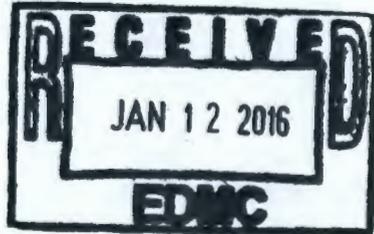


<b>Change Number</b> M-91-15-01	<b>Federal Facility Agreement and Consent Order Change Control Form</b> Do not use blue ink. Type or print using black ink.	<b>Date</b> 02/26/2015
<b>Originator</b> Ray Corey		<b>Phone</b> (509) 376-0108
<b>Class of Change</b> <input type="checkbox"/> I - Signatories <input checked="" type="checkbox"/> II - Executive Manager <input type="checkbox"/> III - Project Manager		
<b>Change Title</b> Modification of TRU and Mixed Waste Retrieval and Treatment M-091 Series Milestones		
<b>Description/Justification of Change</b>  Milestones are being adjusted to complete the treatment to Land Disposal Restriction (LDR) treatment standards for all Hanford Site Resource Conservation and Recovery Act of 1976 (RCRA) mixed low-level waste (MLLW) and RCRA transuranic mixed (TRUM) waste. These adjustments are needed to develop information about alternatives for retrieval, storage, and treatment of all Hanford TRUM waste; and to better align with the projected schedule for re-opening the Waste Isolation Pilot Plant (WIPP).  Definitions of terms utilized in this change are contained in major milestone M-091-00.		
<b>Impact of Change</b>  This change requires identification of alternatives for retrieval, storage, and treatment of TRUM waste prior to developing a conceptual design and constructing or acquiring the necessary capabilities. It delays by 2 years establishing schedules for achieving the offsite shipment of all TRUM waste, and defers the completion of retrieval of retrievably stored waste (RSW), but doesn't delay the date for completing offsite shipment of all TRUM waste. This change does not impact major milestone M-091-00.		
<b>Affected Documents</b>  The Hanford Federal Facility Agreement and Consent Order, as amended, and Hanford Site internal planning management, budget documents, and subsequent versions of the M-091-03 Project Management Plan.		
<b>Approvals</b>  Ray Corey <i>Mahesh Jambh, acting</i> <u>1/6/16</u> <input checked="" type="checkbox"/> Approved _____ Disapproved DOE Date  N/A _____ Approved _____ Disapproved EPA Date  Jane Hedges <i>Jane Hedges</i> <u>1/11/16</u> <input checked="" type="checkbox"/> Approved _____ Disapproved Ecology Date		Page 1 of 9



Description/Justification of Change continued on next page.

The changes implemented in this Change Control Form are as follows:

**I. TRUM Certification and MLLW Treatment**

The certification of TRUM and the treatment of MLLW have been grouped into an annual set of milestones. The annual milestones support risk reduction by addressing the outdoor storage of TRUM and container integrity issues, and they align with the schedule for the development of alternate capabilities required for waste treatment and certification. Through this regrouping process, new milestones M-091-47A and M-091-47B have been established. M-091-47B contains language to create the next two interim milestones for annual certification and treatment. Establishing the next two interim milestones is to be performed on a biennial basis until certification and treatment have been completed. M-091-46E, M-091-46F, M-091-42, M-091-43, M-091-44, M-091-46, and related target dates have been removed.

Table 1: Modifications are denoted by using ~~strikeout~~ to indicate text deletions and double underline to indicate text additions.

<p><u>M-091-47A</u>  <u>Lead Regulatory</u>  <u>Agency: Ecology</u></p>	<p><u>Certify or treat 280 cubic meters of TRUM/MLLW waste in fiscal year 2015. DOE achieves credit toward this volumetric requirement through its selected certification of some combination of: 1) small container TRUM waste, 2) large container TRUM waste, and 3) disposal of MLLW from small or large containers.</u></p>	<p><u>09/30/2015</u></p>
<p><u>M-091-47B</u>  <u>Lead Regulatory</u>  <u>Agency: Ecology</u></p>	<p><u>Certify or treat 280 cubic meters of TRUM/MLLW waste. DOE achieves credit toward this volumetric requirement through its selected certification of some combination of: 1) small container TRUM waste, 2) large container TRUM waste, and 3) disposal of MLLW from small or large containers.</u></p> <p><u>Submit a change request to establish the next two interim milestones for annual certification of TRUM waste and disposal of MLLW.</u></p>	<p><u>09/30/2016</u></p>
<p><del>M-091-46E</del></p>	<p><del>Certify 250 cubic meters of small container CH TRUM waste. Any volume certified above the 250 cubic meters shall count towards fulfillment of subsequent milestones.</del></p>	<p><del>09/30/2015</del></p>
<p><del>M-091-46F</del></p>	<p><del>Certify 250 cubic meters of small container CH TRUM waste.</del></p>	<p><del>09/30/2016</del></p>

