



U.S. Department of Justice

Environment and Natural Resources Division

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August 10, 2009

Mary Sue Wilson  
Sr. Assistant Attorney General  
Andrew Fitz  
Assistant Attorney General  
Attorney General of Washington  
Ecology Division  
PO Box 40117  
Olympia, WA 98504-0117

Re: State of Washington v. DOE, No. 08-5085-FVS (E.D. Wa.)

Dear Ms. Wilson and Mr. Fitz:

I write to confirm the agreement between the State of Washington (State) and the United States Department of Energy and Secretary of Energy Chu (collectively DOE), hereinafter the Parties, as embodied in this letter.

**1. Consent Decree Entry**

A proposed Consent Decree is attached to this letter. The Parties will lodge the proposed Consent Decree with the Court in this case by August 11, 2009, and submit the proposed Consent Decree for a 45-day public comment period, to run from September 24, 2009 to November 9, 2009. Once lodged, either Party may provide copies of the proposed Consent Decree to any member of the public in advance of the formal comment period. Each Party will share with the other any written comments received during the formal comment period. Signature and entry of the Consent Decree will be subject to public comment to the Parties.

Upon the satisfactory completion of this notice and comment process and publication of the Draft Environmental Impact Statement described below, the Parties will sign the proposed Consent Decree and modifications to the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement (TPA)) described below, and jointly request that the Court enter the proposed Consent Decree. Before making such a request, DOE will have published its Draft Tank Closure and Waste Management Environmental Impact Statement (Draft EIS) that includes, as an element of DOE's preferred alternative, limitations and exemptions on off-site

waste importation at Hanford until at least the Waste Treatment Plant is operational, as those limitations and exemptions are defined in DOE's January 6, 2006 Settlement Agreement with the State (as amended on June 5, 2008) regarding Washington v. Bodman, No. 2:03-cv-05018-AAM.

Upon completion of the public notice and comment process, and absent either party having a notice-and-comment based reason not to execute and request the Court to enter the proposed Consent Decree, the State will advise DOE in writing that it is ready to seek entry of the Consent Decree by the Court, using the following language:

By this letter, the State of Washington notifies DOE that applicable notice and comment processes have been completed and all conditions necessary for the State and DOE to jointly move the Court to enter the proposed Consent Decree in this case, as well as all conditions necessary for the State to execute certain proposed modifications to the Hanford Federal Facility Agreement and Consent Order, have been met, subject to the following sentence. The State will join DOE in moving for such entry, and execute such modifications, once DOE publishes its Draft Tank Closure and Waste Management Environmental Impact Statement that includes the element of the preferred alternative as described in the agreement between the Parties in the letter dated August 10, 2009.

If, after receipt of the above written statement by the State, DOE does not within a reasonable period complete and publish its Draft EIS that includes the element of the preferred alternative as described above, then the State may, after 30-day advance notice to DOE, withdraw its consent from the proposed Consent Decree. In the event of such withdrawal, the State will be free to resume litigation in this case. Further, if the modifications to the TPA described below are not executed, either party may withdraw its consent to the proposed Consent Decree.

Once the Consent Decree is lodged, the Parties will promptly file a joint motion to hold the case in abeyance, pending the execution and entry of the Consent Decree. In the event that the Court does not enter the Consent Decree or it is withdrawn from consideration for entry by the Court, the Parties will request that the Court adopt a modified schedule that extends each of the dates in the prior schedule by the period of time from the lodging of the Decree until either the Court does not enter the Decree or it is withdrawn from consideration for entry by the Court. Unless and until either the Court does not enter the Decree or the Decree is withdrawn from consideration for entry by the Court, the Parties will conduct their affairs in a manner consistent with the milestones in the proposed Consent Decree.

## **2. TPA Modifications**

DOE will prepare proposed change packages based on the proposed modifications to the TPA contained in "Enclosure B," "Enclosure C," and "Enclosure E" attached to this letter. Contemporaneous with lodging of the Consent Decree in this case, the Parties will submit the proposed change packages for a 45-day public comment period, to run from September 24, 2009 to November 9, 2009. Final approval of the change packages by the three parties to the TPA (DOE, the United States Environmental Protection Agency, and the Washington Department of

Ecology) will be subject to public comment. Following conclusion of the public comment period, the three parties to the TPA will consider any comments received and make any appropriate changes. A response to comments document will be prepared and issued.

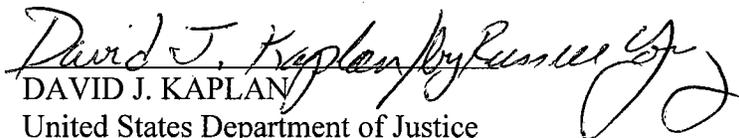
Upon the completion of these processes, and absent a notice-and-comment based reason not to execute the change packages, the Parties will simultaneously execute the proposed change packages and the proposed Consent Decree. The modifications become effective once the proposed Consent Decree is entered by the Court. In the event that the Court does not enter the proposed Consent Decree or it is withdrawn from consideration for entry by the Court, either DOE, EPA, or the State may withdraw their consent to the TPA modifications.

Prior to the TPA modifications taking effect, the Parties will conduct their affairs in a manner consistent with the requirements of the change packages, until those change packages either take effect or the proposed Consent Decree is withdrawn from consideration for entry by the Court.

We look forward to receiving written confirmation of the State's acceptance of the provisions of this letter.

Sincerely,

JOHN C. CRUDEN  
Acting Assistant Attorney General  
Environment & Nat. Resources Div.

  
DAVID J. KAPLAN

United States Department of Justice  
Environmental Defense Section  
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Attachments:

Proposed Consent Decree, including attachments  
Proposed HFFACO modifications ("Enclosure B"; "Enclosure C"; "Enclosure E")

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**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF WASHINGTON**

STATE OF WASHINGTON,  
DEPARTMENT OF ECOLOGY,

Plaintiff,

v.

STEVEN CHU, Secretary of the  
United States Department of  
Energy, and the UNITED STATES  
DEPARTMENT OF ENERGY,

Defendants.

NO. 08-5085-FVS

CONSENT DECREE

**I. INTRODUCTION**

WHEREAS, Plaintiff State of Washington, through its Department of Ecology (State or Ecology), has filed a complaint that alleges violations by Defendants Secretary of Energy Steven Chu and the United States Department of Energy (collectively DOE) of the Hanford Federal Facility Agreement and Consent Order (HFFACO) and regulations promulgated under the Hazardous Waste Management Act (HWMA), Chapter 70.105 Revised Code of Washington (RCW), such regulations which are authorized under the Resource Conservation and Recovery Act (RCRA) pursuant to 42 U.S.C. § 6926; and

WHEREAS, on May 15, 1989, DOE and Ecology entered into the HFFACO. The HFFACO establishes milestones for DOE to, among other matters, construct and operate a Waste Treatment Plant (WTP) to treat (vitrify)

1 all Hanford tank waste by December 31, 2028, and to complete waste retrieval  
2 from 149 single-shell tanks (SSTs) by September 30, 2018; and

3 WHEREAS, the WTP is a highly complex facility and a number of  
4 challenges in its construction have arisen since the HFFACO was signed. DOE  
5 has previously requested and Ecology has agreed to a number of schedule  
6 extensions using procedures specified in the HFFACO; and

7 WHEREAS, DOE is behind schedule with the WTP construction, having  
8 not completed certain WTP-related HFFACO milestones, and requires  
9 additional time beyond the schedule in the HFFACO as of April 3, 2009 to  
10 complete WTP construction. To date, the WTP Complex is approximately 44%  
11 constructed and 75% designed; and

12 WHEREAS, although DOE has completed retrieval of waste from seven  
13 single-shell tanks, DOE is behind schedule with waste retrievals, having not  
14 completed certain retrieval-related HFFACO milestones, and requires  
15 additional time beyond the schedule in the HFFACO as of April 3, 2009 to  
16 retrieve waste from all of Hanford's SSTs; and

17 WHEREAS, Ecology alleges that DOE's continued storage of land  
18 disposal restricted tank waste, as well as the conditions of and continued storage  
19 of waste in Hanford's SSTs, violate applicable regulations promulgated under  
20 the HWMA and authorized under RCRA; and

21 WHEREAS, Ecology and DOE (the Parties) wish to resolve this action  
22 without litigation and have, therefore, agreed to entry of this Consent Decree

1 without adjudication of any issues of fact or law contained herein. This Decree  
2 is filed to resolve litigation, solely for the matters covered by this Decree,  
3 between the State and DOE regarding certain milestones in the HFFACO and  
4 alleged violations of those portions of the regulations which underlie these  
5 milestones and portions of milestones in the HFFACO; and

6 WHEREAS, certain HFFACO modifications become effective  
7 simultaneous with entry of this Decree, regarding matters not covered by this  
8 Decree.

9 NOW THEREFORE, it is hereby ordered, adjudged, and decreed as  
10 follows:

## 11 **II. JURISDICTION**

12 The Court has jurisdiction over the subject matter and the Parties to this  
13 Decree. Venue is proper in the United States District Court for the Eastern  
14 District of Washington.

## 15 **III. PARTIES BOUND**

16 This Decree applies to and is binding upon the United States Department  
17 of Energy, the State of Washington, Department of Ecology, and their  
18 successors. DOE remains obligated by this Decree regardless of whether it  
19 carries out the terms through agents, contractors, and/or consultants. This  
20 Decree neither applies to nor is binding upon any other agency of the United  
21 States. Nothing in this Consent Decree shall be construed to make any person  
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1 or entity not executing this Consent Decree a third-party beneficiary to this  
2 Consent Decree.

#### 3 **IV. WORK TO BE PERFORMED AND SCHEDULE**

##### 4 **A. Waste Treatment Plant (WTP) Construction and Startup.**

5 1. In accordance with Appendix A to this Decree, DOE shall achieve  
6 “Hot Start of Waste Treatment Plant” by December 31, 2019, and achieve  
7 “initial plant operations” of the WTP no later than December 31, 2022.

8 2. “Hot Start of Waste Treatment Plant” means the initiation of  
9 simultaneous operation of the Pretreatment (PT) Facility, High-level Waste  
10 (HLW) Facility and Low-activity Waste (LAW) Facility (including as needed  
11 the operations of the Analytical Laboratory (LAB) and the Balance of  
12 Facilities) treating Hanford tank wastes and producing a waste glass product.

13 3. “Initial plant operations” under this Decree is defined as, over a  
14 rolling period of at least 3 months leading to the milestone date, operating the  
15 WTP to produce high-level waste glass at an average rate of at least 4.2 Metric  
16 Tons of Glass (MTG)/day, and low-activity waste glass at an average rate of at  
17 least 21 MTG/day.

18 4. Each milestone set forth in Appendix A shall be completed by the  
19 specified date for that milestone in Appendix A. In the event that the State  
20 seeks to enforce an interim milestone in Appendix A, it shall be a defense to  
21 such enforcement (such that failure to meet the interim milestone by that date  
22 will not constitute a violation of the Consent Decree) if DOE demonstrates that

1 it will (a) complete the interim milestone as soon as practicable and (b)  
2 notwithstanding the missed interim milestone date, achieve WTP hot start by  
3 December 31, 2019, and initial plant operations of the WTP no later than  
4 December 31, 2022, as required in paragraph 1 above.

