0.0	To be determined under the Tri-Party Agreement, Section 8	Addressed under the Tri-Party Agreement, Section 8
B Plant Cell 4 Waste	B Plant Complex Cell 4 Waste	3.3.2	Not yet decided	1.4	0.0	0.0	To be determined under Tri-Party Agreement Section 8	Addressed under the Tri-Party Agreement, Section 8
Cesium and Strontium Capsules	Cesium and Strontium Capsules	5.2	Vitrification	2.0	0.0	0.0	2028 per M-50	M-92
DST Waste	DST Waste	5.2	WTP	80,180	36,021	0.0	2008-2028 per M-50	M-50, M-51, M-61, M-62, M-90
ERDF	ERDF	3.5.2	No treatment needed for direct disposal	37	18, 293	No treatment needed	NA	Treatment and disposal are performed under a CERCLA ROD
ERDF --Treatment	ERDF -- Treatment	3.1.7	ERDF treatment	50	2057	2057	Through 2046	Treatment and disposal are performed under a CERCLA ROD

Table 8-1. Summary of Treatment Information for Each Treatability Group.

ID	Name	Report Section	Treatment Process	Volume Currently Stored (m <sup>3</sup> )	Projected Generation Volume 2001 through 2005 (m <sup>3</sup> )	Projected Volume to be Treated 2001 through 2005 (m <sup>3</sup> )	Planned Treatment Period	Tri-Party Agreement Milestone
K Basin Sludge	K Basin Sludge	4.2	M-91 TRU	0.0	50.0	0.0	WIPP Closure (~2035)	M-91
LERF/ETF Liquid Waste	LERF/ETF Liquid Waste	3.1.8	ETF	40,790	405,840	19,875	Through 2032	M-26-05 H, J, & L
MLLW-01	LDR-Compliant Waste	3.1.10 & 3.1.6	No treatment required	1338	111.2	7795 <sup>1</sup>	N/A	Proposed
MLLW-02	Inorganic Non-Debris	3.1.1	Commercial-Stabilization	2954	76	7795 <sup>1</sup>	Through 2046 <sup>2</sup>	Proposed
MLLW-03	Organic Non-Debris	3.1.3	Commercial-Thermal	701.2	133.7	7795 <sup>1</sup>	Through 2046	M-91-12a, M-91-12
MLLW-04A	O/C Debris	3.1.3	Commercial-Thermal	1817	707.2	7795 <sup>1</sup>	Through 2046 <sup>2</sup>	Proposed
MLLW-04B	Non-O/C Debris	3.1.2	Commercial-Macro	247.6	770.1	7795 <sup>1</sup>	Through 2046 <sup>2</sup>	Proposed
MLLW-05	Elemental Lead	3.1.2	Commercial-Macro	365.5	107.7	7795 <sup>1</sup>	Through 2046 <sup>2</sup>	Proposed
MLLW-06	Elemental Mercury	3.2.2	Commercial amalgamation	9.1	1.6	7795 <sup>1</sup>	Through 2046 <sup>2</sup>	Proposed
MLLW-07	M-91 MLLW	3.2.1	M-91 MLLW	71.1	1101	7795 <sup>1</sup>	Through 2046 <sup>2</sup>	M-91
MLLW-09	Lead Acid & Cadmium Batteries	3.3.2	Not yet decided	6.1	4.02	0	Through 2046 <sup>2</sup>	Proposed
MLLW-10	Reactive Metals	3.3.2	Not yet decided	1.0	1.8	0.0	Through 2046 <sup>2</sup>	Proposed
PNNL-HWTU Waste	PNNL Laboratory Waste	3.1.9	HWTU, ATG	1.5	76.8	76.8	Through 2025	None
PUREX Containment Building Waste	PUREX Containment Building	4.3.1	Not yet decided	1.0	0.0	0	To be determined under the Tri-Party Agreement, Section 8	Addressed under the Tri-Party Agreement, Section 8
PUREX Storage Tunnel Waste	PUREX Storage Tunnels	4.3.1	Addressed under the Tri-Party Agreement, Section 8	2800	0	0	Coordinated with PUREX Containment Building Waste	None

Table 8-1. Summary of Treatment Information for Each Treatability Group.

ID	Name	Report Section	Treatment Process	Volume Currently Stored (m <sup>3</sup> )	Projected Generation Volume 2001 through 2005 (m <sup>3</sup> )	Projected Volume to be Treated 2001 through 2005 (m <sup>3</sup> )	Planned Treatment Period	Tri-Party Agreement Milestone
Purgewater Storage and Treatment Facility	PSTF	3.1.8	Solar evaporation at the PSTF	0	503	503	Ongoing	None
SST Waste	Single Shell Tank System	5.2	WTP	127,400	0.0	0.0	2008-2028 per M-50	M-50, M-51, M-61, M-62, M-90
T Plant EC-1 Condenser	T Plant complex EC-1 Condenser	3.1.5	Debris Macro-encapsulation/ Microencapsulation	32.1	0.0	0.0	2007	None
TRUM-Box	M-91 T Plant TRU, large boxed	4.2	M-91 TRU	152.2	0.0	0.0	M-91	None
TRUM-CH	WRAP TRUM	4.1	WRAP	223.6	2493.1	1020	WIPP closure (~2035)	None
TRU-PCB	PCB TRUM and/or PCB TRU, CH	4.3	Not yet determined	80	1.9	0.0	To be determined by WIPP	None
TRUM-RH	M-91 T Plant TRUM, Remote Handled	4.2	M-91 TRU	15.0	3.6	0.0	WIPP Closure (~2035)	None

<sup>1</sup>The 7795 m<sup>3</sup> is for the total of all MLLW groups.

<sup>2</sup>2046 is taken as the end of waste processing activities on site

<sup>3</sup>Includes non-mixed TRU waste for NDA and NDE.

DST	double-shell tank	SST	single-shell tank
ERDF	Environmental Restoration Disposal Facility	TRU	transuranic
NDA	nondestructive assay	WESF	Waste Encapsulation and Storage Facility
PCB	polychlorinated biphenyl	WRAP	Waste Receiving and Processing
PUREX	Plutonium-Uranium Extraction (Plant or Process)	WTP	Waste Treatment Plant

Table 8-2. Summary of Disposal Information for Each Treatability Group.