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> <p>1. Treatment of CERCLA 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.</p> <p>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.</p>	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	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). 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.	12/31/2030
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-091-46B-T01	Certify 300 cubic meters of small container CH TRUM waste. Any volume certified above the 300 cubic meters shall count towards fulfillment of M-091-46E.	09/30/2012
M-091-46C-T02	Certify 125 cubic meters of small container CH TRUM waste. Any volume certified above the 125 cubic meters shall count towards fulfillment of M-091-46E.	09/30/2013
M-091-46D-T03	Certify 125 cubic meters of small container CH TRUM waste. Any volume certified above the 125 cubic meters shall count towards fulfillment of M-091-46E.	09/30/2014

II. Shipment of TRUM to WIPP

The shipment of large, small, RH and CH TRUM have been grouped into a single set of milestones. The shipment of each of these types of TRUM waste will require the same capabilities, as such, this combined grouping supports the efficient utilization of resources.

The shutdown of WIPP for an indeterminate period currently makes it difficult to forecast a reliable schedule for shipping TRUM to WIPP, and the M-091-46H milestone for completing the offsite shipment of small container CH TRUM by 2018 is severely impacted. As a result, M-091-44T has been revised to establish the submittal of a change package for the offsite shipment of both small and large container TRUM. The 09/30/2020 due date follows the anticipated reopening and operation of WIPP, and it allows the Parties time to develop an understanding of how well WIPP is operating, the operating capacity, and the available shipping capacity.

Milestone M-091-46H, which pertained to completing offsite shipment of small container CH TRUM waste, is hereby replaced with the newly created milestone M-091-48 that establishes a 09/30/2030 date for completing offsite shipment of all TRUM waste, as detailed in the table.

Table 2: Modifications are denoted by using strikeout to indicate text deletions and double underline to indicate text additions.

<p>M-091-44T <u>Lead Regulatory Agency: Ecology</u></p>	<p><del>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.</del></p> <p><u>Submit a change request to establish a schedule for achieving the offsite shipment of all TRUM waste (in above ground storage as of June 30, 2009 and in retrievable storage).</u></p>	<p><del>09/30/2018</del> <u>09/30/2020</u></p>
<p><u>M-091-48</u> <u>Lead Regulatory Agency: Ecology</u></p>	<p><u>Complete the offsite shipment of all TRUM waste (in above ground storage as of June 30, 2009 and in retrievable storage).</u></p>	<p><u>09/30/2030</u></p>
<p>M-091-46H</p>	<p><del>Complete offsite shipment of all small container CH TRUM waste (in above ground storage as of June 30, 2009 and in retrievable storage).</del></p>	<p>09/30/2018</p>

III. Retrieval of RSW (Trench and Caissons)

The retrieval of CH RSW, non-caisson RH RSW and the 200 Area caissons have been grouped into a single set of milestones. This milestone grouping allows for more efficient utilization of resources and to better align with the schedule to provide the necessary capabilities.

Retrieval of RSW is closely linked with the ability to make waste shipments to WIPP, because these shipments of certified waste to WIPP will free up indoor storage space, thereby making room for the safe storage of newly-retrieved RSW.

As previously mentioned, it is believed that the Parties will have greater knowledge of WIPP's capability to accept shipments by 09/30/2020. Thus, the new retrieval milestone M-091-49A would establish a requirement to submit a schedule for the complete retrieval of RSW. To allow for a joint planning process, this new retrieval milestone will be due at the same time as the new M-091-48A (submit a schedule for shipment of TRUM to WIPP), 09/30/2020. As a result, it will be possible to determine how many cubic meters of stored TRUM need to be shipped to make space for the retrieval campaign.