5 **B. Single-shell Tank (SST) Waste Retrievals.**

6 1. In accordance with Appendix B, no later than September 30, 2014,  
7 DOE shall complete retrieval of tank waste from the ten (10) remaining SSTs in  
8 Waste Management Area C for which waste has not yet been retrieved.

9 2. In accordance with Appendix B, no later than December 31, 2022,  
10 DOE shall complete retrieval of tank waste from nine (9) additional SSTs  
11 selected by DOE.

12 3. For purposes of paragraph 2 above, the tanks shall be selected by  
13 DOE after consultation with Ecology. The selected tanks shall include only 100  
14 series tanks (excluding tank S-102), with consideration given to optimizing  
15 WTP waste feed blending and addressing tanks that pose a high risk due to tank  
16 contents, previous leaks, or the risk of future leaks. Once tanks have been  
17 selected, DOE may substitute alternative tanks, but such substitution shall be  
18 subject to the consultation and selection criteria of this paragraph.

19 4. a. At least 180 days before DOE plans to initiate the installation of  
20 equipment for retrieval of waste from a tank or set of tanks covered by Section  
21 IV-B of this Decree, DOE shall submit to Ecology, for its approval, a Tank  
22

1 Waste Retrieval Work Plan (TWRWP) that sets out in a Part 1 and a Part 2 of  
2 the TWRWP the information required in Part 1 and Part 2 of Appendix C.

3 The TWRWP shall be deemed approved if Ecology notifies DOE of its  
4 approval or if 60 days have elapsed after the date DOE submitted the TWRWP  
5 to Ecology and Ecology has not disapproved the TWRWP within that 60-day  
6 period.

7 b. In the event of a disapproval by Ecology, within 30 days of such  
8 disapproval, DOE shall submit a revised TWRWP for a tank or set of tanks  
9 covered by Section IV-B of this Decree addressing Ecology's comments. If  
10 DOE and Ecology cannot resolve the concern(s) raised by Ecology within 60  
11 days of Ecology's initial disapproval, the Parties shall utilize Section IX of the  
12 Decree and the Court shall resolve their dispute under Section IX of the Decree  
13 regarding the disputed elements of Part 1 or Part 2 of the TWRWP. Once the  
14 TWRWP is established for a tank or set of tanks covered by Section IV-B  
15 (either by approval of Ecology or after dispute resolution by the Court under  
16 Section IX of the Decree), DOE may start and carry out tank waste retrieval  
17 activities for the tank(s) addressed by the TWRWP.

18 c. Notwithstanding the provisions of Section IX-C, any period of delay  
19 in resolving a dispute regarding approval of a TWRWP beyond 180 days after  
20 DOE submits a TWRWP for a tank or set of tanks covered by Section IV-B to  
21 Ecology shall extend by a corresponding period the affected milestones in this  
22 Decree, but only for that portion of time that this corresponding period extends

1 beyond the date DOE planned to initiate the installation of equipment for tank  
2 waste retrieval from that tank or set of tanks covered by Section IV-B of the  
3 Decree. For purposes of this paragraph, “affected milestones” are defined as  
4 Section IV-B-1, Section IV-B-2, Milestone B-1 in Appendix B, Milestone B-3  
5 in Appendix B, or Milestone B-4 in Appendix B, involving the tank or set of  
6 tanks addressed in the TWRWP. Ecology may petition the Court to argue that  
7 an extension under this default schedule adjustment should not apply due to the  
8 delay in establishing a TWRWP (either by approval of Ecology or after dispute  
9 resolution by the Court under Section IX of the Decree). In any such petition,  
10 the Court should determine whether, notwithstanding the delay in establishing  
11 the TWRWP, DOE can still meet the scheduled date in the affected milestones  
12 by exercising reasonable diligence under the circumstances. The Court may  
13 consider any allegation concerning whether DOE or the State failed to exercise  
14 reasonable diligence in producing or reviewing the TWRWP and resolving any  
15 disputes.

16 d. Nothing in paragraph 4 shall affect DOE’s right to relief under Section  
17 VI, VII, VIII, and IX of the Decree, to the extent such relief would otherwise be  
18 available.

19 5. When DOE completes retrieval of waste from a tank covered by this  
20 Decree, DOE will submit to Ecology a written certification that DOE has  
21 completed retrieval of that tank. For purposes of this Consent Decree,  
22 “complete retrieval” means the retrieval of tank waste in accordance with Part 1

1 of Appendix C and with the retrieval technology/systems that were established  
2 by Part 1 of the TWRWP either by approval of Ecology or after dispute  
3 resolution by the Court under Section IX of the Decree.

4 **C. Reporting.**

5 1. Semi-Annual Reports. DOE shall, on a semi-annual basis, submit to  
6 Ecology a written report documenting WTP construction and startup activities  
7 and tank retrieval activities that occurred during the period covered by the  
8 report. This written report shall provide the status of progress made during the  
9 reporting period and shall include:

10 a. A brief description of project accomplishments and project  
11 issues encountered during the reporting period and/or expected in the  
12 next six (6) months;

13 b. A definitive statement describing whether or not DOE has  
14 complied with milestones that have already come due as of the date of  
15 the report, and how any missed milestones may affect compliance with  
16 other milestones;

17 c. Where applicable, a description of actions initiated or  
18 otherwise taken to address any schedule slippage;

19 d. Budget/cost status; and

20 e. Copies of written directives given by DOE to the contractors  
21 for work required by this Decree.  
22

1           2. Monthly reports. DOE shall, on a monthly basis, submit to Ecology a  
2 written summary report (e.g., approximately 10 to 15 pages in length)  
3 documenting WTP construction and startup activities and tank retrieval  
4 activities covered by this Decree. This report may be combined with the reports  
5 already provided by DOE to Ecology pursuant to Section 4 of the HFFACO  
6 Action Plan. The monthly report shall address: (a) cost and schedule  
7 performance (earned value management system graphs) for each major activity;  
8 (b) significant accomplishments during the prior month; and (c) significant  
9 planned activities for the next month.

10           3. In the event DOE determines that a serious risk has arisen that DOE  
11 may be unable to meet a schedule as required in Section IV, DOE shall notify  
12 Ecology in a timely manner, as described in Section VII-C.

#### 13 **D. Regulatory Coordination**

14           For the matters covered by this Decree, the Parties shall ensure, to the  
15 maximum extent possible, that any existing or required permit, order, or  
16 approval associated with constructing and operating the WTP, SST waste  
17 retrieval, and reporting is consistent with the requirements of this Consent  
18 Decree.

#### 19 **V. ACCESS**

20           Without limitation on any authority conferred on it by law, Ecology shall  
21 have authority to enter the Hanford Site at all reasonable times for the purposes  
22 of, among other things: (1) inspecting records, operating logs, contracts, and

1 other documents relevant to the implementation of this Decree, subject to  
2 applicable limits on classified and confidential information; (2) reviewing the  
3 progress of DOE in implementing this Decree; (3) conducting such tests as  
4 Ecology deems necessary regarding the work covered herein (provided that  
5 such tests do not interfere with DOE's ability to meet the schedule); and (4)  
6 verifying data relating to the work covered herein submitted to Ecology by  
7 DOE. DOE shall honor all requests for access by Ecology's representatives,  
8 conditioned only upon proof of such status, and conformance with Hanford Site  
9 safety and security requirements. Ecology's representatives shall minimize  
10 interference with operations while on the Hanford Site. DOE reserves the right  
11 to require Ecology's representatives to be accompanied by an escort while on  
12 the Hanford Site. DOE shall provide escorts in a timely manner.

## 13 **VI. JOINT THREE YEAR REVIEWS**

14 The Parties shall meet on mutually agreeable dates that are approximately  
15 three years after the entry of this Decree, and on dates that are approximately at  
16 three year intervals thereafter, and at such other times upon which the Parties  
17 may agree, to review the requirements of the Consent Decree and to discuss the  
18 best available information and any circumstances that may necessitate the  
19 reconsideration of and/or modification to the outstanding requirements of this  
20 Decree. DOE shall provide an update of all activity to date, address any  
21 schedule changes, describe unforeseen technological and logistical difficulties,  
22 and explain any good cause reasons for modifications. Every effort will be

1 made by the Parties to seek agreement to any modifications to the Consent  
2 Decree. Any modifications to the Decree agreed to by the Parties as a result of  
3 this process shall be effectuated through a joint motion to modify the Decree  
4 and any disputes as to whether such a modification is appropriate shall be  
5 resolved through the process set forth in Section IX. The notice and comment  
6 provisions of Section VII-A-2 apply to this section.

## 7 **VII. AMENDMENT OF DECREE**

### 8 **A. Amendment Process.**

9 1. This Decree may be amended by mutual agreement of the State  
10 and DOE upon approval by the Court. The party proposing the amendment  
11 shall provide the proposal in writing to the other party, along with a justification  
12 for the amendment. Proposals to amend the schedule shall be submitted in  
13 accordance with, and shall be evaluated under the criteria described in,  
14 paragraphs B through G, below. Within ten (10) working days of receipt  
15 (except as provided in Section VII-F), the other party shall notify the party  
16 proposing the amendment whether or not the amendment is acceptable.

17 2. If the amendment is acceptable, then the State shall determine, in  
18 its sole discretion, whether the amendment constitutes a significant  
19 modification to the Consent Decree. If the amendment is significant, then the  
20 State and DOE shall take public comment on the amendment. Unless public  
21 comments disclose facts or considerations which indicate the amendment is  
22 inappropriate, the Parties shall submit the amendment to the Court for its

1 approval. If, in the view of either party, public comments disclose facts or  
2 considerations which indicate that the amendment is inappropriate, and if the  
3 Parties are unable to agree on revisions to the proposed amendment to address  
4 the concerns raised during the public comment period, then the provisions of  
5 Section VII-A-3 shall apply.

6 3. If the amendment is not acceptable to the other party, the other  
7 party shall explain in writing its reasons for disagreeing with the amendment.  
8 In such an event, the party proposing the amendment may invoke the dispute  
9 resolution procedures of this Decree.

10 4. The time periods in Section VII may be extended by mutual  
11 agreement of the Parties.

12 **B. Amendment of Schedule.**

13 The schedules in Section IV may be amended under this section if (1) a  
14 request for amendment is timely, and (2) good cause exists for the amendment.

15 **C. Timeliness.**

16 To be timely, a request must be submitted to the other party as  
17 expeditiously as practicable within a reasonable time from when the party  
18 learns that underlying facts give rise to the need for the schedule amendment.

19 **D. Good Cause.**

20 1. "Good cause" for schedule amendment exists when the schedule  
21 cannot be met due to circumstances or events either (1) unanticipated in the  
22

1 development of the schedule in Section IV of this Consent Decree, or  
2 (2) anticipated in the development of the schedule, but which have a greater  
3 impact on the schedule than was predicted or assumed at the time the schedule  
4 was developed (hereafter collectively referred to as “circumstances and  
5 events”). However, in any case, good cause does not exist if DOE can  
6 nonetheless meet the existing schedule by responding with reasonable diligence  
7 to such circumstances or events. Likewise, good cause does not exist if DOE  
8 could have met the existing schedule if it had responded with reasonable  
9 diligence to the circumstance(s) and event(s) when they occurred. Efficient  
10 management practices are an appropriate consideration in determining whether  
11 reasonable diligence has been exercised.