ID	Name	Disposal Location	Volume to be Disposed of through 2006 (m <sup>3</sup> ) <sup>4</sup>	Planned Disposal Period	Tri-Party Agreement Milestone
221-T RCRA Tank System	T Plant Complex Waste	Not yet decided	0.0	Liquid fraction 2007 Solid fraction to be determined by Canyon Disposition Initiative and/or T Plant Complex closure	See 222-S Laboratory Complex Closure Plan
222-S T8 RH-MLLW	222-S Laboratory Complex T8 tunnel waste	Mixed Waste Trenches	0.0	2035	
324 Bldg. Radiochemical Engineering Cell	324 Building Radiochemical Engineering Cell Waste	WIPP	0.0	Before WIPP closure (~2035)	See 324 REC Closure Plan
618-4 DU/Oil	Depleted Uranium in Oil from 618-4 Burial Ground	ERDF	111	2002/2003	Treatment and disposal are performed under a CERCLA ROD
B Plant	B Plant Containment Building Storage	Not yet decided	0.0	To be determined by Tri-Party Agreement Section 8	Addressed under Section 8 of the Tri-Party Agreement
B Plant Cell 4 Waste	B Plant Complex Cell 4 Waste	Not yet decided	0.0	To be determined by	Addressed under Section 8 of the

Table 8-2. Summary of Disposal Information for Each Treatability Group.

ID	Name	Disposal Location	Volume to be Disposed of through 2006 (m <sup>3</sup> ) <sup>4</sup>	Planned Disposal Period	Tri-Party Agreement Milestone
				Tri-Party Agreement Section 8	Tri-Party Agreement
Cesium and Strontium Capsules	Cesium and Strontium Capsules	HLW Repository	0.0	2028 per M-50	M-92
DST Waste	DST Waste	HLW repository & Hanford vaults	0.0	2028 per M-50	M-50, M-51, M61, M-90
ERDF	ERDF	ERDF	18,290	Through 2046	Disposal performed under CERCLA ROD
ERDF--Treatment	ERDF -- Treatment	ERDF	2100	Through 2046	Treatment and disposal are performed under a CERCLA ROD
K Basin	K Basin Sludge	WIPP	0.0	Through WIPP closure (~2035)	M-91
LERF/ETF Liquid Waste	LERF/ETF liquid waste	SALDS	336,994.0	Through 2032	M-26-05 H, J, & L
MLLW-01	LDR-Compliant Waste	Mixed waste trenches	7795 <sup>1</sup>	Through 2046 <sup>2</sup>	Proposed
MLLW-02	Inorganic Non-Debris	Mixed waste trenches	7795 <sup>1</sup>	Through 2046 <sup>2</sup>	Proposed
MLLW-03	Organic Non-Debris	Mixed waste trenches	7795 <sup>1</sup>	Through 2046 <sup>2</sup>	M-91-12a, M-91-12
MLLW-04A	Organic/Carbonaceous Debris	Mixed waste trenches	7795 <sup>1</sup>	Through 2046 <sup>2</sup>	Proposed
MLLW-04B	Non-Organic/	Mixed waste	7795 <sup>1</sup>	Through 2046 <sup>2</sup>	Proposed

Table 8-2. Summary of Disposal Information for Each Treatability Group.

ID	Name	Disposal Location	Volume to be Disposed of through 2006 (m <sup>3</sup> ) <sup>4</sup>	Planned Disposal Period	Tri-Party Agreement Milestone
	-Carbonaceous Debris	trenches			
MLLW-05	Elemental Lead	Mixed waste trenches	7795 <sup>1</sup>	Through 2046 <sup>2</sup>	Proposed
MLLW-06	Elemental Mercury	Mixed waste trenches	7795 <sup>1</sup>	Through 2046 <sup>2</sup>	Proposed
MLLW-07	M-91 MLLW	Mixed waste trenches	7795 <sup>1</sup>	Through 2046 <sup>2</sup>	Proposed
MLLW-09	Lead Acid & Cadmium Batteries	Mixed waste trenches	7795 <sup>1</sup>	Through 2046 <sup>2</sup>	Proposed
MLLW-10	Reactive Metals	Mixed waste trenches	7795 <sup>1</sup>	Through 2046 <sup>2</sup>	Proposed
PNNL-HWTU Waste	PNNL Laboratory Waste	Mixed waste trenches	10	Through 2025	None
PUREX Containment Building Waste	PUREX Containment Building	Not yet decided	0.0	To be determined by Tri-Party Agreement Section 8	Addressed under Section 8.0 of the Tri-Party Agreement
PUREX Storage Tunnel Waste	PUREX Storage Tunnels	Not yet decided	0.0	Coordinate with PUREX Containment Building Waste	None

Table 8-2. Summary of Disposal Information for Each Treatability Group.

ID	Name	Disposal Location	Volume to be Disposed of through 2006 (m <sup>3</sup> ) <sup>4</sup>	Planned Disposal Period	Tri-Party Agreement Milestone
Purgewater Storage and Treatment Facility	PSTF	The Residues and sludges remaining in the modular tanks will be removed, treated as necessary to meet the ERDF Waste Acceptance Criteria and be disposed of in ERDF.	600	Will be determined as part of the remaining revisions being made to the Strategy for Handling and Disposing of Purgewater at the Hanford Site , Washington, WHC-MR-0039	Addressed under Appendix F of the Tri-Party Agreement, Strategy for Handling and Disposing of Purgewater at the Hanford Site, Washington, WHC-MR-0039
SST Waste	Single Shell Tank System	HLW repository and Hanford vaults	0.0	2028 per M-50	M-50, M-51, M61, M-90
T Plant EC-1 Condenser	T Plant complex EC-1 Condenser	Mixed waste trenches	0.0	2007	None
TRUM-Box	M-91 T Plant TRUM, large boxed	WIPP	0.0	Through WIPP closure (~2035)	
TRUM-CH	WRAP TRUM	WIPP	612 <sup>3</sup>	Through WIPP closure (~2035)	
TRUM-RH	M-91 T Plant TRUM, remote handled	WIPP	0.0	Through WIPP closure (~2035)	

Table 8-2. Summary of Disposal Information for Each Treatability Group.

ID	Name	Disposal Location	Volume to be Disposed of through 2006 (m <sup>3</sup> ) <sup>4</sup>	Planned Disposal Period	Tri-Party Agreement Milestone
TRU-PCB	PCB TRUM and/or PCB TRU, CH	WIPP	0.0	Through WIPP closure (~2035)	

<sup>1</sup>The 7795 m<sup>3</sup> is for the total of all MLLW groups.

<sup>2</sup>2046 is taken as the end of waste processing activities on Site

<sup>3</sup>Includes nonmixed TRU.

<sup>4</sup>Disposal volumes used are as-generated volumes without consideration of changes during treatment.

WHC, 1990, *Strategy for Handling and Disposing of Purgewater at the Hanford Site*, Washington, WHC-MR-0039, Westinghouse Hanford Company, Richland, Washington.

