<table>
<thead>
<tr>
<th>Change Number</th>
<th>Federal Facility Agreement and Consent Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-62-03-02</td>
<td>Change Control Form</td>
</tr>
<tr>
<td></td>
<td>Do not use blue ink. Type or print using black ink.</td>
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<td></td>
<td>Date</td>
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<td>June 24, 2003</td>
</tr>
</tbody>
</table>

**Originator** Washington State Department of Ecology

**Class of Change**

| [X] I – Signatories | [ ] II – Executive Manager | [ ] III – Project Manager |

**Change Title**


**Description/Justification of Change**

The M-62 milestone series was initially established based on a two phased approach to treatment system construction. Phase I requirements were to provide a Waste Treatment Plant (WTP) capable of vitrifying no less than 10% of the tank waste by mass and 25% of the tank waste by activity by December 2018. The WTP would be fully operating by 2011 and, based on processing throughput achieved and system availability, decisions would be made in 2014 regarding the facilities necessary to vitrify the remaining tank waste (Phase II). As part of the agencies’ recent Cleanup, Constraints and Challenges “C3T” process (and in an effort to identify valid opportunities to accelerate tank waste treatment) the DOE has been evaluating potential supplemental treatment technologies and has proposed that supplemental treatment technology and balance of mission decisions be made much earlier than previously envisioned. This new approach moves away from a Phase I and Phase II treatment complex and is based on the assumption that by 2011 ORP will have met the M-62 requirement to have a WTP operating, and will have an initial complement of supplemental treatment systems in place (if agreed to by the Parties) and a plan and schedule for any additional facilities and capabilities (second LAW vitrification facility, supplemental treatment, etc.) needed to treat the remainder of Hanford’s tank waste by 2028. On May 21, DOE-ORP provided Ecology with DOE’s revised baseline to complete tank waste treatment by 2028. This baseline is founded in part on DOE’s commitment to make final decisions on the array of supplemental treatment technologies to be applied to Hanford tank wastes by 2005. In recognition of these commitments, the M-62 milestone series is being modified to support accelerated joint decision making by Ecology and DOE regarding Waste Treatment Plant (WTP) and supplemental treatment system capabilities, configuration(s) and schedule(s) to complete the treatment of all Hanford tank waste by 2028. The Parties agree that these decisions must be made jointly and in a timely manner to support timely mission completion.

**Impact of Change**


**Affected Documents**

The Hanford Federal Facility Agreement and Consent Order, as amended, including HFFACO Action Plan Appendix D, DOE’s Annual Land Disposal Restrictions Report, DOE’s Tank Farm Closure/Post-Closure Workplan Update and Hanford site internal planning, management, and budget documents (e.g., DOE and DOE contractor Baselines, Baseline Change Control documents and contracts).

**Approvals**

<table>
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<tr>
<th></th>
<th>Date</th>
<th>Approved</th>
<th>Disapproved</th>
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<tr>
<td>Ecology</td>
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<td>DOE</td>
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<td>EPA</td>
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**Description/Justification of Change – Cont.**

In addition, this change request incorporates a higher confidence schedule that extends the construction period for the WTP and changes the commissioning strategy. This approach continues to assume completion of hot commissioning and transition to full operations on or before January 31, 2011.

This M-62-03-02 Change Request modifies milestones M-62-00A, M-62-03, M-62-07B, M-62-08, M-62-09, M-62-10, M-62-11 and M-62-12 to delete the Phase I and Phase II concept and to accelerate the Parties decision making process. In coordination with this change package, due dates within the milestone M-47 and M-90 series' are revised through separate change packages to align waste feed operations and canister storage capacity to the above referenced M-62 milestone changes.

**Modifications to the M-62 milestone series incorporated into the HFFACO by approval of this M-62-03-02 Change Request are shown here as either shaded additions, or strikethrough deletions.**