12 2. Both Parties to this Consent Decree understand that to  
13 develop this schedule, assumptions had to be made about a broad range  
14 of circumstances and events including unforeseen circumstances that  
15 might arise which could affect the schedule. As part of this process,  
16 further assumptions had to be made about the likelihood of such  
17 circumstances and events occurring and the types of concerns they may  
18 raise, and if they did occur, what effect that might have on the schedule.  
19 It is possible that circumstances and events will arise whose effect on the  
20 schedule exceeds an allowance for uncertainty beyond what is now  
21 included in the schedule.  
22

1 3. If circumstances and events occur that will delay the  
2 completion of work beyond the deadlines in the schedule, and the delay  
3 cannot be or could not have been avoided by DOE responding to the  
4 circumstances and events with reasonable diligence, then “good cause”  
5 exists for extending the schedule. Although such circumstances and  
6 events cannot, by their nature, be fully anticipated and controlled, the  
7 general types of circumstances and events that may give rise to “good  
8 cause” include, but are not limited to: safety concerns; requirement  
9 changes and unknown technical obstacles; equipment failures; market  
10 conditions and equipment supplier responsiveness; regulatory  
11 actions/inactions or legal intervention; and labor shortages. Appendices  
12 A and B set out some of the assumptions and concerns for these types of  
13 circumstances and events.

14 4. The identification in this Decree and its Appendices of  
15 certain circumstances and events and certain concerns and assumptions  
16 regarding circumstances and events does not create a presumption that  
17 any particular circumstance, event, concern, or assumption described in  
18 this Decree or its Appendices will provide the basis for a good cause  
19 extension in any particular case.

20 5. In any request for amendment, DOE shall identify the good  
21 cause that, in its view, justifies amendment. If the State agrees that good  
22 cause exists, the Parties shall agree to an appropriate amendment. If the

1 State does not agree that good cause exists, DOE may invoke the dispute  
2 resolution process set forth in Section IX of this Decree.

3 **E. Force Majeure.**

4 The Parties agree that some events are of such a magnitude that they will  
5 be presumed to justify amendment. Extensions of the schedule shall be equal to  
6 the number of days during which work is interrupted due to *force majeure*  
7 events. These events include, but are not limited to:

- 8 1. Acts of God, fire, war, insurrection, civil disturbance, or  
9 explosion;
- 10 2. Significant adverse weather conditions that could not have  
11 been reasonably anticipated;
- 12 3. Restraint by court order;
- 13 4. Inability to obtain, at reasonable cost and after exercise of  
14 reasonable diligence, any necessary authorizations, approvals, permits or  
15 licenses due to action or inaction of any governmental agency or  
16 authority other than DOE or its authorized contractors;
- 17 5. Any strike or similar work stoppage resulting from labor  
18 dispute, and
- 19 6. Government shutdown or a government- or agency-wide  
20 prohibition of work by essential or non-essential personnel.

21 Any amendment requested on the grounds that one of the events  
22 listed above has occurred will be granted unless the State does not agree

1 that a *force majeure* event has occurred. DOE may pursue dispute  
2 resolution regarding this determination under Section IX of this Decree.  
3 If the dispute is not resolved by mutual agreement of the Parties, DOE  
4 may seek court review, and if the Court determines that, under the  
5 pertinent facts and circumstances, the event does constitute a *force*  
6 *majeure* event, then the Court shall approve the requested extension.  
7 Whenever a *force majeure* event occurs, DOE shall exercise its best  
8 efforts to complete the affected work in accordance with the original  
9 schedule.

10 **F. Safety Concerns.**

11 If a safety concern arises that affects or will likely affect the schedule in  
12 Section IV, DOE shall take the following steps:

13 1. As soon as a safety concern is identified, DOE shall notify  
14 Ecology that an issue exists, the nature of the issue, and any actions taken  
15 to respond to the issue.

16 2. No more than 45 days after the notification in Section VII-  
17 F-1, DOE shall develop and submit to Ecology a Safety Issue Resolution  
18 Plan (SIRP) that identifies the following:

19 a. the issue and its technical basis, its probability of  
20 occurrence, consequences of occurrence, and any threat to human  
21 health and the environment that would result if DOE adhered to the  
22 schedules in Section IV in light of the safety issue;

1           b.    the impacts that the safety issue will have on the  
2 schedules in Section IV;

3           c.    required administrative, procedural, technical, and  
4 operational issues that must be resolved in order for work to  
5 continue;

6           d.    a schedule and necessary resources to resolve the  
7 safety issue in order to allow the resumption of work in the event  
8 that work was stopped because of the safety issue;

9           e.    the management process to be used to resolve the  
10 safety issue;

11          f.    any pertinent information not already provided to  
12 Ecology; and

13          g.    a request for a schedule amendment as set forth in  
14 Section VII-G below. In the event that the impact on the schedule  
15 cannot be adequately determined until the analysis of the safety  
16 question is completed, DOE will advise Ecology of its initial  
17 estimate of schedule impact and a date by which it will submit the  
18 required request for schedule amendment.

19    3.    If Ecology agrees, based on the information provided in the SIRP  
20 and any other information, whether oral or written, provided by DOE,  
21 that good cause exists for a schedule amendment, then the State shall  
22 determine, in its sole discretion, whether the amendment constitutes a

1 significant modification to the Consent Decree. If the amendment is  
2 significant, then the State and DOE shall take public comment on the  
3 amendment. Unless public comments disclose facts or considerations  
4 which indicate that the amendment is inappropriate, the Parties shall  
5 submit the amendment to the Court for its approval. In the event that  
6 Ecology does not agree, either before or after any public comment  
7 period, that good cause exists, DOE may invoke the dispute resolution  
8 procedures in Section IX.

9 **G. Proposals to Amend.**

10 1. Any proposal to amend the schedule in Section IV shall be  
11 submitted in writing to the other party and shall specify the following:

12 a. The particular deadline(s) for which the amendment is  
13 sought;

14 b. The length of the extension(s) sought;

15 c. The basis for the amendment; and

16 d. Any other requirement of this Consent Decree or of the  
17 HFFACO that would be affected if the proposal to amend the schedule  
18 were accepted.

19 2. Any proposal to amend any other provision of this Consent Decree  
20 shall be in writing and shall identify:

21 a. Those portions of the Consent Decree to be amended;  
22



1 seek appropriate relief from the Court as set out hereinafter in paragraph B  
2 below. Either party may request a meeting among technical and/or  
3 management representatives from their respective organizations at any time  
4 during the dispute resolution.

5 **B. Petition Court.**

6 If the dispute is not resolved within 40 days from the date of the written  
7 demand for good faith negotiations of the dispute, either party may petition the  
8 Court for relief. A petition seeking appropriate relief from the Court shall be  
9 filed within thirty (30) calendar days of the end of the 40-day period provided  
10 for in Section IX-A. The Court shall resolve any such disputes under a de novo  
11 standard of review.

12 **C. Applicability of Deadlines During Dispute Resolution.**

13 Deadlines established in the schedules in Section IV shall continue in  
14 force unless and until changed by the Court. Notwithstanding the foregoing  
15 sentence, if DOE has requested an extension of a deadline, DOE shall not be  
16 deemed to be in violation of that deadline while DOE's request is being  
17 evaluated. This period shall run from the time that DOE submits a request for  
18 schedule amendment as provided in Section VII-A or Section VII-F through the  
19 date on which the Court acts on the request.

20 **D. Resolution of Disputes of Certain Modification Determinations**  
21 **Under the HFFACO.**

22

1 Disputes that arise on the determinations in [SP-2], paragraph 4 and 5, of  
2 the HFFACO, regarding whether or not the 2040 and 2047 end-dates for tank  
3 waste retrieval and tank waste treatment, respectively, should be accelerated,  
4 shall be resolved under Sections IX-A and –B of the Decree. The Court shall  
5 possess exclusive jurisdiction to resolve any such disputes, under a de novo  
6 standard of review, until such time as this Decree is terminated pursuant to  
7 Section XV-B of this Decree. The Court shall not possess jurisdiction under the  
8 Consent Decree to enforce either the 2040 or 2047 end-dates in [R-1] and  
9 [WTP-1] of the HFFACO or modifications to those end-dates that it may  
10 establish upon resolving disputes regarding the determinations in Milestone  
11 [SP-2], paragraphs 4 and 5. Upon termination of this Decree pursuant to  
12 Section XV-B, the United States and Ecology shall enter negotiations to  
13 establish the mechanism that will apply to resolve future disputes regarding the  
14 determinations in [SP-2], paragraphs 4 and 5. The United States and Ecology  
15 reserve their rights regarding the mechanism that should apply to such future  
16 disputes.

17 **X. RESOLUTION OF CLAIMS AND COVENANT NOT TO SUE**

18 A. This Decree resolves any claims that have been or could have been  
19 raised by the State that DOE has violated or will violate the requirements of the  
20 HFFACO (as the HFFACO existed as of April 3, 2009), the HWMA, or RCRA,  
21 or any other federal, state, or local claims that have been or could have been  
22 raised by the State in its Amended Complaint, for the matters covered by this

1 Decree. "Matters covered" by this Decree are: (i) the schedule (including  
2 defined milestones) for WTP construction and initial operation; (ii) submittal,  
3 review, and approval of TWRWPs for the 19 tanks covered by this Decree; (iii)  
4 the schedule (including defined milestones) for SST waste retrieval from the 19  
5 tanks in the manner established by Part 1 of the TWRWPs (either by approval  
6 of Ecology or after dispute resolution by the Court under Section IX of the  
7 Decree); and, (iv) reporting relating to (i) through (iii) above. Except for an  
8 action to enforce the requirements of this Decree, the State hereby covenants  
9 not to bring any civil, judicial, or administrative enforcement action against  
10 DOE, its officials or employees, or its contractors or their subcontractors, their  
11 officials, or employees, with respect to matters covered by this Decree. All  
12 claims raised in the Amended Complaint that are not resolved by this Consent  
13 Decree are dismissed with prejudice.

14 B. This Decree does not relieve DOE of responsibility to comply with  
15 any applicable state, federal, or local law or regulation. Both Parties retain all  
16 of their rights and defenses with respect to matters not covered or claims not  
17 dismissed by this Decree. The State expressly reserves for further action or  
18 enforcement, and its execution of this Decree does not discharge, release, or in  
19 any way affect any right, demand, claim, or cause of action that it has, or may  
20 have, regarding DOE's environmental liabilities at the Hanford Site other than  
21 the claims resolved or dismissed by this Decree.  
22

1 C. Notwithstanding any other provision of this Decree, the State  
2 reserves the right to (1) seek amendment of this Decree, if previously unknown  
3 information is received, or previously undetected conditions are discovered, and  
4 these previously unknown conditions or information together with any other  
5 relevant information indicates that the work to be performed and schedule under  
6 this Decree are not protective of human health or the environment, or (2) to  
7 pursue an action outside of this Decree to address an imminent and substantial  
8 endangerment, if previously unknown information is received, or previously  
9 undetected conditions are discovered, and these previously unknown conditions  
10 or information together with any other relevant information indicates that an  
11 imminent and substantial endangerment exists, notwithstanding the work to be  
12 performed and schedule under this Decree, that cannot be addressed by an  
13 amendment to this Decree.

