



FEB 15 2010

10-ESQ-031

CCN: 211304

Ms. Jane A. Hedges, Program Manager  
 Nuclear Waste Program  
 Washington State  
 Department of Ecology  
 3100 Port of Benton Blvd.  
 Richland, Washington 99354

Dear Ms. Hedges:

SUBMITTAL OF HANFORD TANK WASTE TREATMENT AND IMMOBILIZATION PLANT  
 (WTP) 2010 PROGRESS REPORT

- References:
1. Hanford Facility Resource Conservation and Recovery Act Permit (WA7890008967), Part III, Operating Unit 10, Unit-Specific Conditions, Waste Treatment and Immobilization Plant.
  2. ORP letter from S. J. Olinger to J. A. Hedges, Ecology, "Submittal of Dangerous Waste Permit (DWP) Package Low-Activity Waste (LAW)-018 for the Waste Vitrification Facility," 09-ESQ-056, dated February 24, 2009. *A990059*
  3. Ecology letter from E. Fredenberg to S. J. Olinger, ORP, and W. S. Elkins, BNI, "Submittal of Design Package LAW-018 for incorporation in the next Draft Permit for the 'Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste,' Part III, Operating Unit 10 (Waste Treatment and Immobilization Plant), WA7890008967 (WTP Permit)," dated March 18, 2009. *0080660*
  4. Ecology letter from J. A. Hedges to Distribution, "Final Permit Decision on the April 20 through June 5, 2009, Comment Period for the Hanford Waste Treatment and Immobilization Plant Dangerous Waste Permit (WTP Permit)," dated July 31, 2009. *0082634*

Please find in Attachment 1 the WTP 2010 Progress Report. The purpose of the report is to meet Condition III.10.C.2.h of Reference 1 that requires a progress report be generated if at least one Compliance Schedule item is not completed within a 12 month period. The report is due February 24, 2010, 12 months after completion of the last Compliance Schedule item.

Ms. Jane A. Hedges  
10-ESQ-031

-2-

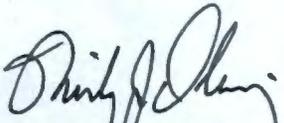
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The last Compliance Schedule submittal was Low-Activity Waste (LAW) Package 18 (Reference 2), which the Washington State Department of Ecology accepted as completion of Compliance Schedule Item 24 (Reference 3), to submit engineering information for equipment for each LAW Vitrification Miscellaneous Treatment Unit sub-system. LAW Package 18 was accepted for incorporation into the WTP Permit on July 31, 2009, per Reference 4, closing Compliance Schedule Item 24. Projected interim requirement completion dates for remaining Compliance Schedule dates will be submitted as a Class 1 permit modification in accordance with Permit Condition III.10.C.2.h, following re-issuance of the Hanford Federal Facility Agreement and Consent Order.

Bechtel National, Inc. and the U.S. Department of Energy, Office of River Protection certification statements are provided in Attachments 2 and 3 respectively.

If you have any questions, please contact me, or your staff may contact Ms. Gae M. Neath, Environmental Compliance Division, (509) 376-7828, or Mr. Brad Erlandson, BNI, (509) 371-3428.



Shirley J. Olinger, Manager  
Office of River Protection



F. M. Russo, Project Director  
Bechtel National, Inc.

ESQ:GMN

Attachments (3)

cc w/attachs: See page 3

Ms. Jane A. Hedges  
10-ESQ-031

-3-

CCN: 211304

cc w/attachs:

G. R. Ashley, BNI  
R. W. Bradford, BNI  
R. E. Brown, BNI  
D. M. Busche, BNI  
J. M. Colby, BNI  
B. L. Curn, BNI  
J. H. Dunkirk, BNI  
B. G. Erlandson, BNI  
P. A. Fisher, BNI  
G. F. Futrell, BNI  
N. F. Grover, BNI  
R. S. Hajner, BNI  
R. M. Kacich, BNI  
M. K. Robinson, BNI  
F. M. Russo, BNI  
J. A. Scarpino, BNI  
A. R. Veirup, BNI  
D. J. Sommer, North Wind  
**Administrative Record (WTP H-0-8)**  
BNI Correspondence