<table>
<thead>
<tr>
<th>MS Number</th>
<th>Milestone Description</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>M-62-00</td>
<td>COMPLETE PRETREATMENT PROCESSING AND VITRIFICATION OF HANFORD HIGH LEVEL (HLW) AND LOW ACTIVITY (LAW) TANK WASTES.</td>
<td>12/31/2028</td>
</tr>
<tr>
<td></td>
<td>COMPLIANCE WITH THE WORK SCHEDULES SET FORTH IN THIS M62 SERIES IS DEFINED AS THE PERFORMANCE OF SUFFICIENT WORK TO ASSURE WITH REASONABLE CERTAINTY THAT DOE WILL ACCOMPLISH SERIES M62 MAJOR AND INTERIM MILESTONE REQUIREMENTS.</td>
<td></td>
</tr>
<tr>
<td>M-62-00A</td>
<td>COMPLETE WTP PRETREATMENT PROCESSING AND VITRIFICATION OF HANFORD HLW AND LAW PHASE I TANK WASTES.</td>
<td>2/28/2018</td>
</tr>
<tr>
<td></td>
<td>PHASE I TANK WASTE PROCESSING SHALL COMPLETE THE WTP PRETREATMENT AND VITRIFICATION OF NO LESS THAN 10% OF HANFORD'S TANK WASTE BY MASS* AND 25% BY ACTIVITY.</td>
<td></td>
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<td></td>
<td>*[IN MEETING THIS REQUIREMENT DOE WILL PRETREAT AND VITRIFY NO LESS THAN 6000 METRIC TONS OF SODIUM (IN THE INSTANCE OF LAW FEED) AND 800 METRIC TONS OF WASTE OXIDES (IN THE INSTANCE OF HLW FEED)].</td>
<td></td>
</tr>
<tr>
<td>M-62-01</td>
<td>SUBMIT SEMI-ANNUAL PROJECT COMPLIANCE REPORT</td>
<td>Semi-annually beginning July 31, 2001</td>
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<td></td>
<td>DOE's MANAGER, OFFICE OF RIVER PROTECTION (ORP), WILL SUBMIT A &quot;PROJECT COMPLIANCE REPORT&quot; TO ECOLOGY SEMI-ANNUALLY (A COPY OF THIS REPORT WILL ALSO BE PROVIDED TO EPA'S REGION 10 OFFICE OF WASTE AND CHEMICALS MANAGEMENT). THIS REPORT WILL DOCUMENT DOE COMPLIANCE WITH AGREEMENT REQUIREMENTS AND SHALL BE SEQUENTIALLY UPDATED BY INFORMATION DOCUMENTING WORK PERFORMED AND ISSUES ENCOUNTERED DURING THE PREVIOUS REPORT PERIOD. THE ORP PROJECT COMPLIANCE REPORT WILL BE PROVIDED AS PART OF THE PARTIES' INTER AGENCY MANAGEMENT INTEGRATION TEAM (IAMIT) MEETINGS, AND SHALL DOCUMENT THE STATUS OF PROGRESS TO DATE, PROGRESS MADE DURING THE REPORT</td>
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PERIOD, AND ACTIVITIES EXPECTED IN THE FORSEEABLE FUTURE. THE REPORT WILL INCLUDE, BUT IS NOT LIMITED TO: (1) A CONCISE DESCRIPTION OF PROJECT ACCOMPLISHMENTS AND ISSUES INCLUDING THOSE ENCOUNTERED DURING THE PREVIOUS YEAR AND THOSE EXPECTED IN THE NEAR TERM, (2) WHEN APPLICABLE, A DESCRIPTION OF ACTIONS INITIATED OR OTHERWISE TAKEN TO RECOVER ANY AGREEMENT SCHEDULE SLIPPAGE, (3) A BUDGET AND COST STATUS, (4) A STATEMENT DOCUMENTING WHETHER OR NOT DOE AND DOE’S CONTRACTOR(S) REMAIN IN COMPLIANCE WITH AGREEMENT REQUIREMENTS, I.E., WHETHER OR NOT “DOE AND DOE’S CONTRACTOR(S) HAVE COMPLETED SUFFICIENT WORK TO ALLOW ACHIEVEMENT OF AGREEMENT REQUIREMENTS,” AND (5) CONCISE DESCRIPTIONS OF ANY NONCOMPLIANCE. COPIES OF ALL PERTINANT DOE WORK DIRECTIVES AND/OR AUTHORIZATIONS ISSUED TO DOE’S CONTRACTOR(S) SHALL BE PROVIDED ON REQUEST.

M-62-02 SUBMITTAL OF HANFORD TANK WASTE TREATMENT ALTERNATIVES REPORT. 3/01/2000

DOE WILL SUBMIT A REPORT THAT DESCRIBES THE ALTERNATIVES (TECHNICAL, FINANCIAL, AND CONTRACTUAL) TO TREAT HANFORD TANK WASTE. THE REPORT WILL: 1.) IDENTIFY AND DESCRIBE CREDIBLE ALTERNATIVES TO THE CURRENT PRIVATIZATION APPROACH THAT MEET DOE COMMITMENTS TO ACHIEVE HOT OPERATIONS BY DECEMBER, 2007, AND TO TREAT NO LESS THAN 10 PERCENT OF THE TANK WASTE BY MASS AND 25 PERCENT OF THE TANK WASTE BY ACTIVITY BY FEBRUARY, 2018, 2.) SERVE AS A BASIS TO AMEND THE FISCAL YEAR 2001 BUDGET REQUEST FOR AUTHORITY TO IMPLEMENT A CONTINGENCY OPTION (AUTHORITY TO USE PRIVATIZATION SET-ASIDE FUNDS), AND 3.) BE RELEASED CONCURRENTLY TO ECOLOGY, EPA, AND THE PUBLIC.