## 14 XI. INTEGRATION

15 A. Simultaneous with the entry of this Decree, amendments to the  
16 HFFACO executed by the Parties become effective in accordance with their  
17 terms. While the provisions of Sections IV-B, IV-D, IX, and Appendix C may  
18 affect certain matters under the HFFACO, the Decree shall not give the court  
19 jurisdiction over the HFFACO or otherwise govern the HFFACO or its  
20 enforcement (which shall be determined by the HFFACO in accordance with its  
21 own terms).  
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United States District Judge

1 FOR THE STATE OF WASHINGTON  
2 DEPARTMENT OF ECOLOGY

FOR THE UNITED STATES  
DEPARTMENT OF ENERGY

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**APPENDIX A: WTP CONSENT DECREE**  
**MILESTONES, SCHEDULE, ASSUMPTIONS**

**1. WTP Construction and Startup.**

The milestones referred to in Section IV above are as follows:

| <b>Project</b>  | <b>Description</b>  | <b>Date</b> |
|-----------------|---|-------------|
| A-1             | Achieve initial plant operations for the Waste Treatment Plant                  | 12/31/2022  |
| A-2<br>Interim  | HLW Facility Construction Substantially Complete                                | 12/31/2016  |
| A-3<br>Interim  | Start HLW Facility Cold Commissioning   | 06/30/2018  |
| A-4<br>Interim  | HLW Facility Hot Commissioning Complete   | 12/31/2019  |
| A-5<br>Interim  | LAB Construction Substantially Complete   | 12/31/2012  |
| A-6<br>Interim  | Complete Methods Validations  | 12/31/2017  |
| A-7<br>Interim  | LAW Facility Construction Substantially Complete                                | 12/31/2014  |
| A-8<br>Interim  | Start LAW Facility Cold Commissioning   | 12/31/2018  |
| A-9<br>Interim  | LAW Facility Hot Commissioning Complete   | 12/31/2019  |
| A-12<br>Interim | Steam Plant Construction Complete   | 12/31/2012  |
| A-13<br>Interim | Complete Installation of Pretreatment Feed Separation Vessels FEP-SEP-00001A/1B | 12/31/2015  |
| A-14<br>Interim | PT Facility Construction Substantially Complete                                 | 12/31/2017  |

| <b>Project</b>  | <b>Description</b>   | <b>Date</b> |
|-----------------|--|-------------|
| A-15<br>Interim | Start PT Facility Cold Commissioning                                       | 12/31/2018  |
| A-16<br>Interim | PT Facility Hot Commissioning Complete                                     | 12/31/2019  |
| A-17            | Hot Start of Waste Treatment Plant   | 12/31/2019  |
| A-18<br>Interim | Complete Structural Steel Erection Below Elevation 56' in PT Facility      | 12/31/2009  |
| A-19<br>Interim | Complete Elevation 98' Concrete Floor Slab Placements in PT Facility       | 12/31/2014  |
| A-20<br>Interim | Complete Construction of Structural Steel to Elevation 14' in HLW Facility | 12/31/2010  |
| A-21<br>Interim | Complete Construction of Structural Steel to Elevation 37' in HLW Facility | 12/31/2012  |

“Substantially complete”<sup>1</sup> means that the Start-up Organization has certified that the facility and its subsystems are ready to be turned over to the Start-up Organization.

<sup>1</sup> Because under Milestones A-5 and A-7, the LAW and LAB facilities must be substantially complete several years before “Hot Start of Waste Treatment Plant”, equipment in those facilities that might become obsolete or require upkeep if installed at that early time would be installed later, such as: Communications systems; Melter assembly and movement into the LAW building; Hi-purity piping tubing systems; Distributed control system (DCS); Selected instrumentation subject to damage or obsolescence; Penetration sealing and heating, ventilation, and air-conditioning (HVAC) balancing; Piping insulation; Selected architectural finishes/components subject to damage; Cable installation and other fire-load materials, which would cause the permanent plant fire protection systems to become required for fire protection; Fire detection systems; Batteries; Master-slave Manipulators; Shield Windows; Carbon media in carbon bed adsorber; High-efficiency particulate air (HEPA) and other filters in HVAC systems. If DOE wishes to defer installation of equipment that is not substantially similar, then DOE shall seek approval from Ecology, with any dispute to be resolved under Section IX. The following items will not be considered substantially similar for purposes of delayed installation: All major civil, structural, piping, mechanical, and electrical power equipment installed and inspected; Electrical raceway installed except that required for systems/components not installed for obsolescence or maintenance

1           “Start Cold Commissioning” means the introduction of feed simulants for  
2 the purpose of determining individual facility functionality.

3           “PT Facility Hot Commissioning Complete” means the point at which the  
4 PT Facility has demonstrated its ability to separate liquids from solids using  
5 radioactive materials to produce acceptable feed for high level waste (HLW)  
6 and low-activity waste (LAW) glass production.

7           “HLW Facility Hot Commissioning Complete” means the point at which  
8 the HLW facility has demonstrated its ability to produce immobilized HLW  
9 glass of acceptable quality.

10           “LAW Facility Hot Commissioning Complete” means the point at which  
11 the LAW facility has demonstrated its ability to produce immobilized LAW  
12 glass of acceptable quality.

13           **2.     WTP Construction and Startup Concerns and Assumptions**

14           The milestones and schedule set forth in Section IV of the Decree and  
15 this Appendix thereto are based upon project planning that requires assumptions  
16 to be made and raises concerns about a broad range of circumstances and  
17 events, including unforeseen circumstances. Below is a non-exhaustive  
18 identification of some of the concerns and assumptions for the circumstances

19 \_\_\_\_\_  
20 considerations; All piping hydro-tested to confirm capability to meet design requirements;  
21 Buildings enclosed and weather-tight, as required by design; Interior partition walls  
22 completed except for penetrations and penetration sealing and caulking; Major  
instrumentation racks and associated tubing installed except for those portions subject to  
obsolescence or maintenance; Permanent lighting for the facilities complete.

1 and events. The identification in this Appendix of certain circumstances and  
2 events and certain concerns and assumptions regarding circumstances and  
3 events does not create a presumption that any particular circumstance, event,  
4 concern, or assumption described in this Appendix will provide the basis for a  
5 good cause extension in any particular case. These concerns and assumptions  
6 are subject to the requirements for establishing good cause under Section VII-  
7 D, including the requirement that DOE exercise reasonable diligence.

8 a. Unforeseen safety concerns that, because of the nature of the  
9 concerns and the time required to address them, may require that  
10 milestone dates and the schedule be extended. These concerns may  
11 include but are not limited to worker and public safety or impacts to  
12 the environment. Construction and start-up of the WTP involves  
13 unique characteristics and hazards including industrial, electrical,  
14 thermal, chemical, and radiological hazards.

15 b. Because of the highly complex nature of the WTP, the  
16 milestones and schedule cannot anticipate all of the requirement  
17 changes and unknown technical obstacles that may be encountered  
18 and that may require time to remedy. These include but are not  
19 limited to difficulties in achieving the Maximum Achievable Control  
20 Technology standards during performance testing, difficulties in  
21 adoption of laser ablation technologies resulting in extended sample  
22 turn-around times, integrated control software obsolescence,

1 formation of hazardous mercury compounds in the evaporators, or  
2 technical issues that result from unforeseen tank waste characteristics.

3 c. Although the milestones and schedule were developed  
4 assuming that equipment failures will occur and that time to respond  
5 will be required, these failures may take place more often and require  
6 more time to remedy than anticipated in development of the  
7 milestones and schedule. Examples may include but are not limited  
8 to components such as melters, agitators, compressors, material  
9 handling systems, crane systems, evaporators, and ultrafilters.

10 Failures may occur during construction, testing, start-up, and  
11 operations. During WTP start-up and operations, failures in the Site  
12 infrastructure (e.g., Double-shell Tank system; 242-A Evaporator;  
13 Liquid Effluent Retention Facility, Effluent Treatment Facility,  
14 Integrated Disposal Facility, and the 222-S Laboratory) may occur.

15 d. Although the milestones and schedule were based upon  
16 nominal delivery timelines developed through DOE and contractor  
17 experience, actual delivery times from suppliers of needed  
18 construction commodities and specialty equipment are affected by  
19 worldwide economic conditions and demand for the same or similar  
20 commodities and equipment; these conditions limit the ability of  
21 DOE and its contractors to secure required delivery dates to meet the  
22 milestones and schedule set forth above. Examples of these

1 conditions include but are not limited to building steel, emergency  
2 diesel generators, piping and valves, and other commodities.

3 e. DOE's ability to meet the milestones and schedule is  
4 dependent upon multiple regulatory actions and can be adversely  
5 impacted by forces outside its control, including but not limited to,  
6 obtaining operating permits and decisions from regulatory agencies  
7 on a timely basis, or legal intervention by third-parties under existing  
8 agreements or statutory provisions.

9 f. DOE's ability to meet the milestones and schedule assume  
10 that required staffing levels can be achieved and sustained. The  
11 availability of skilled professionals and craft can be adversely  
12 impacted by competing projects in the nuclear, mining, chemical, oil  
13 and gas, refining and petrochemical industries, both domestic and  
14 international, and by local and regional projects, as well.

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1                   **APPENDIX B:**

2                   **1.     Tank Waste Retrievals**

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| <b>Project</b> | <b>Description</b>  | <b>Date</b> |
|----------------|---|-------------|
| B-1            | Complete retrieval of tank wastes from the following remaining SSTs in WMA-C: C-101, C-102, C-104, C-105, C-107, C-108, C-109, C-110, C-111, and C-112.   | 9/30/2014   |
| B-2            | Subject to the requirements of Section IV-B-3, DOE will advise Ecology of the 9 SSTs from which waste will be retrieved by 2022. Subject to the requirements of Section IV-B-3, DOE may substitute any of the identified 9 SSTs and advise Ecology accordingly. | 9/30/2014   |
| B-3            | Of the 9 SSTs referred to in B-2, DOE will have initiated startup of retrieval in at least 5.   | 12/31/2017  |
| B-4            | Complete retrieval of tank wastes from the 9 SSTs selected to satisfy B-2.  | 9/30/2022   |

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12                   “Initiate startup of retrieval” means that actual pump operations in the

13                   SST have commenced and that transfers from the SST have totaled an estimated

14                   5% of the waste in the tank.

15                   **2.     Tank Retrieval Milestones and Schedule Concerns and**

16                   **Assumptions**

17                   The milestones and schedule set forth in Section IV of the Decree and

18                   this Appendix thereto are based upon project planning that requires assumptions

19                   to be made and raises concerns about a broad range of circumstances and

20                   events, including unforeseen circumstances. Below is a non-exhaustive

21                   identification of some of the concerns and assumptions for the circumstances

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1 and events. The identification in this Appendix of certain circumstances and  
2 events and certain concerns and assumptions regarding circumstances and  
3 events does not create a presumption that any particular circumstance, event,  
4 concern, or assumption described in this Appendix will provide the basis for a  
5 good cause extension in any particular case. These concerns and assumptions  
6 are subject to the requirements for establishing good cause under Section VII-  
7 D, including the requirement that DOE exercise reasonable diligence.