Because non-caisson, RH RSW is interspersed with CH RSW within the trenches, it is prudent to simultaneously retrieve both entities. As a result, the complete retrieval of RH and CH RSW, as well as 200 Area caisson retrieval and designation, is covered within newly created milestone M-091-49, which allows for the deletion of redundant milestones: M-091-40, M-091-40X, M-091-41, M-091-41A, and related target dates. The logic for completing retrieval (M-091-49) by 09/30/2028 accounts for the scenario in which the WIPP permit ending in 2030 is not renewed. Thus, the 2028 date for completing retrieval provides 2 years to certify the remainder of the retrieved waste and ship it to WIPP before the permit runs out.

Table 3: Modifications are denoted by using ~~strikeout~~ to indicate text deletions and double underline to indicate text additions.

<p><u>M-091-49A</u> <u>Lead Regulatory Agency: Ecology</u></p>	<p><u>Submit a change request to establish a schedule for achieving the retrieval of RSW.</u></p>	<p><u>09/30/2020</u></p>
<p><u>M-091-49</u> <u>Lead Regulatory Agency: Ecology</u></p>	<p><u>1. Complete the retrieval and designation of RH RSW (includes the 200 area caissons).</u></p> <p><u>2. Complete the retrieval and designation of CH RSW in burial grounds 218-W-4B, 218-W-3A and 218-E-12B.</u></p> <p><u>a. 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.</u></p>	<p><u>09/30/2028</u></p>

	<p>b. <u>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.</u></p> <p><u>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.</u></p> <p><u>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.</u></p> <p>c. <u>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.</u></p>	
<p>M-091-40</p>	<p>Complete the retrieval and designation of CH RSW in burial grounds 218-W-4B, 218-W-3A and 218-E-12B.</p> <p>a. <del>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.</del></p> <p>b. <del>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.</del></p> <p><del>Such sampling and analysis shall be in accordance with Ecology approved sampling and analysis plans (SAP). DOE will implement approved SAPs, as a</del></p>	<p>09/30/2016</p>

	<p>requirement of this milestone, during retrieval of all RSW.</p> <p>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> <p>c. 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.</p>	
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 TRUM.	09/30/2016
M-091-40X	Retrieve a total of 1,250 cubic meters of CH RSW in Fiscal Year 2015.	09/30/2015
M-091-40U-T01	Retrieve a minimum of 250 cubic meters of CH RSW in Fiscal Year 2012. Any volume retrieved above the 250 cubic meters shall count towards fulfillment of M-091-40X.	09/30/2012
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

IV. Alternate Capability Development

Milestones for the acquisition of new facilities (M-091-01, M-091-01A, and M-091-01B) have been replaced by new milestones M-091-51, M-091-52, and M-091-53. These new milestones establish a logical sequence to develop an optimal solution for retrieval, designation, storage, and treatment/processing all Hanford Site RH TRUM waste and TRUM waste prior to disposal.

M-091-51 provides an engineering alternatives study, and M-091-52 integrates this knowledge into a prospective path forward through the submission of target dates. The target dates will serve as placeholders for extensive discussion over the next year. M-091-53 will revise, as necessary, and replace the target dates with interim milestones to establish an effective and definite path forward.

Table 4: Modifications are denoted by using ~~strikeout~~ to indicate text deletions and double underline to indicate text additions.

<u>M-091-51</u> <u>Lead Regulatory Agency: Ecology</u>	<u>Submit to Ecology as a secondary document, an engineering alternatives study 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).</u>	<u>09/30/2016</u>
<u>M-091-52</u> <u>Lead Regulatory Agency: Ecology</u>	<u>Submit a milestone change request with target dates (including a completion date) 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).</u>	<u>09/30/2017</u>
<u>M-091-53</u> <u>Lead Regulatory Agency: Ecology</u>	<u>Submit a milestone change request to replace the target milestones established in M-091-52 with annual milestones (including a completion date) 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).</u>	<u>09/30/2018</u>

M-091-01A	<del>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). 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.</del>	09/30/2016
M-091-01B	<del>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). 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.</del>	09/30/2018
M-091-01	<del>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.</del>	TBD