M-62-03 SUBMIT DOE PETITION FOR RCRA DELISTING OF VITRIFIED HLW. 12/31/2006


M-62-04T READINESS TO PROCEED – SUPPORT TO PHASE I TREATMENT. 5/01/2000

DOE AND ITS HANFORD TANK FARMS OPERATIONS CONTRACTOR WILL COMPLETE ALL NECESSARY WORK AND ACHIEVE READINESS TO PROCEED IN SUPPORT OF PART B-2 PHASE I.

M-62-06 START OF CONSTRUCTION – PHASE I TREATMENT COMPLEX. 12/31/2002


M-62-07A INITIAL ERECTION OF LOW-ACTIVITY WASTE VITRIFICATION FACILITY ELEVATION ~21’ STRUCTURAL STEEL COLUMNS, BEAMS, AND Q DECK AT ELEVATION +3 (BNI BASELINE SCHEDULE ACTIVITY 4DL131B000 AS PART OF DOE CONTRACT No. DE-AC27-01RV14136).

This milestone represents the placement of the first structural steel column as part of initiation of BNI Baseline Schedule activity 4DL131B000 – LAW – Elev ~21 SS Columns, Beams & Q-Deck at +3 (Contract No. DE-AC27-01RV14136). In addition activity 4DL121B100 LAW – Elev ~21 Place Basemat Concrete shall be substantially completed and activities 4DL121D000 LAW – Elev ~21 Perimeter Walls FREP and 4DL121F000 LAW – Elev ~21 Interior Walls FREP shall have been initiated.

Completion of this milestone will be met when the first structural steel column is installed at
the –21 foot elevation in the LAW facility. This milestone demonstrates a significant progress in design and engineering as well as construction of the LAW facility because basement concrete will have been poured and construction of walls will have been started. In addition, procurements will have been made, not only for this facility, but for the other major facilities. Erection of structural steel in the LAW facility will also provide a lessons learned opportunity because it will be the first facility to begin this aspect of construction.

M-62-07B

COMPLETE ASSEMBLY OF LOW ACTIVITY WASTE VITRIFICATION FACILITY MELTER #1 SO THAT IT IS READY FOR TRANSPORT AND INSTALLATION IN THE LAW VITRIFICATION BUILDING (BNI BASELINE SCHEDULE ACTIVITY 4DL321A200 AS PART OF DOE CONTRACT No. DE-AC27-01RV14136), AND COMPLETE SCHEDULE ACTIVITY ID 4DH46102A2 – MOVE #1 MELTER INTO THE HIGH LEVEL WASTE VITRIFICATION FACILITY.

This milestone represents 1) the assembly of LAW Melter #1 to the point it is ready for refractory as part of BNI Baseline activities 3EL3212A00 Specifications and Analysis, 4DL321A000 LAW – Procure Material & Equipment for Melters and 4DL321A200 LAW-Assemble Melter #1 (Contract No. DE-AC27-01RV14136). In addition, activities 4DL121U100 LAW – Elev +3 South Melter FREP and 4DL131D000 LAW – Elev +28 Columns, Beams & Q-Decking at +48 shall be substantially completed, 2) moving the first HLW melter into the HLW facility as defined in BNI baseline activities ID 4DH46102A2.

Completion of this milestone will be met when 1) LAW melter #1 will have been fully fabricated, assembled and ready for refractory material to be installed. Assembly of the melter is scheduled to occur near the end of LAW construction when the facility is most ready to have the assembled melter moved into the LAW cell where the refractory material will be installed. Meeting this milestone therefore represents significant accomplishment of the engineering, design and construction of the LAW facility. Furthermore, assembly of the first melter provides significant opportunity for lessons learned that can be applied in the assembly of the other two LAW melters as well as the HLW melter; and 2) HLW melter #1 has been fully fabricated and moved into the HLW vitrification facility.