DST double-shell tank

SST single-shell tank

ERDF Environmental Restoration Disposal Facility

TRU transuranic

PCB polychlorinated biphenyl

WESF Waste Encapsulation and Storage Facility

PUREX Plutonium-Uranium Extraction (Plant)

WRAP Waste Receiving and Processing

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## 9.0 TRI-PARTY AGREEMENT MILESTONE TABLES

### 9.1 DOCUMENTATION AND RECORDS

The Tri-Party Agreement is a legal document covering Hanford Site environmental compliance and cleanup activities. The Tri-Party Agreement Action Plan implements the agreements between the (Ecology), DOE (both the U.S. Department of Energy, Richland Operations Office [RL] and the U.S. Department of Energy, Office of River Protection [ORP]), and the EPA, and is enforceable. The Tri Party Agreement Action Plan, Section 9.0, "Documentation and Records," defines the documents to be generated under the Action Plan, the classification and listing of primary and secondary documents, and the record systems to be implemented to preserve and access the documentation. The Action Plan, Section 12, "Changes to the Agreement," establishes a process for the parties to propose and implement changes to elements of the Agreement, the Action Plan, Appendices, and supporting plans (specifically, the annual update of the LDR Report).

### 9.2 LDR UPDATE AND REVISION

The Parties intend to issue one report annually in accordance with the requirements of Tri-Party Agreement Interim Milestone M-26-01. Each annual update will be issued as a complete replacement that completely supersedes the prior-year LDR Report. Following finalization of the annual LDR Report, Ecology or DOE may seek to modify the document. Proposed modifications to the Tri-Party Agreement workscope will be identified and processed using the Tri-Party Agreement Action Plan Sections 9.0 and 12.0 and not as part of the review and approval process for the annual update of the LDR Report. Modifications to non-Tri-Party Agreement workscope may be made using an errata sheet or may be incorporated into the next annual LDR update. The decision to issue an erratum or to incorporate the modification into the next annual update will be made jointly by DOE and Ecology. Modifications to Tri-Party Agreement milestones listed in the LDR Report will be incorporated into the next annual update to the LDR Report and will not be issued as errata sheets.

Table 9-1 identifies active Tri-Party Agreement milestones through 2049. Figure 9-1 is the graphic schedule for the milestones listed in Table 9-1.

Table 9-1. Tri-Party Agreement Action Plan Active Milestones.

Milestone Number	Title	Due Date
D-001-00	Complete Interim Stabilization of all 29 SSTs	09/30/04
D-001-02-T01	Complete Pumping of Tanks S-102 S-106, S-103	03/30/01
D-001-04-T01	Complete Pumping of Tanks U-103, U-102, U-109	04/15/02
D-001-06T	Complete Pumping of Tanks A-101, AX-101	04/15/02
D-001-06T	Complete Pumping of Tanks A-101 and AX-101	09/30/03
D-001-06-T01	Complete Pumping of Tanks A-101; AX-103	09/30/03

Table 9-1. Tri-Party Agreement Action Plan Active Milestones.

Milestone Number	Title	Due Date
D-001-08-T01	Complete Pumping of Tanks SX-105, SX-103, SX-101 and U-106	02/28/03
D-001-09	Initiate Pumping of Tanks BY 106 and BY 105	07/15/01
D-001-09-T01	Complete Pumping of BY 106 and BY 105	06/30/03
D-001-10V	Percentage of Pumpable Liquid Remaining to be Removed or <5% of Organic Complexed Pumpable Liquids	09/30/01
D-001-11	Initiate Pumping of Tanks U-108, U-107, S-111 and SX-102	12/31/01
D-001-11-T01	Complete Pumping of Tanks U-108, U-107, S-111 and SX-102	06/30/03
D-001-12V	Percentage of Pumpable Liquid Remaining to be Removed or <18% of Total Liquid	09/30/02
D-001-13	Initiate Pumping of Tanks U-111, S-109, S-112 and S-107	11/30/02
D-001-13-T01	Complete Pumping of Tanks U-111, S-109, S-112 and S-107	09/30/03
M-013-00L	Submit 3 200 NPL RI/FS Work Plans	12/31/01
M-013-00M	Submit 3 200 NPL RI/FS Work Plans	12/31/02
M-013-00N	Submit 3 200 NPL RI/FS Work Plans	12/31/03
M-013-00O	Submit 3 200 NPL RI/FS Work Plans	12/31/04
M-013-00P	Submit 4 200 NPL RI/FS Work Plans	12/31/05
M-015-00	Complete RI/FS Process for All Operable Units	12/31/08
M-015-00C	Complete All 200 Area Non-Tank Farm Operable Unit Pre-ROD Site Investigations under Approved Work Plan Schedules	12/30/08
M-016-00	Complete Remedial Actions for All Non-Tank Farm OUs	09/30/18
M-016-00A	Complete All 100 Area Remedial Actions	TBD
M-016-00B	Complete all 300 Area Remedial Actions	TBD
M-016-00F	Establish Date for Completion of all 100 Area Remedial Actions	12/31/01
M-016-03A	Establish Due Date for Completion of 300 Area Remedial Actions	06/30/02
M-016-03E	Complete remediation of the Waste Sites in the 300-FF-1 OU (Excluding 618-4 Burial Ground)	09/30/01
M-016-03F	Complete Excavation, Verification, Soil and Drummed Waste Treatment and Disposal, and Backfilling of the 618-4 Burial Ground	12/31/49
M-020-00	Submit Part B Permit Applications or Closure Plans for All RCRA TSD Sites	02/28/04
M-024-00M - S	Install RCRA Groundwater Wells	December 31 each year
M-026-01K to -- 01Q	Submit an annual Hanford Land Disposal Restrictions Report	Document due 4/30 each year
M-040-00	Mitigate/Resolve Tank Safety Issues for High-Priority Watch List Tanks	09/30/01
M-042-00	Provide Additional DST Capacity	TBD
M-044-00A	Complete Delivery of Information Requirements	09/30/02

Table 9-1. Tri-Party Agreement Action Plan Active Milestones.