8 a. Unforeseen safety concerns that, because of the nature of the  
9 concerns and the time required to address them, may require that  
10 the milestones and schedule be extended. These concerns may  
11 include, but are not limited to, worker and public safety or impacts  
12 to the environment. The wastes contained within each tank have  
13 their own unique characteristics and hazards.

14 b. The wastes associated with each tank or group of tanks have  
15 their own unique characteristics. Because of this, the milestones  
16 and schedule cannot anticipate all of the requirement changes and  
17 technical obstacles that may be encountered and that may require  
18 time to remedy. These may include but are not limited to unknown  
19 physical, chemical, and radiological characteristics present in the  
20 wastes; differences between the assumed and actual configurations  
21 of the tanks and tank farms; changes to the hazardous waste  
22

1 management requirements; and significant changes in the nature  
2 and extent of assumed environmental contamination.

3 c. Although the milestones and schedule were developed  
4 assuming that equipment failures will occur and that will require  
5 time to respond to, these failures may take place more often and  
6 require more time to remedy than anticipated in the development  
7 of the milestones and schedule. Examples may include but are not  
8 limited to failures in the Single-shell Tank waste retrieval systems,  
9 tank farms, and supporting infrastructure (e.g., Double-shell Tank  
10 system; 242-A Evaporator; Liquid Effluent Retention Facility,  
11 Effluent Treatment Facility, Integrated Disposal Facility, and the  
12 222-S Laboratory).

13 d. Although the milestones and schedule were based upon  
14 delivery timelines developed through DOE and Contractor  
15 experience, actual delivery times from suppliers of needed  
16 construction commodities and specialty equipment are affected by  
17 worldwide economic conditions and demand for the same or  
18 similar commodities and equipment; these conditions limit the  
19 ability of DOE and its Contractors to secure required delivery dates  
20 to meet the milestones and schedule. Examples of these conditions  
21 include but are not limited to specialized waste retrieval systems  
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and components, piping and valves, and spare parts for aging tank systems.

e. DOE's ability to meet the milestones and schedule is dependent upon multiple regulatory actions and can be adversely impacted by forces outside its control, including but not limited to, obtaining operating permits and decisions from regulatory agencies on a timely basis, or legal intervention by third-parties under existing agreements or statutory provisions.

f. DOE's ability to meet the milestones and schedule assume that required staffing levels can be achieved and sustained. The availability of skilled professionals and craft can be adversely impacted by competing projects in the nuclear, mining, chemical, oil and gas, refining and petrochemical industries, both domestic and international, and by local and regional projects, as well.

1           **APPENDIX C:**

2           A Tank Waste Retrieval Work Plan (TWRWP), for a tank or set of tanks  
3 covered by Section IV-B of the Decree, may cover an individual tank or a group  
4 of tanks and will address only those actions associated with waste retrieval.  
5 Such TWRWPs shall contain a Part 1 and Part 2, which shall include the  
6 information required only by Parts 1 and 2 below. Processes not covered by a  
7 TWRWP (e.g., tank closure) are not established under this Consent Decree.

8           Part 1: Required Retrieval Technologies

9           For retrieval of the tanks covered by Section IV-B of the Decree, Part 1  
10 of the TWRWP will describe the retrieval technology or technologies to be  
11 implemented by DOE for the tank retrievals covered in the TWRWP and the  
12 rationale for selecting these technologies to meet the requirements of this  
13 Decree for tank waste retrieval. For each tank or group of tanks, the TWRWP  
14 shall establish two retrieval technologies that shall be deployed to each of their  
15 “limits of technology” in an effort to obtain a waste residue goal of 360 cubic  
16 feet of waste or less for each tank. The “limits of technology” means that the  
17 recovery rate of that retrieval technology for that tank is, or has become, limited  
18 to such an extent that it extends the retrieval duration to the point at which  
19 continued operation of the retrieval technology is not practicable, with the  
20 consideration of practicability to include matters such as risk reduction,  
21 facilitating tank closures, costs, the potential for exacerbating leaks, worker  
22 safety, and the overall impact on the tank waste retrieval and treatment mission.

1 If 360 cubic feet is reached with the first retrieval technology, the first retrieval  
2 technology shall be used to the “limits of technology” and a second retrieval  
3 technology shall not be required. If the waste residual goal of 360 cubic feet is  
4 not achieved using the established two technologies, an additional retrieval  
5 technology established in a revised TWRWP shall be deployed to the “limits of  
6 technology;” provided that DOE may request that the State agree that DOE may  
7 forego implementing a third retrieval technology if DOE believes implementing  
8 such technology is not practicable under the criteria set forth above. If DOE  
9 and Ecology are unable to reach agreement, the resolution of the issue of  
10 whether a third retrieval technology shall be deployed shall be resolved through  
11 the dispute resolution process set forth in Section IX of this Decree. After such  
12 retrieval technologies have been deployed, retrieval for a tank will be complete.

13 Submittal of the TWRWP shall be accompanied by a schedule provided  
14 for informational purposes only. The schedule will include design,  
15 construction, and field retrieval activities.

#### 16 Part 2: Required Information in a TWRWP

17 To support planned retrieval activity, Part 2 of the TWRWP shall provide  
18 the information set forth below:

- 19 1. Tank(s) and/or ancillary equipment condition and  
20 Configuration;
- 21 2. Leak detection monitoring and mitigation plan, including  
22 technology description, rationale for selection,

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configuration, inspection and monitoring requirements, mitigation response, and anticipated performance goals;

- 3. Operational requirements during retrieval;
- 4. A pre-retrieval risk assessment of potential residuals, consideration of past leaks, and potential leaks during retrieval, based on available data and the most sophisticated analysis available at the time. The purpose of this risk assessment is to aid operational decisions during retrieval activities. This risk assessment will not be used to make final tank retrieval or closure decisions. The risk assessment will contain the following, as appropriate:

- Long-term human health risks associated with potential leaks during retrieval and potential residual waste after completion of retrieval:
  - Potential impacts to groundwater, including a WMA-level risk assessment
  - Potential impacts based on an intruder scenario
- Process management responses to a leak during retrieval and estimated potential leak volume
- The pre-retrieval risk analysis will be based on the following criteria:
  - Using the WMA fence line for point of compliance
  - Identify the primary indicator contaminants (accounting for at least 95% of impact to

1 groundwater risk) and provide the incremental  
2 lifetime cancer risk (ILCR) and hazard index  
3 (HI)

- 4 ○ Using ILCR and HI for the industrial and  
5 residential human scenarios as the risk metric
- 6 ○ Calculated concentration(s) of primary  
7 indicator contaminant(s) in groundwater (mg/L,  
and pCi/L).

8 5. Functions and associated requirements necessary to support  
9 design of proposed waste retrieval and leak detection  
10 monitoring and mitigation system(s);

11 6. Preliminary isolation evaluation including a list of ancillary  
12 equipment associated with the specific component, plans  
13 for ancillary equipment removal or waste retrieval,  
14 available characterization information for waste contained  
15 within ancillary equipment, and anticipated interrelated  
16 impacts of various retrieval actions;

17 7. Any TWRWP that identifies the use of new aboveground  
18 tanks, tank systems or treatment systems (not otherwise  
19 permitted, and to be operated only during the retrieval  
20 duration) shall include the following additional information:

- 21 ● General arrangement diagrams
- 22 ● System description

- 1 • Piping and instrumentation drawings (P&ID) for the
- 2 retrieval system
- 3 • Process flow diagrams
- 4 • Information to demonstrate compliance with WAC
- 5 173-303-640
- 6 • Describe the disposition of the system at completion of
- 7 the retrieval.

8 Part 3: Integration with HFFACO

9 A. Those portions of the TWRWP that address Part 1 of Appendix C for a  
10 tank or set of tanks covered by Section IV-B, established either by approval of  
11 Ecology or after resolution of a dispute by the Court under Section IX of this  
12 Decree, shall be enforceable under the Decree. Those portions of such a  
13 TWRWP that address Part 2 of Appendix C shall not be enforceable under this  
14 Consent Decree; rather, once a TWRWP is established, Part 2 shall for the  
15 purposes of any HFFACO enforcement claims be governed by the HFFACO, as  
16 set forth herein.

17 1. Once a TWRWP is established for a tank or set of tanks covered by  
18 Section IV-B (either by approval of Ecology or after resolution of a dispute by  
19 the Court pursuant to Section IX of this Decree), Part 2 of that TWRWP shall  
20 for purposes of HFFACO enforcement constitute an Action Plan primary  
21 document under the HFFACO within the meaning of Appendix I, Section 1.0,  
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1 with each party retaining the rights they otherwise have regarding the  
2 enforcement of that TWRWP under the HFFACO, and

3 2. Sections 2.1.4 and 2.1.5 of Appendix I of the HFFACO (except for the  
4 references to start dates and schedules), and Section 2.1.6 of Appendix I of the  
5 HFFACO, and only these portions of Appendix I of the HFFACO, shall apply  
6 according to their terms to the retrieval activities undertaken by DOE under Part  
7 2 of the TWRWP, with each party retaining the rights they otherwise have  
8 regarding enforcement of these provisions under the HFFACO.

9 3. Upon the establishment of a TWRWP for a tank or set of tanks  
10 covered by Section IV-B (either by approval of Ecology or after resolution of a  
11 dispute by the Court under section IX of this Decree), the requirements and  
12 schedules of the TWRWP shall be incorporated by reference into the Hanford  
13 Sitewide HWMA permit to satisfy any HWMA permit requirements.

14 B. Notwithstanding the requirements of Part 1 of Appendix C, DOE has,  
15 prior to the entry of this Consent Decree, submitted TWRWPs under the  
16 HFFACO that Ecology has already approved, or may hereafter approve, for  
17 certain tanks covered by Milestone B-1 in Appendix B to this Consent Decree.  
18 These tanks are subject to the requirements of Appendix C. However, such  
19 approvals, including the deployment of technologies to the limits of technology  
20 pursuant to such TWRWPs, shall count towards satisfaction of DOE's  
21 obligations under Part 1 of Appendix C. This Consent Decree shall not be  
22 interpreted to prohibit DOE from continuing to conduct retrieval activities

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under such approved TWRWPs, including in a situation where a revised TWRWP may be required under this Consent Decree.