M-62-08

SUBMITTAL OF HANFORD TANK WASTE SUPPLEMENTAL PHASE II TREATMENT ALTERNATIVES TECHNOLOGIES REPORT, DRAFT HANFORD TANK WASTE TREATMENT BASELINE, AND DRAFT NEGOTIATIONS AGREEMENT IN PRINCIPLE (AIP).

DOE WILL SUBMIT A PRELIMINARY SUPPLEMENTAL TREATMENT TECHNOLOGIES REPORT THAT DESCRIBES THE TECHNICAL, FINANCIAL, AND CONTRACTUAL ALTERNATIVES WHICH IN COMBINATION WITH THE WTP AND ANY REQUIRED ADDITIONAL LAW VITRIFICATION FACILITIES, ARE NEEDED TO TREAT ALL OF HANFORD’S TANK WASTES THE TANK WASTES REMAINING AFTER COMPLETION OF PHASE I TREATMENT. THE REPORT WILL IDENTIFY AND DESCRIBE VIABLE PATH(S) FORWARD CREDIBLE ALTERNATIVES TO COMPLETE TREATMENT OF THE REMAINING ALL TANK WASTES BY 12/31/2028, AND AID IN BUDGET PLANNING FOR FUTURE BUDGET AUTHORITY SUBMITTAL. THE REPORT SHALL APPLY THE SAME SELECTION CRITERIA TO ALL OPTIONS AND INCLUDE THE 2ND LAW VITRIFICATION FACILITY AS AN OPTION. THE REPORT WILL INCLUDE: THE RESULTS OF ALL WASTE FORM PERFORMANCE DATA (COMPARED AGAINST THE PERFORMANCE OF BOROSILICATE GLASS) FOR ALL THE TREATMENT TECHNOLOGIES BEING
CONSIDERED: PERFORMANCE DATA WILL BE ADEQUATE TO MAKE DECISIONS AS TO THE ACCEPTABILITY OF ANY PROPOSED WASTE FORM FOR THE WASTE BEING CONSIDERED, AND DESCRIPTION OF THE CONSIDERED TREATMENT TECHNOLOGIES (INCLUDING SIZE, THROUGHPUT, TECHNICAL VIABILITY, AND LIFE CYCLE COST ESTIMATES). THE REPORT WILL BE UPDATED EVERY TWO YEARS UNTIL THE TANK WASTE TREATMENT PHASE II PLAN IN FINALIZED.

THIS REPORT WILL ALSO INCLUDE A DISCUSSION OF WASTE TREATMENT PLANT THROUGHPUT COMMITMENTS AND THE REALISTIC POTENTIAL FOR ENHANCING THE THROUGHPUT OF CURRENTLY PLANNED MELTERS, PROPOSED ADDITIONAL MELTERS AND POTENTIAL SECOND GENERATION MELTERS INSTALLED AT FIRST MELTER CHANGE OUT.

THE DRAFT BASELINE WILL CONTAIN DOE’S PROPOSED APPROACH FOR TREATING ALL HANFORD TANK WASTES (HLW, LAW, AND TRU) BY 12/31/2028 INCLUDING LIFE CYCLE COST ESTIMATES THAT INDICATE PROJECTED FUNDING REQUIREMENTS THROUGH COMPLETION OF THE RIVER PROTECTION PROJECT MISSION, A SCHEDULE FOR CONSTRUCTION AND OPERATION OF PROPOSED NEW FACILITIES AND/OR ENHANCEMENTS TO THE WTP, AND PROJECTED THROUGHPUT FOR EACH FACILITY.

