

<b>Change Number</b> M-091-09-01	Federal Facility Agreement and Consent Order <i>Change Control Form</i> Do not use blue ink. Type or print using black ink.	<b>Date</b> August 23, 2010
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**Class of Change**  
 I – Signatories       II – Executive Manager       III – Project Manager

**Change Title**  
Modification of Hanford Federal Facility Agreement and Consent Order (HFFACO) M-091 Series Milestones

**Description/Justification of Change**

The Washington State Department of Ecology (Ecology) and the U.S. Department of Energy (DOE) - Richland Operations Office (RL) initiated M-091-45 negotiations on September 8, 2009 to reach an agreement on adjustments in work scope and milestones consistent with a shift of resources to the river corridor and other higher priority Hanford Site cleanup tasks. The Parties agreed that it was prudent to expand the scope to encompass all the M-091 series milestones, and to simplify the language in the M-091 series, in response to public comments that the milestones were difficult to read and understand.

*Continued on page 2*

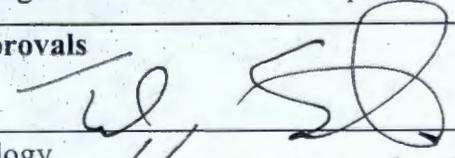
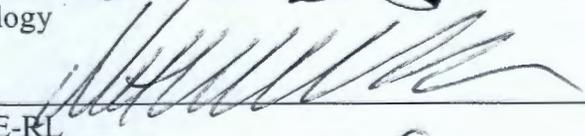
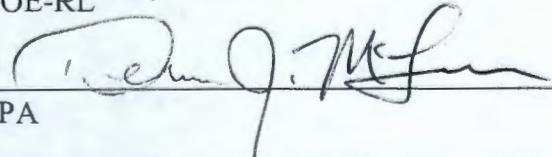
**Impact of Change**

This change replaces existing milestones to establish a comprehensive approach for the safe and stable processing of retrieved and retrievably stored Hanford Site wastes, including establishing enforceable milestones for the shipment of TRUM waste from the Hanford Site, and revising the major milestone definition to focus on completing treatment and offsite shipment of TRUM waste.

**Affected Documents**

The HFFACO, as amended and Hanford Site internal planning management, and budget documents (e.g., DOE contractor Baseline Change Control documents; M-091-03 Hanford Site TRUM waste and MLLW Project Management Plan and LDR Report).

**Approvals**

 _____ Ecology	9/15/10 _____ Date	<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved
 _____ DOE-RL	9/2/2010 _____ Date	<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved
 _____ EPA	9/9/10 _____ Date	<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved

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**Description/Justification continued from page 1:**

Previously, the major milestone focused on the acquisition and modification of facilities/capabilities to support retrieval, storage and treatment of wastes. Ecology and DOE refocused the major milestone on the original milestone goal, to treat all Hanford Site *Resource Conservation and Recovery Act of 1976 (RCRA)* mixed low-level waste (MLLW) and certify and ship transuranic mixed (TRUM) waste to satisfy Land Disposal Restriction treatment standards. Interim milestones in this change package support the actions necessary to achieve the major milestone including waste: retrieval, treatment, certification, and shipment and the acquisition of necessary facilities and/or capabilities. DOE may choose to complete certification and shipment of TRUM waste for disposal at the Waste Isolation Pilot Plant (WIPP) in lieu of LDR treatment if, as of the time of shipment, such waste is exempt from LDR treatment requirements when disposed at WIPP.

Negotiation of these M-91 milestones started because milestone M-091-45 required DOE to submit a change package for interim milestones. M-091-45 requirements included that DOE replace a "To Be Determined" (TBD) date for the M-091-01 milestone. The latter milestone originally required DOE to complete acquisition of facilities, modification of existing facilities, and modifications of planned facilities by 6/30/2012. Ecology and DOE have agreed that DOE will now prepare a conceptual design for facilities by 2016, and replace the M-091-01 TBD date at that time (2016).

This M-091 change package provides a comprehensive, easily understood series of milestones to measure progress on the safe and stable processing and shipping of Hanford Site waste covered by the M-091 milestone series and meets the M-091-45 interim milestone requiring completion of negotiations.