Milestone Number	Title	Due Date
M-044-15E	Issue Characterization Deliverables Consistent with WIRD	09/30/01
M-044-15F	Issue Characterization Deliverables Consistent with WIRD	09/30/02
M-044-16E	Input Characterization Information for the HLW Tanks Which Sampling and Analysis were Completed Into an Electronic Database	09/30/01
M-044-16F	Input Characterization Information for the HLW Tanks Which Sampling and Analysis were Completed Into an Electronic Database	09/30/02
M-045-00	Complete Closure of All SSTs	TBD
M-045-00B	Complete "Near Term" SST Retrieval Activities	09/30/06
M-045-00C	Complete Renegotiation of 2nd Phase (I.e., 9/2006 to 9/2015) SST Retrieval Activities	02/28/04
M-045-02F - 02L	Submit Annual Updates to Retrieval Sequence Document for Ecology Approval	September 30 each year
M-045-03C	Complete Full-Scale Salt Cake Waste Retrieval Technology Demonstration at SST S-112	09/30/05
M-045-03D	Complete Full Scale S-112 Salt Cake Waste Retrieval Technology Demonstration Design	05/31/03
M-045-03E	Complete Full Scale S-112 Salt Cake Waste Retrieval Technology Demonstration Design Construction	09/30/04
M-045-03E	Complete S-112 Salt Cake Waste Removal	09/30/04
M-045-03F	Complete Full Scale Sludge/Hard Heel Confined Sluicing and Robotic Technologies, Waste Retrieval Demonstration at Tank 241-C-104	TBD
M-045-03G	Complete C-104 Sludge/Hard Heel Confined Sluicing and Robotic Technologies Cold Demonstration	06/30/04
M-045-03G	Complete C-104 Sludge/Hard Heel Confined Sluicing and Robotic Technologies Cold Demonstration	06/30/04
M-045-03H	Complete C-104 Sludge/Hard Heel Confined Sluicing and Robotic Technologies Cold Design	09/30/04
M-045-03H	Complete C-104 Sludge/Hard Heel Confined Sluicing and Robotic Technologies Cold Demonstration Construction	09/30/06
M-045-03I	Complete C-104 Sludge/Hard Heel Confined Sluicing and Robotic Technologies Cold Construction	09/30/06
M-045-03-T03	Submit S-112 Salt Cake Retrieval Demonstration F&R Document	12/31/01
M-045-03-T04	Submit C-104 Sludge/Hard Hell Confined Sluicing F&R Document	12/31/01
M-045-055	Submit to Ecology for Review and Approval as a Primary Document Phase I RFI for WMA's S-SX, T, Tx-TY, and B-BX-BY	02/28/04
M-045-05A	Complete Initial Waste Retrieval from Tank S-102	09/30/06

Table 9-1. Tri-Party Agreement Action Plan Active Milestones.

Milestone Number	Title	Due Date
M-045-05A	Complete Initial Waste Retrieval from Tank S-102	09/30/06
M-045-05B	Complete S-102 Initial Retrieval Project Design	03/31/04
M-045-05B	Complete Initial Waste Retrieval from Tank S-102 Design	03/31/04
M-045-05C	Complete S-102 Initial Waste Retrieval Project Construction	12/31/02
M-045-05C	Complete Initial Waste Retrieval from Tank S-102 Construction	11/30/05
M-045-05D	Establish Completion Date for 2nd Tank Initial Waste Retrieval	12/31/00
M-045-05D	Establish Completion Date for the 2nd Tank Initial Retrieval	12/31/02
M-045-05E	Complete 2nd Tank Initial Retrieval Project Design	06/30/06
M-045-05E	Complete 2nd Tank Initial Retrieval Project Design	06/30/06
M-045-05-T05	Initiate Tank Retrieval from An Additional 5 SSTs	09/30/07
M-045-06-T05	Tank Farm Closure/Post Closure Update	06/30/02
M-045-06-T05	Submit Tank Farm Closure/Post-Closure Workplan Update	06/30/02
M-045-06-T06	Tank Farm Closure/Post Closure Update	06/30/04
M-045-06-T06	Submit Tank Farm Closure/Post-Closure Workplan Update	06/30/04
M-045-06-T07	Submit Tank Farm Closure/Post-Closure Workplan Update	06/30/06
M-045-06-T07A	Tank Farm Closure/Post Closure Update	06/30/06
M-045-11	Complete 244-AR Vault Characterization	09/30/03
M-045-11	Complete 244-AR Vault Interim Stabilization	08/18/54
M-045-12-T01	SST Retrieval Options Report to Increase Tank Space	02/28/02
M-045-12-T01	Submit Options Report Documenting DOE Assessment of Actions That Could Be Taken to Increase Available Tank Space for SST Waste Retrieval	02/28/02
M-046-00H thru -00N	Double Shell Tank Space Evaluation	9/30 annually
M-046-01H thru -01N	Concurrence of Additional Tank Acquisition	11/30 annually
M-047-00	Acquisition and Phase I Operations of Hanford Site HL Radioactive Tank Waste Treatment, Storage and Disposal Facilities	02/28/18
M-047-01	Complete 241-AP Tank Farm Transfer System Construction	03/31/06
M-047-01	Complete Construction of Transfer System from 241-AP Tank Farm to Support Start of Hot Commissioning of Phase I Tank Waste Treatment Complex	03/31/06
M-047-02	Complete 241-First HLW Waste Feed Treatment/Pretreatment Complex Startup and Turnover	03/31/07
M-047-02	Complete Startup and Turnover Activities Required to Transfer System Upgrades to Allow Transfer of First HL Waste Feed to Pretreatment-Treatment Complex	03/31/07

Table 9-1. Tri-Party Agreement Action Plan Active Milestones.

Milestone Number	Title	Due Date
M-047-03	Start Construction of Waste Retrieval and Mobilization Systems for Selected Initial HLW Feed Tanks	07/30/04
M-047-03	Start Construction of Waste Retrieval and Mobilization System for Selected Initial HLW Feed Tank	07/30/04
M-047-03A	Complete Startup and Turnover Activities for Waste Retrieval and Mobilization Systems for Selected Initial High-Level Waste Feed Tanks	02/28/07
M-047-03A	Complete Startup and Turnover Activities for Waste Retrieval and Mobilization Systems for Selected Initial HLW Feed Tanks	02/28/07
M-047-04	Complete Startup and Turnover Activities for Retrieval Transfer System Upgrades to Allow Transfer of First Low-Activity Waste Feed to the Pretreatment/Treatment Complex	06/03/07
M-047-04	Complete Startup and Turnover Activities for Required Transfer System Upgrades to Allow Transfer of First LLW Feed to the Pretreatment/Treatment Complex	06/30/07
M-047-05	Start Construction of Waste Retrieval and Mobilization Systems for Selected Initial LLAW Feed Tank (Other Than AZ-101 and AZ-102)	05/31/04
M-047-05	Start Construction of Waste Retrieval and Mobilization System for Selected Initial HLW Feed Tank	05/31/04
M-047-05A	Complete Construction of Waste Retrieval and Mobilization Systems for Selected Initial LLAW Feed Tank (Other Than AZ-101 and AZ-102)	04/30/06
M-047-05A	Complete Construction of Waste Retrieval and Mobilization System for Selected Initial HLW Feed Tank	04/30/06
M-050-00	Complete Treatment Processing of Hanford Tank Waste	12/31/28
M-051-00	Complete Nitrification of Hanford High Level Tank Waste	12/31/28
M-061-00	Complete Pretreatment and Immobilization of Hanford LAW	12/31/28
M-062-01C through -01M	Submit Semi-Annual Project Compliance Report	1/31; 7/31
M-062-03	Submit DOE Petition for RCRA Delisting of Vitriified HLW	12/31/06
M-083-00	Complete Stabilization of Process Areas and other PFP Cleanout Actions Resulting from the EIS ROD within PFP	TBD
M-089-00	Complete Closure of Non-Permitted Mixed Waste Units in the 324 Building REC-B Cell, REC D Cell and High-Level Vault	10/31/05
M-89-02	Complete Removal of 324 Building REC B Cell MW and Equipment	11/30/00
M-090-00	Complete Acquisition of New Facilities, Modification of Existing Facilities, and or Modification of Planned Facilities as Necessary for Storage of Hanford Site IHLW and Deposal of IHLW	TBD
M-090-08	Initiate ILAW Disposal Construction	07/30/04