**Attachment 1  
10-ESQ-031  
(14 Pages)**

**WTP 2010 Progress Report**

## WTP 2010 Progress Report

### 1. Introduction

This report documents compliance with the Hanford Tank Waste Treatment and Immobilization Plant (WTP) Unit Specific Condition III.10.C.2.h of the Hanford Facility Resource Conservation and Recovery Act Permit (RCRA) (also referred to as the Dangerous Waste Permit [DWP]). This condition reads as follows:

“III.10.C.2.h. The Permittees must complete at least one Compliance Schedule interim requirement every 12 months, as specified in operating Unit 10, Appendix 1.0 of this Permit. If no interim requirement will be completed within a 12 month period, the Permittees will submit progress reports to Ecology for incorporation into the Administrative Record. Progress report Compliance Schedule dates will be submitted to Ecology as a Class 1 prime permit modification, for incorporation into Operating Unit 10, Appendix 1.0 of this Permit. Progress reports will contain at a minimum, the following information:

- i. A description of the portion of the interim requirement completed;
- ii. Summaries of any problems affecting timely completion of the interim requirement;
- iii. A description of the plans for completing the remaining portion of the interim requirement, including any alternatives;
- iv. Projected interim requirement completion date.”

A table summarizing the status of WTP Interim Compliance Schedule items that addresses each of the above requirements is provided in Appendix 1. Projected interim requirement completion dates will be submitted to the Washington State, Department of Ecology (Ecology) as a Class 1 prime permit modification, in accordance with Permit Condition III.10.C.2.h, following reissuance of the Hanford Federal Facility Agreement and Consent Order (HFFACO). Additional supporting information is provided below.

### 2. Issues Impacting Completion (III.10.C.2.h.ii):

Interim compliance schedule requirements not completed include engineering and operations related items. This progress report provides an update to the engineering and construction status of the WTP.

Compliance schedule dates were originally established when the project was scheduled to begin operations in 2007. Revised seismic criteria, use of final rather than initial design for permit packages, and several other factors have impacted the project schedule and moved the operations date of the WTP from 2007 to 2019. This has stretched the design and construction phases of the project and delayed activities that are essential to the completion of the interim compliance schedule requirements. The specific issues impacting completion of the interim requirements are documented in the U. S. Department of Energy (DOE), Office of River Protection (ORP) letter 06-WTP-011 (CCN 135388), which is included as Appendix 2 to this progress report.

### **3. Work Completed to Date (III.10.C.2.h.i):**

The WTP continues to make significant progress in the areas of DWP permitting, design, and construction. Major accomplishments, along with project challenges, are summarized in the following subsections.

#### **3.1 Permitting**

Work has progressed on Compliance Schedule requirements associated with incorporating design into the permit. This includes submittal of design package Low-Activity Waste Facility (LAW) LAW-018, 94 permit change notices (PCN) submitted with 97 approved, and an increased number of design change documents, since the last WTP Progress Report was submitted in June 2007 (CCN 145816). Piping and Instrumentation Diagrams (P&ID) are being replaced with enhanced P&IDs for the Pretreatment Facility (PTF), providing a higher level of design detail. In addition, permit versions of design documentation are being replaced with updated source documents.

Since the last WTP Progress Report was submitted in June 2007 (CCN 145816), two WTP permit modifications have been implemented, and progress continues toward the Hanford Facility RCRA Permit renewal. The 2+2 permit modification was issued by Ecology on October 29, 2007, and became effective December 7, 2007. Bechtel National, Inc. (BNI), and DOE-ORP provided significant support to Ecology for the issuance of the DWP incorporating the 2+2 melter configuration permit modification. Subsequently, design package LAW-018 was submitted in February 2009, and incorporated into the permit on July 31, 2009, completing Compliance Schedule Item 24. The July 2009 permit modification included information on LAW Melter Process System ancillary equipment (LAW-018), PTF In-Cell Handling System Decontamination Soak Tank (PTF-095), LAW leak detection capability, LAW waste removal capability, pipe stress design criteria, diagrams and data sheets for LAW and HLW mechanical handling systems, P&IDs for the HLW melter system film cooler utilities, and mechanical drawings for the HLW melter assemblies. In addition, this modification incorporated new permit conditions resulting from settlement of a permit appeal, regarding identification, treatment, and disposal of WTP secondary waste. Finally, the WTP recently provided informal comments to Ecology supporting renewal of the Hanford Facility RCRA Permit.