This change package addresses the public's comments to make the milestones easier to read and understand. The negotiation team also streamlined the milestones through the elimination of unnecessary historical text, removing requirements embedded in the milestone text and rewording the milestones to a distinct understandable action.

The changes are extensive enough that the Parties have decided to issue the change package as a replacement of the M-091 series milestones.

Number	Milestone	Due Date
M-091-00	<p>Complete the treatment to Land Disposal Restriction (LDR) treatment standards for all Hanford Site <i>Resource Conservation and Recovery Act of 1976 (RCRA)</i> mixed low-level waste (MLLW) and <i>RCRA</i> transuranic mixed (TRUM) waste.</p> <p>DOE may choose to complete certification and shipment of TRUM waste for disposal at the Waste Isolation Pilot Plant (WIPP) in lieu of LDR treatment if, as of the time of shipment, such waste is exempt from LDR treatment standards when disposed at WIPP. Notification of certification in support of shipment will be reported at least annually as part of the project manager meetings or quarterly milestone review for inclusion in the administrative record.</p> <p><b>Definitions</b></p> <p><b>"Certification"</b> as used herein is defined as:</p> <ul style="list-style-type: none"> <li>• Completion of all activities necessary for waste to be packaged such that it can meet the Waste Isolation Pilot Plant Waste Acceptance Criteria</li> </ul>	Date to be established pursuant to milestone M-091-044T.

Number	Milestone	Due Date
	<p>(WIPP WAC). If subsequent WIPP certification reveals the waste cannot be shipped to WIPP this waste will not count toward meeting the milestone volume requirements (and will be subtracted from meeting such requirements) until such time as it has been determined to meet WIPP WAC or;</p> <ul style="list-style-type: none"> <li>• The TRUM has been shipped to Idaho. TRUM waste shipped to Idaho may also count toward certification based upon actual shipment to Idaho and contingent upon the waste not returning to the Hanford Site, or;</li> <li>• The waste has been treated to meet LDR treatment standards.</li> </ul> <p><b>“Contact Handled (CH)”</b> waste is a waste container with a surface dose rate less than or equal to 200 millirem per hour.</p> <p><b>“MLLW”</b> is LLW that is subject to RCRA or 70.105 RCW. “LLW” is defined as radioactive waste that is not spent fuel, high-level waste, TRU waste, byproduct material, or naturally occurring radioactive material.</p> <p><b>“Remote Handled (RH)”</b> waste is a waste container with a surface dose rate greater than 200 millirem per hour.</p> <p><b>“Retrievably Stored Waste (RSW)”</b> as used herein is defined as waste that is or was believed to meet the TRU waste criteria when it was placed in the 218-W-4B, 218-W-4C, 218-W-3A and 218-E-12B burial ground trenches after May 6, 1970. RSW does not include waste in containers that have deteriorated to the point that they cannot be retrieved and stabilized (e.g. placed in over-packs) in a manner that would allow them to be transported and designated without posing significant risks to workers, the public or the environment. With respect to any such containers, and with respect to any release of RSW, how to move forward will be determined through the cleanup process set forth in RCRA, CH. 70.105 RCW, and/or the <i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)</i> as appropriate. Those processes may result in additional requirements for the remediation of such wastes.</p> <p><b>“Retrieval of CH RSW”</b> is defined as uncovering CH wastes within DOE’s RSW trenches, removing such CH wastes from the trenches, and transferring the waste to a permitted and compliant treatment, storage or disposal unit or the Environmental Restoration and Disposal Facility (ERDF).</p> <p><b>“Retrieval of RH RSW”</b> is defined as uncovering RH wastes within DOE’s RSW trenches and caissons, removing such RH wastes from the trenches and caissons, and transferring the waste to a permitted and compliant treatment, storage or disposal unit or the ERDF.</p> <p><b>“Shipment”</b> is defined as TRUM waste containers leaving the Hanford Site, and includes waste shipped to either Idaho or the Waste Isolation Pilot Plant (WIPP), and contingent upon the waste not returning to the Hanford Site.</p> <p><b>“Small Containers and Large Containers”</b> as used herein have different meanings depending on whether they are used in reference to MLLW or TRUM waste.</p>	