THE REPORT AND BASELINE WILL BE ACCOMPANIED BY A DRAFT NEGOTIATIONS AGREEMENT IN PRINCIPLE (AIP) AND DRAFT AGREEMENT CHANGE REQUEST CONTAINING MILESTONES AND ASSOCIATED AGREEMENT REQUIREMENTS SUFFICIENT TO EFFECTIVELY DRIVE ALL REQUIRED WORK, INCLUDING BUT NOT LIMITED TO: 1) THE ESTABLISHMENT OF REQUIREMENTS REGARDING ANY NECESSARY WTP MODIFICATION(S), 2) THE ESTABLISHMENT OF REQUIREMENTS SCHEDULING THE ACQUISITION AND OPERATION OF ANY APPROVED TREATMENT TECHNOLOGY SYSTEMS, 3) THE ESTABLISHMENT OF PRODUCTION METRICS FOR TREATMENT COMPLEX (WTP PLUS ANY SUPPLEMENTAL TREATMENT SYSTEM OR SECOND LAW VITRIFICATION FACILITY) CONSISTENT WITH COMPLETION OF TREATMENT BY 12/31/2028, 4) THE ESTABLISHMENT OF REQUIREMENTS SCHEDULING ACQUISITION AND OPERATION OF FEED DELIVERY SYSTEMS FOR ANY APPROVED SUPPLEMENTAL TECHNOLOGY (M-47 MILESTONES). THE AIP WILL BE FINALIZED WITHIN 30 DAYS OF SUBMITAL AND PROVIDE THAT NEGOTIATIONS WILL BE COMPLETED WITHIN ONE HUNDRED AND EIGHTY (180) DAYS OF AIP FINALIZATION, AND WILL PROVIDE THAT, IN THE EVENT THE PARTIES DO NOT REACH AGREEMENT WITHIN THIS TIMEFRAME, THE NEGOTIATIONS WILL BE RESOLVED AS A RESOLUTION OF A DISPUTE VIA FINAL DETERMINATION OF THE DIRECTOR OF ECOLOGY PURSUANT TO HFFACO ARTICLE VIII. UNLESS OTHERWISE AGREED BY THE PARTIES, THIS FINAL DETERMINATION WILL BE ISSUED WITHIN SEVEN MONTHS OF AIP FINALIZATION.

M-62-09
DOE WILL START HOT COLD COMMISSIONING OF ITS TANK WASTE TREATMENT COMPLEX PLANT. START OF COLD COMMISSIONING IS DEFINED AS INTRODUCTION OF FIRST FEED SIMULANT INTO A PROCESS BUILDING (DEFINED AS FIRST PRINCIPAL FACILITY RECEIPT OF RADIOACTIVE TANK WASTE FOR TREATMENT).

M-62-10
COMPLETE HOT COMMISSIONING - PHASE I WASTE TREATMENT PLANT COMPLEX 01/31/2011
DOE WILL ACHIEVE SUSTAINED THROUGHPUT OF PRETREATMENT, LOW-ACTIVITY WASTE VITRIFICATION, AND HIGH-LEVEL WASTE VITRIFICATION PROCESSES AND DEMONSTRATED WTP TREATMENT COMPLEX AVAILABILITY TO COMPLETE TREATMENT OF NO LESS THAN 10% OF THE TANK WASTE BY MASS AND 25% OF THE TANK WASTE BY ACTIVITY BY DECEMBER 2018.
M-62-11 SUBMITTAL OF HANFORD TANK WASTE TREATMENT PHASE II PLAN. SUBMIT A FINAL HANFORD TANK WASTE TREATMENT BASELINE.

DOE WILL SUBMIT TO ECOLOGY A DETAILED PLAN AND PROPOSAL FOR THE PROCESSING OF THE REMAINDER OF DOE’S LAW AND HLW WASTES (PHASE II WASTES). THIS PLAN AND PROPOSAL WILL BE ACCOMPANIED BY A DRAFT NEGOTIATIONS AGREEMENT IN PRINCIPLE (AIP), AND DRAFT AGREEMENT CHANGE REQUEST CONTAINING SUFFICIENT ENFORCEABLE MILESTONES AND ASSOCIATED AGREEMENT REQUIREMENTS TO EFFECTIVELY DRIVE PHASE II WORK TO COMPLETION IN ACCORDANCE WITH AGREEMENT REQUIREMENTS. PHASE II AGREEMENT NEGOTIATIONS WILL BE COMPLETED WITHIN SIX (6) MONTHS OF AIP FINALIZATION.

FOLLOWING THE COMPLETION OF NEGOTIATIONS REQUIRED IN M-62-08, DOE WILL MODIFY ITS DRAFT BASELINE AS REQUIRED AND SUBMIT ITS REVISED, AGREED-TO, BASELINE FOR TREATING ALL HANFORD TANK WASTE (HLW, LAW, AND TRU) BY 12/31/2028.

M-62-12 ISSUANCE OF DOE AUTHORIZATION TO PROCEED—PHASE II TREATMENT AND/OR WTP MODIFICATION(S).

DOE WILL AUTHORIZE THE CONTRACT PHASE TO DESIGN, CONSTRUCT, COMMISSION, AND PROVIDE SERVICES FOR HANFORD TANK WASTE PRETREATMENT, LOW-ACTIVITY WASTE VITRIFICATION, AND HIGH-LEVEL WASTE VITRIFICATION ALL REMAINING HANFORD TANK WASTE, CONSISTENT WITH COMPLETION OF TREATMENT BY DECEMBER 2028. TBD (To be determined by negotiations provided for at M-62-11).