Table 9-1. Tri-Party Agreement Action Plan Active Milestones.

Milestone Number	Title	Due Date
M-090-10	Initiate Hot Operations of ILAW Disposal Facility	01/31/07
M-090-11	Complete Canister Storage Facility Construction	02/01/07
M-090-T01	Complete ILAW Disposal Detailed Design	03/30/04
M-091-00	Complete Acquisition of New Facilities, Modification of Existing Facilities, and or Modification of Planned Facilities as Necessary for Storage, Treatment/Processing and Disposal of all Hanford Site TRU/TRUM, LLMW, and GTC3	TBD
M-091-05-T01	Complete and Submit TRU/TRUM Retrieval and Processing Facility Engineering Study FDC Study	12/31/02
M-091-06-T01	Award Necessary Privatized Contracts for Processing RH and Large Size TRU/TRUM	06/30/05
M-091-07	Complete Project W-113 Post 1970 CH TRU/TRUM Retrieval	09/30/04
M-091-10	Submit LLMW GTC3 WM Project Management Plan	06/30/99
M-091-12	Complete Thermal Treatment and Disposal of an Additional 360 cubic meters of CH LLMW	12/31/05
M-091-12	Complete thermal treatment and disposal of 360 cubic meters of CH LLMW	12/31/05
M-091-12A	Complete thermal treatment and disposal of at least 240 cubic meters of CH LLMW	12/31/02
M-091-13	Initiate Disposal of CH LLMW	06/03/01
M-091-13	Initiate Disposal of CH LLMW	06/30/01
M-091-14-T01	Award Commercialization Contracts for Treatment of RH and Large Size LLMW	10/31/03
M-091-15	Complete Acquisition of Facilities and Initiate Treatment of RH and Large Container CH LLMW	06/30/08
M-091-18	Transmit T-Plant Sludge Storage Conceptual Design Document (CCD) to Ecology	06/29/01
M-091-18	Transmit T Plant Sludge CDD TO Ecology	06/29/01
M-091-19-T01	Complete Physical Activities at T Plant Necessary to Store Floor and Pit Sludge	09/30/02
M-091-19-T01	Complete Physical Activities at T Plant for SNF Sludge	09/30/02
M-091-20	T Plant Ready to Receive 1st Canister of K Basin Floor and Pit Sludge	12/31/02
M-091-20	T Plant Ready to Receive 1st Canister of K Basin Floor and Pit Sludge	12/31/02
M-091-21-T01	Complete Physical Activities at T Plant Necessary to Store Canister and Fuel Wash Sludge	11/29/03
M-091-21-T01	Complete Physical Activities at T Plant to Store Canister and Fuel Wash Sludge	11/29/03
M-091-22	T Plant Ready to Receive Canister and Fuel Wash Sludge from K Basins	02/29/04

Table 9-1. Tri-Party Agreement Action Plan Active Milestones.

Milestone Number	Title	Due Date
M-091-22	T Plant Ready to Receive Canister and Fuel Wash Sludge	02/29/04
M-092-01	Complete Commercial Disposition and/or Acquisition of New Facilities, Modification of Existing Facilities, and or Modification of Planned Facilities as Necessary for Site-wide Consolidation and Storage Prior to Commercial Use or Treatment and/or Repackaging by DOE TWRS	12/31/09
M-092-03	Inclusion of Hanford Site Cs/SR Treatment	06/30/03
M-092-12	Consolidated Storage of Hanford, 300 Area SCW	09/30/06
M-092-13	Submit 300 Area SCW PMP	09/30/00
M-092-14	Complete Removal and Transfer, and Initiate Storage of Phase I 300 Area SCW and Materials	09/30/02
M-092-15	Complete Removal and Transferred Initiate Storage of Phase II 300 Area SCW and Materials	09/30/04
M-092-16	Complete Removal and Transfer, and Initiate Storage of Phase III 300 Area SCW and Materials	09/30/06
M-093-14	Initiate Negotiation of Remaining Surplus Reactor Disposition Schedules	06/30/03
M-093-15	Complete Negotiation of Remaining Surplus Reactor Disposition Schedules	12/31/03

CDD	conceptual design document	PFP	Plutonium Finishing Plant
CH	contact handled	PMP	project management plan
DOE	U.S. Department of Energy	RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
DST	double-shell tank	REC	Radiochemical Engineering Cell
EIS	environmental impact statement	RFI	RCRA facility investigation
F&R	functions and requirements	RH	remote handled
FDC	functional design criteria	RI/FS	remedial investigation/feasibility study
HL	high level	ROD	record of decision
HLW	high-level waste	SCW	special-case waste
IHLW	immobilized high-level waste	SNF	spent nuclear fuel
ILAW	immobilized low-activity waste	SST	single-shell tank
LAW	low-activity waste	TBD	to be determined
LLAW	low-level activity waste	TRU	transuranic
LLMW	low-level mixed waste	TRUM	transuranic mixed
LLW	low-level waste	TSD	treatment, storage, and/or disposal
MW	mixed waste	TWRS	Tank Waste Remediation System
NPL	National Priorities List	WIRD	waste information requirements document
OU	operatable unit	WMA	Waste Management Area

# FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

## ACTION PLAN WORK SCHEDULE

	CY 2001												CY 2002				2003	2004	2005	2006	2007		
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1 QTR	2 QTR	3 QTR	4 QTR							
D-001-00 COMPLETE INTERIM STABILIZATION OF ALL 29 SINGLE-SHELL TANKS.																		○					
D-001-01 INITIATE PUMPING OF TANKS T-104, T-110, SX-104, SX-106 (MARCH 1999)	COMPLETED OCTOBER 2000																						
D-001-02 INITIATE PUMPING OF TANKS S-102, S-106, S-103 (JUNE 1999)	○												D-001-02-T01 COMPLETE PUMPING OF TANKS S-102, S-106, S-103										
D-001-04 INITIATE PUMPING OF TANKS U-103, U-102, U-109													D-001-04-T01 COMPLETE PUMPING OF TANKS U-103, U-102, U-109										
D-001-05V PERCENTAGE OF PUMPABLE LIQUID REMAINING TO BE REMOVED = OR <38% OF ORGANIC COMPLEXED PUMPABLE LIQUIDS	COMPLETED AUGUST 2000																						
D-001-00 COMPLETE INTERIM STABILIZATION OF ALL 29 SINGLE-SHELL TANKS.																		○					

Figure 9-1. Tri-Party Agreement Milestone Schedule.  
The Tri-Party Agreement milestones on this table are current as of June 1, 2001. Any changes to the Tri-Party Agreement after this date are not reflected here.



# FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

## ACTION PLAN WORK SCHEDULE

	CY 2001												CY 2002				2003	2004	2005	2006	2007							
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1 QTR	2 QTR	3 QTR	4 QTR												
<p>D-001-12V PERCENTAGE OF PUMPABLE LIQUID REMAINING TO BE REMOVED = OR &lt;18% OF TOTAL LIQUID</p> <p>D-001-13 INITIATE PUMPING OF TANKS U-111, S-109, S-112 &amp; S-107</p> <p>M-16-03A ESTABLISH DATE FOR COMPLETION OF 300 AREA REMEDIAL ACTIONS 6/30/02</p> <p>M-16-03F COMPLETE EXCAVATION, VERIFICATION, SOIL AND DRUMMED WASTE TREATMENT AND DISPOSAL, AND BACKFILLING OF THE 618-4 BURIAL GROUND 12/31/49</p> <p>M-16-92B ERDF CELLS 3 &amp; 4 READY TO ACCEPT REMEDIATION WASTE</p> <p>M-019-00 COMPLETE TREATMENT AND/OR DIRECT DISPOSAL OF AT LEAST 1,644 CUBIC METERS OF CONTACT HANDLED &amp; NEWLY GENERATED HANFORD LLMW</p>													<p>D-001-13 INITIATE PUMPING OF TANKS U-111, S-109, S-112 &amp; S-107</p>				<p>D-001-10V PERCENTAGE OF PUMPABLE LIQUID REMAINING TO BE REMOVED = OR &lt;18% OF TOTAL LIQUID</p> <p>D-001-13-T01 COMPLETE PUMPING OF TANKS U-111, S-109, S-112 &amp; S-107</p> <p>M-16-03A ESTABLISH DATE FOR COMPLETION OF 300 AREA REMEDIAL ACTIONS</p>											
	COMPLETED DECEMBER 1999																											
	COMPLETED SEPTEMBER 2000																											

Figure 9-1. Tri-Party Agreement Milestone Schedule.  
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# FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

## ACTION PLAN WORK SCHEDULE

	CY 2001												CY 2002				2003	2004	2005	2006	2007												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1 QTR	2 QTR	3 QTR	4 QTR																	
M-045-03D COMPLETE S-112 SALTCAKE WASTE RETRIEVAL TECHNOLOGY DEMONSTRATION DESIGN																			M-045-03D COMPLETE S-112 SALTCAKE WASTE RETRIEVAL TECHNOLOGY DEMONSTRATION DESIGN														
M-045-03E COMPLETE S-112 SALTCAKE WASTE RETRIEVAL TECHNOLOGY DEMONSTRATION CONSTRUCTION																											M-045-03E COMPLETE S-112 SALTCAKE WASTE RETRIEVAL TECHNOLOGY DEMONSTRATION CONSTRUCTION						
M-045-03F COMPLETE FULL SCALE SLUDGE/HARD HEEL CONFINED SLUICING & ROBOTIC TECHNOLOGIES, WASTE RETRIEVAL DEMO @ TANK C-104																			TBD														
M-045-03G COMPLETE C-104 SLUDGE/HARD HEEL CONFINED SLUICING & ROBOTIC TECHNOLOGIES COLD DEMONSTRATION																											M-045-03G COMPLETE C-104 SLUDGE/HARD HEEL CONFINED SLUICING & ROBOTIC TECHNOLOGIES COLD DEMONSTRATION						
M-045-03H COMPLETE C-104 SLUDGE/HARD HEEL CONFINED SLUICING & ROBOTIC TECHNOLOGIES DESIGN																											M-045-03H COMPLETE C-104 SLUDGE/HARD HEEL CONFINED SLUICING & ROBOTIC TECHNOLOGIES DESIGN						
M-045-03I COMPLETE C-104 SLUDGE/HARD HEEL CONFINED SLUICING & ROBOTIC TECHNO WASTE RETRIEVAL DEMO CONSTRUCTION																											M-045-03I COMPLETE C-104 SLUDGE/HARD HEEL CONFINED SLUICING & ROBOTIC TECHNO WASTE RETRIEVAL DEMO CONSTRUCTION						

Figure 9-1. Tri-Party Agreement Milestone Schedule.  
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# FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