Number	Milestone	Due Date
	<ul style="list-style-type: none"> <li>• When referring to MLLW, small containers are containers less than 10 cubic meters, including 55-gallon drums. A large container is anything not defined as a small container.</li> <li>• When referring to TRUM waste, small containers are 55-gallon drums or smaller containers even if over packed in 85-gallon drums, and WIPP standard waste boxes (SWB). A WIPP SWB is a 1.8 cubic meter steel container that is approximately 0.94 meters in height, 1.8 meters in length, and 1.4 meters in width and was qualified by the DOE in 1988 as meeting the U.S. Department of Transportation (DOT) requirements for specification 7A type A packaging. A large container is defined as any container that is not defined as a small container.</li> </ul> <p>“<b>TRUM Waste</b>” is TRU waste that is subject to RCRA or 70.105 RCW. “<b>TRU Waste</b>” as used herein is defined as waste that meets the definition in Subsection (18) of Section 2 of the WIPP Land Withdrawal Act. Pub. L. 102-579.</p> <p>“<b>200 Area Caissons</b>” as used herein are defined as RSW in the 218-W-4B burial ground caissons Alpha-1 through Alpha-4.</p> <p><b>Note:</b> To provide further clarification on how volumes should be determined in different M-091 contexts, and to be consistent with the volumes of waste listed in the Hanford Site Solid Waste Inventory Tracking System (SWITS), the following descriptions are provided:</p> <ul style="list-style-type: none"> <li>• Volumes for the purposes of determining amounts retrieved shall be based on the volume of the original containers in retrievable storage. For example, the volume of a 55-gallon RSW drum that would be counted toward “retrieval” would be 55-gallons (0.208 cubic meters), even if in the process of retrieval the drum needed to be over-packed into an 85 gallon drum.</li> <li>• The volume of MLLW “treated” will be counted as the retrieval volume (for RSW) or the MLLW pre-treatment container volume (for stored waste).</li> <li>• The volume of small container CH TRUM waste counted as certified will be the volume of the certified container containing the waste unless the waste is compacted. In the event that the waste is compacted, the volume of the pre-compaction container will be counted.</li> <li>• The volume of large container CH TRUM waste and RH TRUM waste (in above ground storage as of June 30, 2009 and in retrievable storage) will be based on the pre-treatment volume of each large container CH TRUM waste as listed in Hanford’s SWITS.</li> </ul> <p><b>Note:</b> Each requirement of these M-091 series milestones is considered a distinct work requirement independently subject to the enforcement provisions of the agreement.</p>	

Number	Milestone	Due Date
M-091-01	Complete the acquisition of new facilities, modification of existing facilities, and modification of planned facilities necessary for retrieval, storage, and treatment/processing, of all Hanford Site RCRA TRUM waste.	Date to be established pursuant to milestones M-091-01A and M-091-01B.
M-091-01A	<p>Complete the conceptual design for acquisition of capabilities and/or acquisition of new facilities, modification of existing facilities, and/or modification of planned facilities necessary for retrieval, designation, storage, and treatment/processing prior to disposal of all Hanford Site RH TRUM waste and TRUM waste in large containers (in above ground storage as of June 30, 2009 and in retrievable storage).</p> <p>In addition, submit a milestone change package (based on the conceptual design) for annual construction milestones for the planned facilities necessary for retrieval, storage, and treatment/processing, of all Hanford Site RH TRUM waste and large container CH TRUM waste.</p>	09/30/2016
M-091-01B	<p>Complete the definitive design for acquisition of capabilities and/or acquisition of new facilities, modification of existing facilities, and/or modification of planned facilities necessary for retrieval, designation, storage, and treatment/processing prior to disposal of all Hanford Site RH TRUM waste and TRUM waste in large containers (in above ground storage as of June 30, 2009 and in retrievable storage).</p> <p>In addition, submit a milestone change package documenting any substantial variations, based on the definitive design, from annual construction milestones finalized pursuant to M-091-01A.</p>	09/30/2018
M-091-03	<p>Submit a revision of the Hanford Site TRUM waste and MLLW Project Management Plan (PMP) to Ecology pursuant to, and in compliance with, the requirements of agreement section 11.5. Revisions of the PMP shall address RCRA MLLW and TRUM waste and will consider and expressly evaluate the impact on M-091 retrieval, treatment and processing capabilities that may result from retrieval, treatment and/or processing of any other TRUM waste including but not limited to offsite TRUM waste and Hanford Site TRUM waste generated after January 1, 2003.</p> <p>Annual revisions of the PMP will be submitted on June 30 every year starting in 2008 and continuing until the M-091 milestones are completed. The PMP revisions shall include plans and schedules to meet all the requirements set forth in the M-091 milestone series. Each revision of the M-091-03 PMP shall, upon approval by Ecology, supersede previous M-091-03 PMPs.</p> <p>The PMP will include a description of completed and scheduled work relating to RH waste and large containers of RH and CH waste performed in accordance with the requirements of the M-091 milestone series. The PMP will document work completed during the previous federal fiscal year and work scheduled for the coming fiscal year. The PMP shall identify by citation all publicly available reports describing pertinent project issues and accomplishments, and shall identify anticipated projects for the coming year.</p> <p>With respect to RH TRUM waste, large container TRUM waste, RH MLLW and large container MLLW; the PMP submitted yearly will specifically include at least</p>	Due date annually by June 30