## Enclosure B

| Project            | Description   | Status      | Date  |
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|                    | <b>The following TPA changes shall go into effect upon entry of the Consent Decree in <i>Washington v. DOE</i>, Case No. 08-5085-F VS</b>   |             |   |
| WTP-1 <sup>1</sup> | <p>Complete pretreatment processing and vitrification of Hanford High Level (HLW) and Low Activity (LAW) Tank Wastes.</p> <p>Compliance with the work schedules set forth in this milestone Series is defined as the performance of sufficient work to assure with reasonable certainty that DOE will accomplish Series major and interim milestone requirements.</p> <p>DOE internal work schedules (e.g., DOE approved schedule baselines) and associated work directives and authorizations for this milestone series shall be consistent with the requirements of this Agreement. Modification of DOE contractor baseline(s) and issuance of associated DOE work directives and/or authorizations that are not consistent with Agreement requirements shall not be finalized prior to approval of an Agreement change request submitted pursuant to Agreement Action Plan Section 12.0.</p> | Enforceable | 12/31/2047<br>or earlier as<br>established<br>by [SP-2] |
| WTP-2              | <p>Close all 28 issues, as originally identified, in <i>Comprehensive Review of the Hanford Waste Treatment Plant Flowsheet and Throughput Assessment Conducted by an Independent Team of External Experts</i>, issued in March 2006.</p> <p>For purposes of Project [WTP-2], "close" is defined as the Technology Steering Committee's approval signature of closeout documentation for each issue.</p>  | Enforceable | 12/31/2009  |
| WTP-3              | <p>On an annual basis, submit data, whose accuracy is certified in accordance with WAC 173-303-810(13), and which demonstrates on a rolling three year average, operation of WTP,</p>   | Enforceable | 2/28/2023   |

<sup>1</sup> **Note to Parties:** The milestones in this document are conditioned upon deletion or modification of current HFFACO milestones M-47, M-50, M-51, M-61, and M-62 and revision of the M-90 milestones as these will be addressed by the proposed consent decree or these Enclosure B HFFACO milestones.

## Enclosure B

| Project | Description  | Status | Date |
|---------|--|--------|------|
|         | and any supplemental treatment if needed, at a rate sufficient to accomplish treatment of all Hanford tank waste in accordance with the date required by milestone [WTP-1], taking into account that treatment rates are expected to vary based upon a number of factors, including the character of the waste treated, or alternatively describe plans to increase the rate beyond that previously anticipated in order to achieve treatment of all Hanford tank waste by the [WTP-1] milestone date. |        |      |

## Enclosure B

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| ST-1 | Without restricting the discretion reserved to DOE and Ecology under [SP-2(3)] to make the supplemental treatment decision in accordance with [SP-2(3)] under that milestone, DOE and Ecology shall complete negotiations establishing milestones for implementing near-term (2011-2016) actions, such as those identified in the 2008 External Technical Review of System Planning for Low-Activity Waste Treatment at Hanford report, for enhancing WTP tank waste treatment and advancing the evaluation of supplemental treatment options. Such actions may include, among other actions: enhancing WTP LAW melter production rates; installing a third melter in the WTP LAW Facility; cold and hot testing strategies for bulk vitrification; and evaluating and implementing sodium mitigation strategies. | Enforceable               | Twelve (12) months after milestone [ST-1] is adopted by the parties  |
| ST-2 | Complete Final Design and Submit acomplete RCRA Part B Permit Modification request for Enhanced WTP and/or Supplemental Vitrification Treatment Facility based on the [SP-2] decision.  | Target                    | 12 months after [SP-2(3)] decision on supplemental treatment   |
| ST-3 | Start construction of Supplemental Vitrification Treatment Facility and/or WTP Enhancements.  | Target<br>See * in [SP-2] | 36 months after [SP-2(3)] decision on supplemental treatment, provided that Ecology has issued a final permit modification at least twelve (12) months earlier |
| ST-4 | Complete construction of Supplemental Treatment Vitrification Facility and/or WTP   | Target<br>See * in [SP-2] | 72 months after [SP-   |

**Enclosure B**

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|      | Enhancements.  |                              | 2(3)]<br>decision on<br>supple-<br>mental<br>treatment                            |
| ST-5 | Complete Hot Commissioning of Supplemental Treatment Vitrification Facility and/or WTP Enhancements. | Target<br>See * in<br>[SP-2] | 92 months<br>after [SP-<br>2(3)]<br>decision on<br>supple-<br>mental<br>treatment |

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| <p><b>Systems Plan (SP-1)</b></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 [R-1]), 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 [WTP-1]), 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.</p> <p>The Plan will include the following elements:</p> <p><b>OVERALL MINIMUM REQUIREMENTS</b></p> <p>The Plan will present the following minimum information for each scenario evaluated:</p> | <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.</p> <p>Beginning October 31, 2011, and every three years thereafter, issue the System Plan.</p> |
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## Enclosure B

- 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
- 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.

### **TANK WASTE TREATMENT**

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 [WTP-1], 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.

The Plan will, at a minimum, describe how the tank waste treatment mission can:

- Pretreat 100% of the retrievable tank waste (at

## Enclosure B

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|  | <p>a rate sufficient to operate the HLW facility, LAW facility, and Supplemental Treatment system simultaneously at their estimated average production rates).</p> <ul style="list-style-type: none"><li>• Vitrify 100% of the separated high-level waste stream at estimated average production rates.</li><li>• Vitrify 100% of separated low-level waste stream at estimated average production rates.</li><li>• Appropriately manage secondary waste streams.</li></ul> <p>The Plan will take into account the results from testing of the Pretreatment Engineering Platform and other studies.</p> <p><b><u>SUPPLEMENTAL TREATMENT</u></b></p> <p>The Plan will also describe:</p> <ul style="list-style-type: none"><li>• How much total sodium will need to be treated.</li><li>• 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 [WTP-1], 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.</li></ul> <p>The System Plan will outline specific options to treat all the LAW. Such options include:</p> <ul style="list-style-type: none"><li>• Build and operate a 2<sup>nd</sup> LAW Vitrification Facility.</li><li>• Build and operate a Bulk Vitrification Facility.</li></ul> <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 2<sup>nd</sup> LAW Vitrification Facility.</p> <p>This report will:</p> <ul style="list-style-type: none"><li>• Describe additional treatment facilities and</li></ul> |  |
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|  | <p>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 [WTP-1], 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> <ul style="list-style-type: none"><li>• Apply the same selection criteria to all options and include a 2<sup>nd</sup> LAW Vitrification Facility as an option.</li><li>• Include all the results from all waste form performance data (compared against the performance of borosilicate glass) for all the treatment technologies being considered.</li><li>• 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).</li><li>• Include data from both cold and hot testing if bulk vitrification is to be retained as an option.</li></ul> <p><b><u>TANK WASTE RETRIEVAL</u></b></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 [R-1], 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"><li>• SST integrity information, including the SST integrity assurance review provided under milestone [IA-4] and any further integrity assessments.</li><li>• Waste retrieval rate sufficient to operate all waste treatment facilities at their full capacities, considering optimized waste feed rates.</li><li>• The effect on waste retrieval rates of the waste</li></ul> |  |
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|  | <p>retrieval technologies selected through the TWRWP process.</p> <ul style="list-style-type: none"><li>• 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.</li></ul> <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"><li>• The retrieval methodologies that could be employed and estimated waste volumes to be generated for transfer to the DST or other safe storage.</li><li>• DST space evaluations for the waste retrieval sequence.</li><li>• Proposed improvements to reduce waste retrieval durations</li></ul> <p><b><u>CONTINGENCY PLANNING</u></b></p> <p>The Plan will identify and consider possible contingency measures to address the following risks:</p> <ul style="list-style-type: none"><li>• Results from SST integrity evaluations.</li><li>• If retrievals take longer than originally anticipated and there is potential impact to the schedule for retrieving specified tanks under this agreement.</li><li>• If DST space is not sufficient or is not available to support continued retrievals on schedule.</li><li>• If any portion of the WTP does not initiate cold commissioning on schedule.</li><li>• If any portion of the WTP does not complete hot start on schedule.</li><li>• 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.</li></ul> <p>The contingency measures identified for consideration should include, but not be limited to, providing new, compliant tanks with sufficient capacity and in sufficient</p> |  |
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## Enclosure B

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|                     | time to complete retrievals under this agreement, regardless of WTP operational deficiencies or retrieval conditions.  |   |
| Systems Plan (SP-2) | <p>Every six years, within six months of the issuance of the last revision of the System Plan, the parties will negotiate the following:</p> <ol style="list-style-type: none"> <li>1. Commencing as target milestones in 2015 and enforceable milestones in 2021 and each negotiation thereafter, tank waste retrieval sequencing and milestones for the next eight years.</li> <li>2. Contingency actions and milestones, if and as necessary, for 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.</li> <li>3. Supplemental treatment selection (a one-time selection to be made not later than April 30, 2015) and milestones, which must be consistent with [WTP-1] as established by [SP-2(5)]. A 2<sup>nd</sup> LAW Vitrification Facility must be considered as one of the options.<br/>*Milestones [ST-2] through [ST-5] are initially set as target dates and will be established (as may be modified) as interim milestones when they are converted to interim milestones in accordance with applicable HFFACO procedures at the conclusion of this negotiation.</li> <li>4. The date in milestone [R-1] for completion of the tank waste retrievals as expeditiously as possible.</li> <li>5. The date in milestone [WTP-1] for completion of tank waste treatment as expeditiously as possible.</li> </ol> <p>As used in paragraphs 4 and 5, above, the phrase 'as expeditiously as possible' means, in the case of SST retrievals, completing such retrievals as quickly as is technically feasible but not later than the date established in milestone [R-1], and in the case of tank waste treatment, completing such treatment as quickly as is technically feasible but not later than the date established in milestone [WTP-1], and in each case without excessive difficulty or expense within the context of such activities, and in consideration of any impact on the overall cleanup mission.</p> <p>By the milestone due date, the parties will complete</p> | April 30, 2015, and every six years thereafter. |

**Enclosure B**

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|             | <p>negotiations on the above matters. Although multiple scenarios may be considered in the course of the negotiations, and none may be considered wholly appropriate, the final decisions in items 1 through 5 above will be consistent with a single scenario, including any agreed-upon supplemental sensitivity analyses. The parties agree that the chosen scenario alone need not dictate matters in the negotiations and that other information may be considered as the parties deem appropriate.</p> <p>In the event Ecology and DOE do not reach agreement for the matters in [SP-2] paragraphs 1, 2, and 3, the dispute between Ecology and DOE will be resolved pursuant to the HFFACO Article VIII.</p> <p>The dispute resolution process in HFFACO, Article VIII, does not apply to the determinations in [SP-2] paragraphs 4 and 5. Rather, these disputes shall be governed by the Consent Decree in <i>Washington v. DOE</i>, Case No. 08-5085-FVS. No later than 12/31/2021, the United States and Ecology shall complete negotiations to establish a mechanism that will apply to resolve future disputes regarding the determinations in [SP-2] paragraphs 4 and 5. The United States and Ecology have reserved their rights regarding the mechanism that should apply to such future disputes, in the event that they cannot reach agreement.</p> |                   |
| <p>SP-3</p> | <p>Submit a report to the Department of Ecology, with data, whose accuracy is certified in accordance with WAC 173-303-810(13), and which demonstrates that the WTP is designed to accomplish at least the following:</p> <ul style="list-style-type: none"> <li>• Pretreat 100% of retrievable tank waste (i.e., 48,000 MT of sodium and 25,000 MT of solids).</li> <li>• Vitrify 100% of the separated high-level waste stream (estimated at 4.2 MTG/d, at the assumed operating efficiency).</li> <li>• WTP LAW combined with supplemental treatment (bulk vitrification or second LAW) can vitrify 100% of separated low-level waste stream (estimated at 21 MTG/d, at the assumed operating efficiency, for WTP LAW).</li> </ul>   | <p>10/31/2011</p> |