## ACTION PLAN WORK SCHEDULE

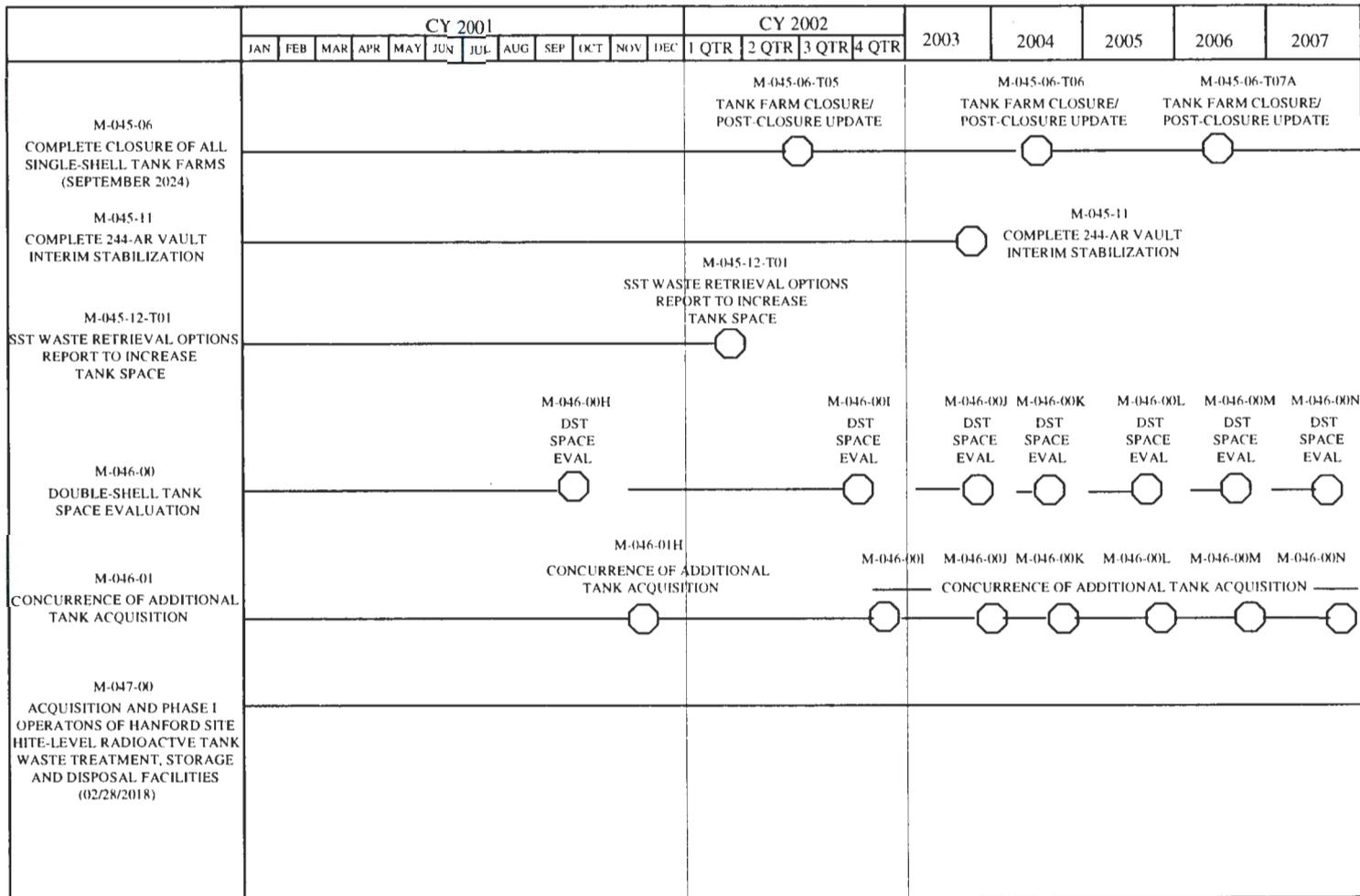


Figure 9-1. Tri-Party Agreement Milestone Schedule.  
The Tri-Party Agreement milestones on this table are current as of June 1, 2001. Any changes to the Tri-Party Agreement after this date are not reflected here.





# FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

## ACTION PLAN WORK SCHEDULE

	CY 2001												CY 2002				2003	2004	2005	2006	2007
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1 QTR	2 QTR	3 QTR	4 QTR					
M-70-00 THE ERDF WILL BE OPERATIONAL (AVAILABLE TO RECEIVE WASTE) ON SEPTEMBER, 1996 9/30/96	COMPLETED SEPTEMBER 1996																				
M-082-00 COMPLETE B PLANT FACILITY TRANSITION PHASE I & INITIATE THE SURVEILLANCE & MAINTENANCE PHASE	COMPLETED SEPTEMBER 1999																				
M-089-00 COMPLETE CLOSURE OF NON-PERMITTED MIXED WASTE UNITS IN THE 324 BUILDING REC-B CELL, REC-D CELL, AND HIGH-LEVEL VAULT																					
M-089-02 COMPLETE REMOVAL OF 324 BUILDING REC-B CELL MW AND EQUIPMENT	NOT COMPLETE - WAS DUE 11/30/ 2000																				
M-090-00 COMPLETE ACQUISITION OF NEW FACILITIES, MODIFICATION OF EXISTING FACILITIES, AND OR MODIFICATION OF PLANNED FACILITIES AS NECESSARY FOR STORAGE OF HANFORD SITE IHLW, AND DISPOSAL OF IHLW	TBD																				
M-090-08 INITIATE ILAW DISPOSAL CONSTRUCTION																					
M-090-09-T01 COMPLETE ILAW DISPOSAL DETAILED DESIGN																					

DOE/RL-2001-20, VOLUME 2 REV 0

Figure 9-1. Tri-Party Agreement Milestone Schedule.  
 The Tri-Party Agreement milestones on this table are current as of June 1, 2001. Any changes to the Tri-Party Agreement after this date are not reflected here.

# FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

## ACTION PLAN WORK SCHEDULE

	CY 2001												CY 2002				2003	2004	2005	2006	2007
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1 QTR	2 QTR	3 QTR	4 QTR					
M-090-10 INITIATE HOT OPERATIONS OF ILAW DISPOSAL FACILITY																			M-090-10 INITIATE HOT OPERATIONS OF ILAW DISPOSAL FACILITY		
M-090-11 COMPLETE CANISTER STORAGE FACILITY CONSTRUCTION																			M-090-11 COMPLETE CANISTER STORAGE FACILITY CONSTRUCTION		
M-091-00 COMPLETE ACQUISITION OF NEW FACILITIES, MODIFICATION OF EXISTING FACILITIES, AND OR MODIFICATION OF PLANNED FACILITIES AS NECESSARY FOR STORAGE, TREATMENT/ PROCESSING, AND DISPOSAL OF ALL HANFORDSITE TRU/TRUM, LLMW, AND GTC3																			TBD		
M-091-01 COMPLETE ACQUISITION OF NEW FACILITIES, MODIFICATION OF EXISTING FACILITIES, AND OR MODIFICATION OF PLANNED FACILITIES AS NECESSARY FOR STORAGE, AND TREATMENT/ PROCESSING PRIOR TO DISPOSAL OF ALL HANFORD SITE POST 1970 TRU/TRUM. (TO BE ESTABLISHED NO LATER THAN 12/31/2000)																			TBD		

Figure 9-1. Tri-Party Agreement Milestone Schedule.  
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# FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