Number	Milestone	Due Date
	<p>one measurable action to be taken by DOE to acquire capabilities to manage such wastes.</p> <p>PMP revisions will be submitted to Ecology for review and approval as primary documents pursuant to agreement action plan section 9.2.1. DOE shall implement the plan as approved.</p>	
M-091-03D-02	Submit a revision to the PMP for disposition (treatment plans, variances or procurements and schedules) of all no path forward waste (as defined in the PMP) in above ground storage as of June 30, 2009.	06/30/2011
M-091-40	<p>Complete the retrieval and designation of CH RSW in burial grounds 218-W-4B, 218-W-3A and 218-E-12B.</p> <ol style="list-style-type: none"> <li>1. If specific large containers cannot be removed from a trench within 60 days of being exposed DOE shall notify Ecology within the 60-day period. Ecology will inspect the containers and impose specific conditions for that waste container to prevent releases to the environment. In determining such conditions Ecology will consider among other factors; whether the waste containers has been inspected and found to be intact and not posing a threat to human health and the environment (or re-packaged to prevent release to the environment) and existing documentation concerning the presence of free liquids.</li> <li>2. As RSW retrieval proceeds, DOE shall sample and analyze trench substrates with the purposes of determining whether or not releases of contaminants to the environment have occurred, and, if so, the nature and extent of contamination. <p style="margin-left: 40px;">Such sampling and analysis shall be in accordance with Ecology approved sampling and analysis plans (SAP). DOE will implement approved SAPs, as a requirement of this milestone, during retrieval of all RSW.</p> <p style="margin-left: 40px;">The results of burial ground vent and substrate sampling and analysis pursuant to approved SAPs shall be submitted to Ecology quarterly in the project managers' meetings for inclusion in the administrative record. Such reports shall document results and methodologies, shall assess results against regulatory requirements, shall include a description (or descriptions) of documented contaminant releases to the environment, and shall describe planned and/or scheduled additional work.</p> </li> <li>3. Within 90 days of retrieval, DOE shall designate all CH RSW retrieved from the RSW trenches pursuant to the Washington Administrative Code (WAC) 173-303-070 through 100.</li> </ol>	09/30/2016
M-091-40T	Retrieve 2,000 cubic meters of CH RSW.	09/30/2011
M-091-40U-T01	<p>Retrieve a minimum of 250 cubic meters of CH RSW in Fiscal Year 2012.</p> <p>Any volume retrieved above the 250 cubic meters shall count towards fulfillment of M-091-40X.</p>	09/30/2012

