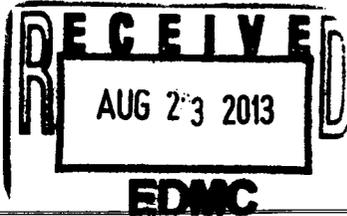


**Office of River Protection, State of Washington Department of Ecology
Tank Waste Retrieval Work Plan/Functions and Requirements Change Notice
(Per Hanford Federal Facility Agreement and Consent Order Section 9.3)**

1. Document Title and Number: RPP-22520, Rev. 7, 241-C-101 and 241-C-105 Tanks Waste Retrieval Work Plan		
2. Minor Field Change: (Section 12.4 HFFACO Action Plan) <input type="checkbox"/> Yes: (WRPS Signature Only – Attach signed form to Primary Document for record purposes) <input checked="" type="checkbox"/> NO: Proceed to Box 3	3. Document Issue Date: 03/21/12	5. Notice Number: 2013-08
	4. Document Modification Notice Date: 8/19/13	
6. Do proposed changes require schedule changes? (Would this extend completion of retrieval beyond 12 months from date of initiation?) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7. Do proposed changes include specific additions, deletions, or modification to scope and/or requirements which affect the overall intent of the plan? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	8. (Check only one box) <input type="checkbox"/> Significant Modification (Check if the answer to question in <u>either</u> section 6 or 7 is "yes". Significant modifications require revision of the primary document.) Minor Modification <input checked="" type="checkbox"/> Requires modification of the document <input checked="" type="checkbox"/> Can be accomplished with Modification Notice.
9. Description and Justification of Change:		
<p>Change Description: A change is needed to allow for washing solids from the wall and stiffener rings of tank C-101 above 54 inches as measured from the bottom of the tank. Section 2.4.1.1 of RPP-22520 summarizes the re-evaluation of the tank leak status and establishes the basis for using modified sluicing and high pressure water below 54 inches. Section 3.2 of RPP-22520, like other Tank Waste Retrieval Work Plans, includes the requirement that flush water will not be purposely sprayed on the walls above the maximum level stated in the process control plan. For C-101 this precaution prevents the removal of a significant volume of solids on the tank wall higher than 54 inches. During retrieval operations, no hole has been observed in the wall of the tank. It is unlikely that a hole will be discovered in the same location as a large quantity of solids and that a prolonged spray will be directed towards the hole. Also, there should be concrete behind any hole that will reflect spray back into the tank.</p> <p>Ecology will be informed when this work above 54 inches is planned to be conducted and initiated. Ecology will be kept informed when this work is actively performed on this tank.</p> <p>Justifications:</p> <ul style="list-style-type: none"> Section 3.2, pg 3-13, added conditions for C-101 wall washing above 54 inches. <p>See the attached redline strikeout pages.</p>		
		

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10. Impact of Change:

Allows for solids removal from the wall of C-101 above 54 inches.

11. Additional Requirements and/or Provisions

Approvals

Washington River Protection Solutions, LLC.	Office of River Protection	State of Wash., Dept. of Ecology
<input type="checkbox"/> Provisional Approval ² Date	<input type="checkbox"/> Provisional Approval ² Date	<input type="checkbox"/> Provisional Approval ² Date
<input checked="" type="checkbox"/> Final Approval Date 8/20/13	<input checked="" type="checkbox"/> Final Approval Date 8/20/13	<input checked="" type="checkbox"/> Final Approval Date 8-20-13

Notes
 1 - For use by Ecology to identify any additional information needed to make a decision regarding the request for modifications. In addition, Ecology will identify actions, if any, regarding the modification request that DOE may take pending Ecology's final decision
 2 - Provisional approval allows DOE and it's contractors to take specific actions identified in section 11, prior to final approval of this modification.

- The HRR leak detection system for the tank described in Section 4.2.1 must be continuously operable for at least 48 hours prior to the liquid addition.
- The benchmark level described in Section 4.6.1 will not be exceeded during the liquid addition.
- Excess liquid will be removed from the tank as soon as practical once a usable waste level measurement is obtained.
- The liquid to be used for volume displacement measurement should only be supernate. Use of raw water for volume displacement instead of or in addition to supernate shall be discussed with Ecology prior to use.

At the cessation of waste retrieval operations, the tank walls and heel will be flushed to the extent practical with water. Flush water will not be purposely sprayed on the walls above the maximum level stated in the process control plan for C-105. Supernate or high pressure water may be used to remove solids above 54 inches in C-101 provided no hole in the steel liner is observed and no prolonged spray is directed at any location. Spray may not be directed higher than one foot below the top of the steel liner to avoid inadvertently spraying the dome directly or liner cap. When performing the tank flushes, the flush water may be used to push some of the residual waste to a convenient sampling location. For each flush, the volume of water added will be metered and recorded. The flush liquid will be pumped to a minimum heel following each flush addition. It is assumed that performing the final tank flushes will remove residual solids to the extent practical on the walls, dilute soluble radionuclides and chemicals in the tank liquid, and may dissolve potentially soluble compounds that are insoluble in the higher molarity caustic solutions normally present in the tank. The ENRAF level gauge readings taken during the flushing will provide backup data that can be used to support the final tank residual waste measurement.

The timing for transfers out of tank C-101 and C-105 is dependent on personnel resource availability, equipment availability, and DST conditions. Once waste retrieval is started, it should follow the general pattern described, but no liquid additions or removals to/from tanks C-101 can be predicted for more than a day or two in advance; therefore, no detailed timeline can be developed showing all liquid additions and removals. The water or supernate addition/removal may be intermittent or continuous. Based on experience with other modified sluicing and saltcake dissolution retrievals, it will likely last for an 8- to 16-hr period, then be followed by a one shift to several days wait, then continue. Work continuity will be dependent on resource availability. Ideally the retrieval will be completed within a few months, but delays with tank farm work and lack of available resources could increase retrieval duration.

During C-105 retrieval with the MARS-V liquid will be removed as practical from the local depression created by the end effector, and as the depression gets deeper the volume of interstitial liquid in the tank will decrease. Minimizing the interstitial liquid is achieved by minimizing free liquid in the depressions to the extent practical during retrieval. The volume of free liquid present cannot be measured, but it can be effectively controlled by visually monitoring the waste surface during retrieval and vacuuming up the free liquid instead of waste solids when the free liquid appears to exceed a reasonable quantity.