

Change Number M-62-14-01	Federal Facility Agreement and Consent Order Change Control Form <small>Do not use blue ink. Type or print using black ink.</small>	Date 07/31/2014
Originator Thomas W. Fletcher, DOE-ORP		Phone (509) 376-3434
Class of Change <input type="checkbox"/> I - Signatories <input checked="" type="checkbox"/> II - Executive Manager <input type="checkbox"/> III - Project Manager		
Change Title Deletion of TPA Milestone M-062-40ZZ, the One-Time Hanford Tank Waste Supplemental Treatment Technologies Report		
Description/Justification of Change The Parties agree to delete the requirement to submit the One-Time Hanford Tank Waste Supplemental Treatment Technologies Report, embedded as TPA Milestone M-062-40ZZ within TPA Milestone M-062-40.		
Impact of Change This change package deletes the One-Time Hanford Tank Waste Supplemental Treatment Technologies Report provisions of TPA Milestone M-062-40. See strikeout text within the TPA M-062-40 milestone below.		
Affected Documents The HFFACO as amended and Hanford Site internal planning, management, and budget documents (e.g., River Protection Project System Plan, Baseline Control documents, and related work authorizations and directives).		
Approvals <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;"> <p><i>Thomas W. Fletcher</i> DOE N/A</p> </div> <div style="width: 30%;"> <p>7/31/14 X Date _____</p> </div> <div style="width: 30%;"> <p>Approved _____ Disapproved _____</p> </div> </div> <div style="display: flex; justify-content: space-between; align-items: flex-start; margin-top: 10px;"> <div style="width: 30%;"> <p><i>Jane A. Hedges, Pam Mgr</i> EPA <i>by John B. Prie</i> Ecology</p> </div> <div style="width: 30%;"> <p>8/12/2014 X Date _____</p> </div> <div style="width: 30%;"> <p>Approved _____ Disapproved _____</p> </div> </div>		

Specific changes to Tri-Party Agreement Appendix D are displayed with double underline to indicate addition of text and by ~~strikeout~~ to indicate deletion of text.

<u>Number</u>	<u>Milestone</u>	<u>Due Date</u>
<p>M-062-40 Lead Agency: Ecology</p>	<p>Submit a System Plan to Ecology describing the disposition of all tank waste managed by the Office of River Protection, including the retrieval of all tanks not addressed by the Consent Decree in <i>Washington v. DOE</i>, Case No. 08-5085-FVS, and the completion of the treatment mission.</p> <p>The Plan will be updated and submitted to Ecology every three years to document any further optimization of retrieval and waste treatment capabilities to, in the case of SST retrievals, complete such retrievals as quickly as is technically feasible (but not later than the date established in milestone M-045-70), and, in the case of tank waste treatment, complete such treatment as quickly as is technically feasible (but not later than the date established in milestone M-062-00), both with and without consideration of (i) whether such further optimization would be excessively difficult or expensive within the context of such activities and (ii) any impact on the overall cleanup mission.</p> <p>One year prior to the issuance of the System Plan, DOE and Ecology will each select the scenarios (including underlying common and scenario-specific assumptions) that will be analyzed in the System Plan, with DOE and Ecology each having the right to select a minimum of three scenarios each.</p> <p>Note: Per TPA Change Request M-62-13-02, Selection of Scenarios due on October 31, 2013 is deferred to December 15, 2013.</p> <p>The Plan will include the following elements:</p> <p><u>OVERALL MINIMUM REQUIREMENTS</u></p> <p>The Plan will present the following minimum information for each scenario evaluated:</p> <ul style="list-style-type: none"> • A system description for each system utilized in the planning • Planning bases for each case • A description of key issues, assumptions, and vulnerabilities for each scenario evaluated; a description of how such issues, assumptions and vulnerabilities are addressed in the evaluation. • Sensitivities analysis of selected key assumptions 	<p>Starting October 31, 2010 and Every Three Years Thereafter, Ecology and DOE Will Each Have The Right To Select A Minimum of Three Scenarios That Will Be Analyzed In The System Plan. Beginning October 31, 2011, and Every Three Years Thereafter, Issue The System Plan</p>