#### **3.2 Design and Construction**

During 2009, significant progress was made on the WTP Project. For the PTF, the first concrete slab at the 23-meter (77-foot) elevation was placed, and crews began installing one and a half-meter-wide (5-foot-wide) HVAC duct that will span the facility's 122-meter (400-foot) long hot cell. The HLW Facility's crews installed a 38-metric ton (42-ton) door liner, which will hold two shield doors in the facility's filter cave. Two large mixing vessels were installed in the LAW Facility, designed to blend dry glass-forming materials before being combined with waste product and melted. The Analytical

## WTP 2010 Progress Report

Laboratory (LAB) crews continued to install hot cell partition dividers and air handling systems. In the Balance of Facilities (BOF), structural steel was installed around glass-former hoppers and the cathodic protection system was put into service, which protects miles of underground piping from corrosion.

The overall project is approximately 52% complete, including the following:

- Approximately 78% design complete
- Approximately 56% construction complete on BOF
- Approximately 57% construction complete on LAW
- Approximately 59% construction complete on LAB
- Approximately 29% construction complete on PTF
- Approximately 24% construction complete on HLW

From project inception through 2009, WTP placed 148,000 cubic meters (5.20 million cubic feet) of concrete; erected 13,500 metric tons (14,900 tons) of structural steel; installed 80,000 meters (264,000 linear feet) of pipe; and 77,000 meters (253,000 linear feet) of cable and wire.

### 3.3 Challenges

Challenges associated with completion of missed Compliance Schedule items were documented in notification letters to Ecology and are noted in Appendix 1 to this report. The Project continues to resolve technical issues that could impact completion of Compliance Schedule items, potentially impacting construction. Major challenges are summarized below.

- PTF Separations Processes. Phase I testing was completed at the Pretreatment Engineering Platform (PEP), a one-quarter-scale demonstration facility built to confirm the efficiency and throughput of select pretreatment processes. Phase I testing confirmed that the ultrafiltration process will effectively separate the solid and liquid waste, and that the leaching process will dissolve a sufficient amount of aluminum to reduce the overall quantity of high-level waste glass produced.
- Pulse Jet Mixing Design. An M3 Mixing Test Platform, has been constructed and is being utilized to confirm key Pretreatment vessel mixing system technologies. The platform is demonstrating the effectiveness of WTP's pulse-jet mixers (PJM) for specific vessels, which are essential to keep waste solids suspended throughout the pretreatment process. PJMs will be installed in each of the 34 vessels in the PTF, as well as four in the HLW Facility, to keep the waste suspended throughout the treatment process.
- LAW Secondary Offgas Redesign. Assessments have identified areas that require further evaluation relative to industrial safety provisions for the LAW secondary offgas system, where it operates at slightly positive pressure. The secondary offgas system is undergoing design changes, including locating the fans at the end of the offgas treatment train.

## WTP 2010 Progress Report

- PJM Vessel Alterations. The PJM vessels are undergoing design changes to increase supports and to alter existing supports inside the vessel to accommodate revised loading criteria. The re-analysis of vessels is primarily due to increased seismic loads, multiple overblow loads, and impacts from temperature changes.
- Stress/Corrosion/Cracking. Corrosion data sheets require revision to reflect vessel operating temperature ranges, consistent with preventing stress, corrosion and cracking in selected materials.
- Erosion. Permit Condition III.10.E.2.d.i prohibits installation of 11 PJM vessels until Ecology provides written approval of BNI's wear allowance. Ecology has informally reviewed and accepted the erosion test report and resulting design basis erosion estimates. Ecology is awaiting BNI's final margin calculation for review.
- Material at Risk (MAR). The original design basis for radioactive MAR, or "source term," is derived from contract maximums based on a conservative approach that yields a dose significantly higher than that which will actually be fed to the plant. This leads to higher safety classifications, increased design complexity, and excessive shielding. The design basis for MAR is being revised to be consistent with the basis used by the Tank Farm Contractor. BNI and DOE are addressing DNFSB staff concerns related to implementation of the new design basis.
- Hydrogen in Piping and Ancillary Vessels (HPAV). Concern about potential generation of HPAV necessitates designing systems to prevent or mitigate postulated hydrogen detonation events. BNI and DOE initiated HPAV test programs in 2008 for piping system response data to develop more realistic design solutions for postulated hydrogen detonation events in WTP piping.
- Final Independent Qualified Registered Professional Engineer (IQRPE) Reports. Initially, IQRPE Reports that accompanied design packages and permit modifications were submitted as "design intent," based on the rationale that design proposal information and drawings supplied to vendors by BNI was sufficient for permitting. The requirement to submit IQRPE Reports based on "final" vendor design information (CCN 123206/05-ED-052) delays submittal of permit design packages, potentially impacting construction.