## Enclosure C

**NOTE TO PARTIES:** The milestones in this document are conditioned upon deletion of current HFFACO M-45 series milestones except M-045-13 and M-045-15 as these will be addressed by the proposed consent decree or these Enclosure C HFFACO milestones.

| Project             | Description  | Status               | Date  |
|---------------------|--|----------------------|---|
|                     | <b>The following TPA changes shall go into effect upon entry of the Consent Decree in <i>Washington v. DOE</i>, Case No. 08-5085-F VS</b>  |                      |   |
| RETRIEVALS<br>(R-1) | <p>Complete waste retrieval from all remaining single-shell tanks. Retrieval standards and completion definitions are provided in milestone [C-7].</p> <p>The schedule reflects retrieval activities on a farm-by-farm basis. It also allows flexibility to retrieve tanks from various farms if desired to support safety issue resolution, pretreatment or disposal feed requirements, or other priorities.</p>  | Enforceable          | 12/31/2040<br>or earlier as<br>established<br>by [SP-2] |
| CLOSURE<br>(C-1)    | Complete those portions of the C-200 Closure Demonstration Plan necessary to complete closure plan development for the SST system. Those portions of the demonstration plan include: (1) description of the radioactive waste determination process that DOE will utilize for the component of Tank Waste residuals subject to DOE authority, (2) a RCRA/CERCLA Integration White Paper, (3) a tank removal engineering study, and (4) an evaluation of alternatives for removal of waste from the C-301 catch tank. | Enforceable<br>(TPA) | 1/31/2011   |
| CLOSURE<br>(C-2)    | Implement and complete all remaining activities in the June 6, 2007 C-200 Closure Demonstration Plan (with any revisions as agreed to by Ecology and DOE). Provide a report that documents the results of those activities and provides interpretations and recommendations consistent with the Project Goals, Objectives, and Products described in Section 5 of the Plan.  | Enforceable<br>(TPA) | 9/30/2014   |
| CLOSURE<br>(C-3)    | Submit complete permit modification requests for Tiers 1, 2, & 3 (see Appendix I) of the SST System, to support final closure requirements for WMA C   | Enforceable<br>(TPA) | 9/30/2015   |
| CLOSURE<br>(C-4)    | <p>Complete the Closure of WMA C.</p> <p>The milestone date assumes Ecology will issue</p>   | Enforceable<br>(TPA) | 6/30/2019   |

## Enclosure C

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| Project          | Description   | Status               | Date      |
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|                  | a final permit modification decision within 12 months of receiving DOE's modification request under [C-3]. If Ecology does not issue a final permit modification decision within 12 months of receiving DOE's modification request under [C-3], the milestone date will be extended on a day-for-day basis for each day beyond the 12 month period until a final permit modification decision is issued.  |                      |           |
| CLOSURE<br>(C-5) | Complete negotiations of HFFACO interim milestones for closure of the second WMA (including a schedule for submittal of closure plans and risk assessments and final closure dates).  | Enforceable<br>(TPA) | 1/31/2017 |
| CLOSURE<br>(C-6) | Complete negotiations of HFFACO interim milestones for closure of the remaining WMAs (including a schedule for 200 West Area closures, the submittal of closure plans and risk assessments and final closure dates for each WMA).   | Enforceable<br>(TPA) | 1/31/2022 |
| CLOSURE<br>(C-7) | <p>Complete the Closure of All SST Tank Farms</p> <p>Closure will follow retrieval of as much tank waste as technically possible, with tank waste residues not to exceed 360 cubic feet (cu. ft.) in each of the 100 series tanks and 30 cu. ft. in each of the 200 series tanks. If the DOE believes that waste retrieval to these levels is not possible for a tank, then DOE will submit a detailed explanation to EPA and Ecology explaining why these levels cannot be achieved, and specifying the quantities of waste that the DOE proposes to leave in the tank. The request will be approved or disapproved by EPA and Ecology on a tank-by-tank or group of tanks basis. Procedures for modifying the retrieval criteria listed above and for processing requests for exceptions to the criteria are outlined in Appendix H to the agreement.</p> <p>For the purposes of this agreement all units located within the boundary of each tank farm</p> | Enforceable<br>(TPA) | 1/31/2043 |

## Enclosure C

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| Project | Description  | Status | Date |
|---------|--|--------|------|
|         | <p>will be closed in accordance with WAC 173-303-610. This includes contaminated soil and ancillary equipment that were previously designated as RCRA past practice units. Adopting this approach will ensure efficient use of funding and will reduce potential duplication of effort via application of different regulatory requirements: WAC 173-303-610 for closure of the TSD units and RCRA section 3004(u) for remediation of RCRA past practice units.</p> <p>All parties recognize that the reclassification of previously identified RCRA past practice units to ancillary equipment associated with the TSD unit is strictly for application of a consistent closure approach. Upgrades to previously classified RCRA past practice units to achieve compliance with RCRA or dangerous waste interim status technical standards for tank systems (i.e., secondary containment, integrity assessments, etc.) will not be mandated as a result of this action. However, any equipment modified or replaced will meet interim status standards. In evaluating closure options for single-shell tanks, contaminated soil, and ancillary equipment, Ecology and EPA will consider cost, technical practicability, and potential exposure to radiation. Closure of all units within the boundary of a given tank farm will be addressed in a closure plan for the single-shell tanks.</p> <p>Compliance with the work schedules set forth in this milestone series is defined as the performance of sufficient work to assure with reasonable certainty that DOE will accomplish series major and interim milestone requirements.</p> <p>DOE internal work schedules (e.g., DOE-approved schedule baselines) and associated work directives and authorizations shall be consistent with the requirements of this Agreement. Modification of DOE contractor</p> |        |      |

## Enclosure C

**NOTE TO PARTIES:** The milestones in this document are conditioned upon deletion of current HFFACO M-45 series milestones except M-045-13 and M-045-15 as these will be addressed by the proposed consent decree or these Enclosure C HFFACO milestones.

| Project                  | Description   | Status                       | Date   |
|--------------------------|---|------------------------------|--|
|                          | <p>baseline(s) and issuance of associated DOE work directives and/or authorizations that are not consistent with Agreement requirements shall not be finalized prior to approval of an Agreement change request submitted pursuant to Agreement Action Plan Section 12.0.</p> <p>All work under this milestone series shall be conducted in compliance with agreement requirements including but not limited to the parties' agreement Appendix I, "Single-shell Tank System Waste Retrieval and Closure Process", provided that Section 2.1, Tank Waste Retrieval, of Appendix I of the HFFACO shall not apply to the 19 SSTs covered by the Consent Decree in <i>Washington v. DOE</i>, Case No. 08-5085-FVS, except as set forth in Appendix C, Part 3, A.1 and A.2, of such Decree.<sup>1</sup></p> |                              |  |
| <p>CLOSURE<br/>(C-8)</p> | <p>Complete the Closure of All DST Tank Farms</p>   | <p>Enforceable<br/>(TPA)</p> | <p>TBD, based upon completion of retrieval under [SP-2] plus 5 years but no later than 9/30/2052</p> |
| <p>CLOSURE<br/>(C-9)</p> | <p>Submit a retrieval data report to Ecology for the 19 tanks retrieved under the Consent Decree in <i>Washington v. DOE</i>, Case No. 08-5085-FVS, which report shall include the following elements only of Section 2.1.7 of Appendix I to the HFFACO:</p> <p>1) Residual tank waste volume measurement, including associated calculations;<br/>2) The results of residual tank waste characterization;</p>   | <p>Enforceable</p>           | <p>12 months after DOE certifies to Ecology that DOE has completed retrieval of a tank</p>           |

<sup>1</sup> Section 2.1 of Appendix I of the HFFACO will be amended by adding the following sentence to the end of the first paragraph of Section 2.1: 'This section shall not apply to the 19 SSTs covered by the Consent Decree in *Washington v. DOE*, Case No. 08-5085-FVS, except as set forth in Appendix C, Part 3, A.1 and A.2 of such decree.'

### Enclosure C

**NOTE TO PARTIES:** The milestones in this document are conditioned upon deletion of current HFFACO M-45 series milestones except M-045-13 and M-045-15 as these will be addressed by the proposed consent decree or these Enclosure C HFFACO milestones.

| Project               | Description  | Status            | Date  |
|-----------------------|--|-------------------|---|
|                       | <p>3) Retrieval technology performance documentation;</p> <p>4) DOE's updated post-retrieval risk assessment;</p> <p>5) LDMM monitoring and performance results; and,6) Opportunities and actions being taken to refine or develop tank waste retrieval technologies, based on lessons learned.</p>  |                   |   |
| Interim Action (IA-2) | <p>Complete interim barrier demonstration report for the T-106 interim barrier, which report shall include a recommendation and commitment on whether to proceed with additional interim barriers and an evaluation of the barrier's ability to reduce water infiltration that drives migration of subsurface contamination to groundwater.</p>  | Enforceable (TPA) | 9/30/2010   |
| Interim Action (IA-3) | <p>DOE and Ecology will establish, no later than March 31, 2009, selection criteria for installation of additional interim barriers at additional WMAs (beyond the T-106 and TY barriers). DOE and Ecology will meet yearly to review the monitoring data, agree to changes in monitoring (if needed) and assess the performance of the demonstration barrier.</p> <p>DOE shall submit to Ecology for approval, a final design and monitoring plan for TY farm interim barrier by March 31, 2010. Installation of the barrier will be completed by September 30, 2010.</p> <p>By December 31, 2010, complete negotiations to schedule the remaining 4 additional barriers, unless DOE and Ecology agree that monitoring data does not support continued installation of interim barriers.</p> <p>If negotiated, complete installation of 4 additional interim barriers at a rate of one per year, with the first being completed by June 30, 2012. Prior to beginning construction and at least one year before construction is to be complete, DOE will submit to Ecology a final</p> | Enforceable (TPA) | 9/30/2016 or as indicated in the descriptive text of this milestone |

## Enclosure C

**NOTE TO PARTIES:** The milestones in this document are conditioned upon deletion of current HFFACO M-45 series milestones except M-045-13 and M-045-15 as these will be addressed by the proposed consent decree or these Enclosure C HFFACO milestones.

| Project                        | Description   | Status               | Date   |
|--------------------------------|---|----------------------|--|
|                                | design and monitoring plan for each interim barrier. The design and monitoring plans will be consistent with those developed for WMA T and TY unless DOE and Ecology agree otherwise. Ecology will authorize construction upon approval of these submittals.  |                      |  |
| Interim Action<br>(IA-4)       | <p>Establish a panel and provide a report on SST integrity assurance review.</p> <p>DOE has selected and established a panel of technical and nationally recognized experts to focus on data available from already-retrieved tanks.</p> <p>The report will contain:</p> <ol style="list-style-type: none"> <li>1) The panel's evaluation of the existing known conditions of the SSTs;</li> <li>2) The Panel's evaluation of the proposed future use of the SSTs;</li> <li>3) The Panel's recommendations for critical modifications and associated schedule aimed at preventing or minimizing further degradation of SST integrity;</li> <li>4) The Panel's recommendations for additional evaluations and program elements that would improve existing understanding of SST integrity.</li> </ol> <p>An agreement change package with interim milestones as necessary to implement the recommendations will be submitted within 90 days of the report.</p> | Enforceable<br>(TPA) | 09/30/2010<br>or as<br>indicated in<br>the<br>descriptive<br>text of this<br>milestone |
| Catch Tank<br>Action<br>(CT-1) | Submit to Ecology as an Agreement Primary Document a Catch Tank "assumed leak" response plan. This Plan will include criteria for declaring a tank an assumed leaker, response actions that will be taken, notifications, and provisions to ensure initiation of liquid removal within 90 days. <sup>2</sup>  | Enforceable<br>(TPA) | 60 days after<br>this<br>milestone is<br>adopted by<br>the parties                     |

<sup>2</sup> The plan submitted pursuant to this milestone will be added to the list of primary documents set forth in Attachment 2, Action Plan, of the HFFACO, p. 9-2, Table 9-1.