Number	Milestone	Due Date
M-091-40V-T01	Retrieve a minimum of 250 cubic meters of CH RSW in Fiscal Year 2013. Any volume retrieved above the 250 cubic meters shall count towards fulfillment of M-091-40X.	09/30/2013
M-091-40W-T01	Retrieve a minimum of 250 cubic meters of CH RSW in Fiscal Year 2014. Any volume retrieved above the 250 cubic meters shall count toward fulfillment of M-091-40X.	09/30/2014
M-091-40X	Retrieve a total of 1,250 cubic meters of CH RSW in Fiscal Year 2015.	09/30/2015
M-091-41	Complete the retrieval and designation of RH RSW (regardless of package size, including the 200 area caissons).	12/31/2018
M-091-41A	Complete retrieval of non-caisson RH RSW.	09/30/2016
M-091-42	<p>Complete the treatment of small container CH MLLW (in above ground storage as of June 30, 2009 and in retrievable storage) to meet applicable LDR treatment standards in compliance with WAC 173-303-140.</p> <ol style="list-style-type: none"> <li>1. Treatment of <i>CERCLA</i> waste and newly generated CH MLLW will not be counted toward meeting the volume requirements of this milestone. RSW determined to be MLLW in the treatability groups covered by this milestone will be counted toward meeting the volume requirements of this milestone when treated.</li> <li>2. If the actual volume of retrieved CH MLLW covered by this milestone is lower than the estimated volumes anticipated by these milestones DOE will only be required to treat the volume of waste generated, retrieved and/or in storage.</li> </ol>	09/30/2017
M-091-43	Complete the treatment of large container CH MLLW and RH MLLW (in above ground storage as of June 30, 2009 and in retrievable storage) to applicable LDR treatment standards in compliance with WAC 173-303-140.	09/30/2017
M-091-44	<p>Complete the treatment of large container CH TRUM waste and RH TRUM waste (in above ground storage as of June 30, 2009 and in retrievable storage).</p> <p>DOE may choose to complete certification and shipment of TRUM waste for disposal at the Waste Isolation Pilot Plant (WIPP) in lieu of LDR treatment if, as of the time of shipment, such waste is exempt from LDR treatment standards when disposed at WIPP. Notification of certification in support of shipment will be reported at least annually as part of the project manager meetings or quarterly milestone review for inclusion in the administrative record.</p>	12/31/2030
M-091-44P	DOE shall designate all RH TRUM waste and large containers of CH TRUM waste currently in above ground storage (as of June 30, 2003) according to the requirements of WAC 173-303-070 through 100.	12/31/2012
M-091-44Q	Certify a total of 300 cubic meters of large container CH TRUM waste and/or RH TRUM waste.	09/30/2016

Number	Milestone	Due Date
	Any volume certified above 300 cubic meters shall count toward fulfillment of subsequent milestones.	
M-091-44R	<p>Certify a total of 300 cubic meters of large container CH TRUM waste and/or RH TRUM waste.</p> <p>Any volume certified above 300 cubic meters shall count toward fulfillment of subsequent milestones.</p>	09/30/2017
M-091-44S	Certify a total of 300 cubic meters of large container CH TRUM waste and/or RH TRUM waste.	09/30/2018
M-091-44T	Submit a change package for annual milestones to treat or certify and ship large container CH TRUM waste and RH-TRUM waste (in above ground storage as of June 30, 2009 and in retrievable storage) to complete the disposition of this waste.	09/30/2018
M-091-46	Complete the certification of small container CH TRUM waste (in above ground storage as of June 30, 2009 and in retrievable storage)	09/30/2017
M-091-46A	Certify 850 cubic meters of small container CH TRUM waste.	09/30/2011
M-091-46B-T01	<p>Certify 300 cubic meters of small container CH TRUM waste.</p> <p>Any volume certified above the 300 cubic meters shall count towards fulfillment of M-091-46E.</p>	09/30/2012
M-091-46C-T02	<p>Certify 125 cubic meters of small container CH TRUM waste.</p> <p>Any volume certified above the 125 cubic meters shall count towards fulfillment of M-091-46E.</p>	09/30/2013
M-091-46D-T03	<p>Certify 125 cubic meters of small container CH TRUM waste.</p> <p>Any volume certified above the 125 cubic meters shall count towards fulfillment of M-091-46E.</p>	09/30/2014
M-091-46E	<p>Certify 250 cubic meters of small container CH TRUM waste.</p> <p>Any volume certified above 250 cubic meters shall count toward fulfillment of subsequent milestones.</p>	09/30/2015
M-091-46F	Certify 250 cubic meters of small container CH TRUM waste.	09/30/2016
M-091-46G	Complete offsite shipment of 1,000 cubic meters of small container CH TRUM waste.	09/30/2011
M-091-46H	Complete offsite shipment of all small container CH TRUM waste (in above	09/30/2018

Number	Milestone	Due Date
	ground storage as of June 30, 2009 and in retrievable storage).	