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	<ul style="list-style-type: none"> • Estimated schedule impacts of alternative cases relative to the baseline, including cost comparisons for a limited subset of scenarios that DOE and Ecology wish to analyze further. • Identification of new equipment, technology, or actions needed for the scenario (e.g., new evaporators or DSTs; new retrieval technologies; waste treatment enhancements or mitigations, such as sodium, sulfate, aluminum and chrome mitigation measures). • Identification of issues, techniques or technologies that need to be further evaluated or addressed in order to accelerate tank retrievals and tank waste treatment • Impacts on closure activities for each scenario. <p><u>TANK WASTE TREATMENT</u></p> <p>The Plan will evaluate scenarios and identify potential near and long-term actions to optimize tank waste treatment so that the treatment mission is completed as quickly as is technically feasible but not later than the date established in Milestone M-062-00, with and without consideration of (i) whether such further optimization would be excessively difficult or expensive within the context of such activities and (ii) any impact on the overall cleanup mission.</p> <p>The Plan will, at a minimum, describe how the tank waste treatment mission can:</p> <ul style="list-style-type: none"> • Pretreat 100% of the retrievable tank waste (at a rate sufficient to operate the HLW facility, LAW facility, and Supplemental Treatment system simultaneously at their estimated average production rates). • Vitrify 100% of the separated high-level waste stream at estimated average production rates. • Vitrify 100% of separated low-activity waste stream at estimated average production rates. • Appropriately manage secondary waste streams. <p>The Plan will take into account the results from testing of the Pretreatment Engineering Platform and other studies.</p> <p><u>SUPPLEMENTAL TREATMENT</u></p> <p>The Plan will also describe:</p>	

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	<ul style="list-style-type: none"> • How much total sodium will need to be treated. • The needed capacity for supplemental treatment to have all the tank waste treated by a date that is as quickly as is technically feasible but not later than the date established in milestone M-062-00, with and without consideration of (i) whether such further optimization would be excessively difficult or expensive within the context of such activities and (ii) any impact on the overall cleanup mission. <p>The System Plan will outline specific options to treat all the LAW.</p> <p>Such options include:</p> <ul style="list-style-type: none"> • Build and operate a 2nd LAW Vitrification Facility. • Build and operate a Bulk Vitrification Facility. <p>Not later than the System Plan Report due date of 10/31/2014, DOE will submit a one time Hanford Tank Waste Supplemental Treatment Technologies Report, which will be required if a tank waste supplemental treatment technology is proposed, other than a 2nd LAW Vitrification Facility.</p> <p>This report will:</p> <ul style="list-style-type: none"> • Describe additional treatment facilities and technologies, and cost which in combination with the WTP are needed to vitrify all of Hanford's tank waste by a date that is as quickly as is technically feasible but not later than the date established in milestone M-062-00, with and without consideration of (i) whether such further optimization would be excessively difficult or expensive within the context of such activities and (ii) any impact on the overall cleanup mission. • Apply the same selection criteria to all options and include a 2nd LAW Vitrification Facility as an option. • Include all the results from all waste form performance data (compared against the performance of borosilicate glass) for all the treatment technologies being considered. • Describe the technologies being considered (including size, throughput, sodium loading, quantity of waste to be processed, quantity of final waste forms, secondary waste quantity and nature, technical viability, and life cycle cost and schedule estimates). 	

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	<p>• Include data from both cold and hot testing if bulk vitrification is to be retained as an option.</p> <p><u>TANK WASTE RETRIEVAL</u></p> <p>The Plan will evaluate scenarios and identify potential near and long-term actions to optimize tank waste retrieval so that the single-shell tank retrievals are completed as quickly as is technically feasible but not later than the date established in milestone M-045-70, with and without consideration of (i) whether such further optimization would be excessively difficult or expensive within the context of such activities and (ii) any impact on the overall cleanup mission.</p> <p>The Plan will consider:</p> <ul style="list-style-type: none"> • SST integrity information, including the SST integrity assurance review provided under milestone M-045-91 and any further integrity assessments. • Waste retrieval rate sufficient to operate all waste treatment facilities at their full capacities, considering optimized waste feed rates. • The effect on waste retrieval rates of the waste retrieval technologies selected through the TWRWP process. • Sequences for remaining SSTs and DSTs to be retrieved based on a risk prioritization strategy, waste treatment feed optimization as affected by blending, and Waste Management Waste Area Closure considerations. <p>The Plan will also take into account the results from previous waste retrievals and other waste treatment studies. This shall include:</p> <ul style="list-style-type: none"> • The retrieval methodologies that could be employed and estimated waste volumes to be generated for transfer to the DST or other safe storage. • DST space evaluations for the waste retrieval sequence. • Proposed improvements to reduce waste retrieval durations <p><u>CONTINGENCY PLANNING</u></p> <p>The Plan will identify and consider possible contingency measures to address the following risks:</p>	

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	<ul style="list-style-type: none"> • Results from SST integrity evaluations. • If retrievals take longer than originally anticipated and there is potential impact to the schedule for retrieving specified tanks under this agreement. • If DST space is not sufficient or is not available to support continued retrievals on schedule. • If any portion of the WTP does not initiate cold commissioning on schedule. • If any portion of the WTP does not complete hot start on schedule. • If operation of the WTP does not meet treatment rates that are adequate to complete retrievals under the schedule in this agreement. For example, the contingency measures will address estimated pretreatment facility throughput as affected by ultrafiltration capacity and oxidative leaching requirements. <p>The contingency measures identified for consideration should include, but not be limited to, providing new, compliant tanks with sufficient capacity and in sufficient time to complete retrievals under this agreement, regardless of WTP operational deficiencies or retrieval conditions.</p>	