## Enclosure C

**NOTE TO PARTIES:** The milestones in this document are conditioned upon deletion of current HFFACO M-45 series milestones except M-045-13 and M-045-15 as these will be addressed by the proposed consent decree or these Enclosure C HFFACO milestones.

| Project                  | Description  | Status            | Date   |
|--------------------------|--|-------------------|--|
| Catch Tank Action (CT-2) | Remove pumpable liquid from Catch Tank S-302. Note: this milestone has already been completed and thus will be removed after public comment  | Enforceable (TPA) | 9/30/2008 (Completed)                                  |
| Catch Tank Action (CT-3) | Submit to Ecology as an agreement primary document a report on all Catch Tanks and associated pipelines that are identified in the SST System Part A or that have otherwise been known to be used for SST tank system operations. The report will identify DOE's proposed closure strategy for each of these tanks, and ancillary equipment. For items that are outside of the WMA boundaries, these items will be assigned either to a specific waste site operable unit (200-IS-1) or to a specific WMA for closure. The report shall provide the regulatory basis and supporting information for such assignments. For items assigned to an Operable Unit, M-16-00 processes and milestones will be followed to ensure completion of remedial actions for all non-tank farm operable units by 9/30/2024 (M-16-00). The schedules for remedial action implementation will be established by regulatory agency approval of the Remedial Design/Remedial Action work plans and is enforceable as a HFFACO requirement. For items assigned to WMAs for closure, closure milestones will be included within the applicable WMA closure schedule and milestones. <sup>3</sup> | Enforceable (TPA) | 60 days after this milestone is adopted by the parties |

<sup>3</sup> The report submitted pursuant to this milestone will be added to the list of primary documents set forth in Attachment 2, Action Plan, of the HFFACO, p. 9-2, Table 9-1.

**Enclosure E**

**September 2007 Hanford Negotiations Update  
Draft Hanford Lifecycle Scope, Schedule and Cost  
Report Milestone**

|  |  |
|--|--|
| <p>THE FOLLOWING CHANGES SHALL GO INTO EFFECT UPON ENTRY OF THE CONSENT DECREE IN <i>WASHINGTON V. DOE</i>, CASE NO. 08-5085-FVS</p>   |  |
| <p>M-XX-YY THE USDOE SHALL PREPARE AND SUBMIT TO EPA AND ECOLOGY A REPORT SETTING OUT THE LIFECYCLE SCOPE, SCHEDULE AND COST FOR COMPLETION OF THE HANFORD SITE CLEANUP MISSION. THE REPORT SHALL REFLECT ALL OF THOSE ACTIONS NECESSARY FOR THE USDOE TO FULLY MEET ALL APPLICABLE ENVIRONMENTAL OBLIGATIONS INCLUDING THOSE UNDER THE HFFACO, THE CONSENT DECREE IN <i>WASHINGTON V. DOE</i>, CASE NO. 08-5085-FVS, AND THE HANFORD RCRA/HWMA PERMIT. THE REPORT SHALL INCLUDE SCOPE, SCHEDULE AND COST FOR COMPLETING WORK AT EACH OF THE OPERABLE UNITS AND RCRA TSD GROUPS/UNITS THAT ARE LISTED IN APPENDIXES B AND C OF THE HFFACO, IN THE CONSENT DECREE IN <i>WASHINGTON V. DOE</i>, CASE NO. 08-5085-FVS, AND IN THE HANFORD RCRA/HWMA PERMIT, INCLUDING THE HANFORD WASTE TREATMENT AND IMMOBILIZATION PLANT. THE REPORT WILL INCLUDE ALL OTHER CLEANUP AND MONITORING ACTIVITIES (INCLUDING POST-CLOSURE ACTIVITIES) AND ALL RELATED ACTIONS NECESSARY TO COMPLETE THE CLEANUP MISSION TO PROVIDE A COMPLETE UNDERSTANDING OF THE RESOURCES NECESSARY FOR THE HANFORD CLEANUP MISSION.</p> <p>THIS REPORT SHALL TAKE INTO ACCOUNT CIRCUMSTANCES EXISTING AS OF THE END OF THE FISCAL YEAR PRECEDING THE MONTH OF THE REPORT, INCLUDING FUNDS APPROPRIATED BY CONGRESS FOR THE HANFORD CLEANUP, BUT SHALL NOT ASSUME ANY LIMITATION ON FUNDING FOR FUTURE YEARS. HOWEVER, THE REPORT WILL TAKE INTO CONSIDERATION CRITICAL RESOURCE AVAILABILITY NOT BASED UPON ASSUMED FUTURE FUNDING LIMITATIONS AND THE PRACTICAL LIMITS OF PROJECT ACCELERATION WHEN DEVELOPING AN EXECUTABLE PLAN. USDOE MAY ALSO INCLUDE COSTS OTHER THAN THOSE DIRECTLY RELATED TO ENVIRONMENTAL OBLIGATIONS (SUCH AS SECURITY COSTS) BUT SHALL CLEARLY DISTINGUISH EXPENDITURES FOR ENVIRONMENTAL OBLIGATIONS FROM OTHER EXPENDITURES. COSTS SHALL BE DISPLAYED BY PROGRAM BASELINE SUMMARY. ADDITIONAL LEVELS OF DETAIL WILL APPEAR IN APPENDICES TO THE REPORT. COST INFORMATION WILL PROVIDE SUFFICIENT DETAIL TO VALIDATE CONSISTENCY WITH THE SCOPE AND SCHEDULE FOR INDIVIDUAL CLEANUP PROJECTS. REPORTING IN THE APPENDICES WILL TYPICALLY BE ONE LEVEL BELOW THE PBS FOR THE LIFECYCLE, AND AT LEVELS BELOW THAT FOR THE NEXT TWO TO FIVE YEARS BEYOND THE EXECUTION YEAR</p> <p>(USUALLY AT THE ACTIVITY LEVEL WITHIN THE BUDGET</p> | <p>DUE DATE TO SUBMIT THE REPORT TO BE JANUARY 31 AND ANNUALLY THEREAFTER, EXCEPT THAT THE FIRST REPORT TO BE DUE NO SOONER THAN 9 MONTHS AFTER INCORPORATION OF THIS MILESTONE IN TPA</p> |

ASSIGNED TO A SPECIFIC PROJECT, E.G., RL-0011, WBS ELEMENT 011.04.01, NUCLEAR MATERIAL STABILIZATION AND DISPOSITION - PFP, DISPOSITION PFP, TRANSITION 234-5Z). EPA AND ECOLOGY PROJECT MANAGERS MAY REQUEST ADDITIONAL LEVELS OF DETAIL BE PROVIDED BY THEIR DOE COUNTERPARTS.

IN CIRCUMSTANCES WHERE FINAL CLEANUP DECISIONS HAVE NOT YET BEEN MADE, THE REPORT SHALL BE BASED UPON THE REASONABLE UPPER BOUND OF THE RANGE OF PLAUSIBLE ALTERNATIVES OR MAY SET FORTH A RANGE OF ALTERNATIVE COSTS INCLUDING SUCH A REASONABLE UPPER BOUND. IN MAKING ASSUMPTIONS FOR THE PURPOSE OF PREPARING THE INITIAL REPORT, USDOE SHALL TAKE INTO ACCOUNT THE VIEWS OF EPA AND ECOLOGY AND SHALL ALSO TAKE INTO ACCOUNT THE VALUES EXPRESSED BY THE AFFECTED TRIBAL GOVERNMENTS AND HANFORD STAKEHOLDERS REGARDING WORKSCOPE, PRIORITIES AND SCHEDULE. THE REPORT SHALL INCLUDE THE SCOPE, SCHEDULE AND COSTS FOR EACH SUCH PBS LEVEL TWO ELEMENT AND SHALL SET FORTH THE BASES AND ASSUMPTIONS FOR EACH CLEANUP ACTIVITY.

AFTER USDOE SUBMITS THE REPORT, THE USDOE WILL REVISE THE REPORT BASED UPON EPA AND ECOLOGY COMMENTS TO REFLECT A COMMON VISION OF THE SCOPE, SCHEDULE AND BUDGET FOR THE REMAINDER OF THE CLEANUP MISSION. IF THE AGENCIES ARE UNABLE TO REACH RESOLUTION ON SPECIFIC ASPECTS OF THE SCOPE OF CLEANUP ACTIONS, THE REVISED DOCUMENT WILL PRESENT A RANGE OF POTENTIAL ACTIONS WITH THE ASSOCIATED SCHEDULE AND BUDGET, THEREBY COMPLETING THE MILESTONE. DOE, EPA AND ECOLOGY SHALL ATTEMPT TO REACH AGREEMENT ON THE REPORT SO IT CAN SERVE AS AN AGREED UPON FOUNDATION FOR PREPARING BUDGET REQUESTS AND FOR INFORMATIONAL BRIEFINGS OF AFFECTED TRIBAL GOVERNMENTS AND HANFORD STAKEHOLDERS. THE REPORT SHALL ALSO SERVE AS THE BASIS FOR ANNUAL DISCUSSIONS AMONG USDOE, EPA AND ECOLOGY ON HOW AND WHEN THE USDOE WILL COMPLETE CLEANUP, HOW CONGRESSIONAL APPROPRIATIONS FOR THE HANFORD SITE FOR THAT YEAR MAY AFFECT ASSUMPTIONS PRESENTED IN THE REPORT, AND HOW MILESTONE CHANGES AND ADJUSTMENTS WILL AFFECT LIFECYCLE SCOPE, SCHEDULE AND COST.

WITHOUT LIMITING ANY DOE OBLIGATION UNDER ANY OTHER PROVISIONS OF THIS AGREEMENT, AND WITHOUT LIMITING ANY DOE OBLIGATION TO DISCLOSE INFORMATION THAT IS OTHERWISE PUBLICLY AVAILABLE, NOTHING IN THIS MILESTONE SHALL BE CONSTRUED, EITHER ALONE OR IN COMBINATION WITH ANY OTHER PROVISION OF THE HFFACO, TO REQUIRE DISCLOSURES RELATED TO INTERNAL FEDERAL BUDGET DELIBERATIONS.