## ACTION PLAN WORK SCHEDULE

	CY 2001												CY 2002				2003	2004	2005	2006	2007	
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1 QTR	2 QTR	3 QTR	4 QTR						
<p>M-091-06-T01 AWARD NECESSARY PRIVATIZED CONTRACTS FOR PROCESSING REMOTE HANDLED (RH) &amp; LARGE SIZE TRU/TRUM</p>																	<p>M-091-06-T01 AWARD NECESSARY PRIVATIZED CONTRACTS FOR PROCESSING REMOTE HANDLED (RH) &amp; LARGE SIZE TRU/TRUM</p> 					
<p>M-091-10 SUBMIT HANFORD SITE LLMW &amp; GREATER THAN CLASS C (GTC3) WASTE PROJECT MANAGEMENT PLAN (PMP)</p>	COMPLETE JUNE 1999																					
<p>M-091-12 COMPLETE THERMAL TREATMENT AND DISPOSAL OF AN ADDITIONAL 360 CUBIC METERS OF CONTACT HANDLED LLMW. THIS BRINGS THE CUMULATIVE TOTAL TO 600 CUBIC METERS 12/31/05</p>																	<p>M-091-12 COMPLETE THERMAL TREATMENT AND DISPOSAL OF AN ADDITIONAL 360 CUBIC METERS OF CONTACT HANDLED LLMW. THIS BRINGS THE CUMULATIVE TOTAL TO 600 CUBIC METERS</p> 					
<p>M-091-12A COMPLETE THERMAL TREATMENT AND DISPOSAL OF AN ADDITIONAL 240 CUBIC METERS OF CONTACT HANDLED LLMW 12/31/02</p>																	<p>M-091-12A COMPLETE THERMAL TREATMENT AND DISPOSAL OF AN ADDITIONAL 240 CUBIC METERS OF CONTACT HANDLED LLMW</p> 					
<p>M-091-13 INITIATE DISPOSAL OF CH LLMW</p>	COMPLETE NOVEMBER 1999																					

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Figure 9-1. Tri-Party Agreement Milestone Schedule.



# FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

## ACTION PLAN WORK SCHEDULE

	CY 2001												CY 2002				2003	2004	2005	2006	2007	
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1 QTR	2 QTR	3 QTR	4 QTR						
<p>M-091-21-T01 COMPLETE PHYSICAL ACTIVITIES AT T PLANT NECESSARY TO STORE CANISTER &amp; FUEL WASH SLUDGE</p>																	○					
<p>M-091-22 T PLANT IS READY TO RECEIVE CANISTER &amp; FUEL WASH SLUDGE FROM K BASINS</p>																	○					
<p>M-092-01 COMPLETE COMMERCIAL DISPOSITION AND/OR ACQUISITION OF NEW FACILITIES, MODIFICATION OF EXISTING FACILITIES, AND/OR MODIFICATION OF PLANNED FACILITIES AS NECESSARY FOR SITEWIDE CONSOLIDATION AND STORAGE PRIOR TO COMMERCIAL USE, OR TREATMENT AND/OR REPACKAGING BY DOE TWRS (12/31/2009)</p>																						

Figure 9-1. Tri-Party Agreement Milestone Schedule.  
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# FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

## ACTION PLAN WORK SCHEDULE

	CY 2001												CY 2002				2003	2004	2005	2006	2007
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1 QTR	2 QTR	3 QTR	4 QTR					
<p>M-092-05 INCLUSION OF HANFORD SITE Cs/Sr "TREATMENT AND/OR REPACKAGING PARAMETERS" IN DOE TWRS PHASE II REQUEST FOR PROPOSALS (TREATMENT AND/OR REPACKAGING OF ALL REMAINING Cs/sSr) (12/31/2009)</p>																					
<p>M-092-12 COMPLETE ACQUISITION OF NEW FACILITIES, MODIFICATION OF EXISTING FACILITIES, AND OR MODIFICATION OF PLANNED FACILITIES NECESSARY FOR CONSOLIDATED STORAGE PRIOR TO DISPOSAL OF HANFORD, SITE 300 AREA SPECIAL CASE WASTE (SCM)</p>																				○	
<p>M-092-13 SUBMIT 300 AREA SCW PROJECT MANAGEMENT PLAN (PMP)</p>	COMPLETED MARCH 2000																				
<p>M-092-14 COMPLETE REMOVAL AND TRANSFER, AND INITIATE STORAGE OF PHASE I 300 AREA SCW &amp; MATERIALS</p>	COMPLETED MARCH 2000																				

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Figure 9-1. Tri-Party Agreement Milestone Schedule.

# FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

## ACTION PLAN WORK SCHEDULE

	CY 2001												CY 2002				2003	2004	2005	2006	2007			
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1 QTR	2 QTR	3 QTR	4 QTR								
M-092-15 COMPLETE REMOVAL AND TRANSFER, AND INITIATE STORAGE OF PHASE II 300 AREA SCW & MATERIALS																			M-092-15 COMPLETE REMOVAL AND TRANSFER, AND INITIATE STORAGE OF PHASE II 300 AREA SCW & MATERIALS					
M-092-16 COMPLETE REMOVAL AND TRANSFER, AND INITIATE STORAGE OF PHASE III 300 AREA SCW & MATERIALS																								M-092-16 COMPLETE REMOVAL AND TRANSFER, AND INITIATE STORAGE OF PHASE III 300 AREA SCW & MATERIALS
M-093-00 COMPLETE FINAL DISPOSITION OF ALL 100 AREA SURPLUS PRODUCTION REACTOR BUILDINGS 12/31/49																								
M-093-11 COMPLETE 105-F INTERIM SAFE STORAGE 9/30/03																								M-093-11 COMPLETE 105-F INTERIM SAFE STORAGE
M-093-12 ISSUE 105-F DISPOSITION COMPETITIVE PROCUREMENT PACKAGE 2/28/02																			M-093-12 ISSUE 105-F DISPOSITION COMPETITIVE PROCUREMENT PACKAGE					
M-093-14 INITIATE NEGOTIATION OF REMAINING SURPLUS REACTOR DISPOSITION SCHEDULE 6/30/03																								M-093-14 INITIATE NEGOTIATION OF REMAINING SURPLUS REACTOR DISPOSITION SCHEDULE

The Tri-Party Agreement milestones on this table are current as of June 1, 2001. Any changes to the Tri-Party Agreement after this date are not reflected here.

Figure 9-1. Tri-Party Agreement Milestone Schedule.

# FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

## ACTION PLAN WORK SCHEDULE

	CY 2001												CY 2002				2003	2004	2005	2006	2007
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1 QTR	2 QTR	3 QTR	4 QTR					
M-093-17-T01 COMPLETE THE INTERIM DAPE STORAGE FOR THE 105-D REACTOR 9/30/07																			○		
M-093-18-T01 COMPLETE THE INTERIM SAFE STORAGE FOR THE 105-H REACTOR 9/30/07																			○		
M-093-20-T01 COMPLETE 105-N INTERIM SAFE STORAGE 12/31/49																					
M-093-21-T01 COMPLETE 105-KW INTERIM SAFE STORAGE 1/31/49																					
M-093-22-T01 COMPLETE 105-KE INTERIM SAFE STORAGE 1/31/49																					

Figure 9-1. Tri-Party Agreement Milestone Schedule.  
 The Tri-Party Agreement milestones on this table are current as of June 1, 2001. Any changes to the Tri-Party Agreement after this date are not reflected here.

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