#### **4. Plans for Completion of Compliance Schedule Items (III.10.C.2.h.iii) and Revised Compliance Schedule Dates (III.10.C.2.h.iv):**

Revision to the Compliance Schedule dates will be proposed upon issuance of the HFFACO, forecast for April 2010. The proposed, revised dates will be submitted to Ecology as a Class 1 prime permit modification, in accordance with Permit Condition III.10.C.2.h. Projected completion dates for remaining Compliance Schedule items are provided in Appendix 1.

## Appendix 1

### WTP Interim Compliance Schedule 2010 Progress Report

**WTP INTERIM COMPLIANCE SCHEDULE  
2010 PROGRESS REPORT**

Item	Compliance Schedule Submittal	Interim Compliance Date in the Permit	Projected Completion Date <sup>1</sup> (III.10.C.2.h.iv)	Portion Complete (III.10.C.2.h.i)	Potential Issues (III.10.C.2.h.ii)	Plan for Completion (III.10.C.2.h.iii)
	<b>III.10.C.2</b>					
1	Submit documentation stating the WTP has been constructed in compliance with the Permit	1-Mar-08	31-Dec-18 <sup>2</sup>		CCN 173308	Completed 24590-WTP-PL-MGT-09001, <i>WTP DWP Certification Plan</i>
2	Submit updated Site Transportation Report for incorporation into the Administrative Record	Complete	N/A	N/A	N/A	N/A
33	Update and resubmit the Part A, form 3 Permit Application	Complete	N/A	N/A	N/A	N/A
34	DELETED	DELETED	N/A	N/A	N/A	N/A
	<b>III.10.C.3</b>					
3	Revise and Submit Waste Analysis Plan and associated Quality Assurance Project Plan to Ecology for review and approval	1-Apr-07	31-Dec-18 <sup>2</sup>	Addendum update provided to Ecology for 3/2010 Sitewide Permit Renewal	CCN 149986, 4/12/07	Update/finalize to support operations prior to cold commissioning
	<b>III.10.C.5</b>					
4	Update and submit for approval "Procedures to Prevent Hazards", Chapter 6.0 Sections 6.3, 6.4, 6.5 and the Inspection Schedule	1-Apr-07	31-Dec-18 <sup>2</sup>	Addendum update provided to Ecology for 3/2010 Sitewide Permit Renewal	CCN 149986, 4/12/07	Update/finalize to support operations prior to cold commissioning
	<b>III.10.C.6</b>					
5	Update and submit the Contingency Plan	1-Apr-07	31-Dec-18 <sup>2</sup>	Addendum update provided to Ecology for 3/2010 Sitewide Permit Renewal	CCN 149986, 4/12/07	Update/finalize to support operations prior to cold commissioning
	<b>III.10.C.7</b>					
6	Update and resubmit for review and approval Training Program description in Chapter 8 of the Permit	1-Apr-07	31-Dec-18 <sup>2</sup>	Addendum update provided to Ecology for 3/2010 Sitewide Permit Renewal	CCN 149986, 4/12/07	Update/finalize to support operations prior to cold commissioning
7	Submit under separate cover the actual WTP Dangerous Waste Training Plan for incorporation into Administrative Record	1-Apr-07	31-Dec-18 <sup>2</sup>		CCN 149986, 4/12/07	Update/finalize to support operations prior to cold commissioning
	<b>III.10.C.8</b>					
8	Update and resubmit the Closure Plan for approval	1-Apr-07	31-Dec-18 <sup>2</sup>	Addendum update provided to Ecology for 3/2010 Sitewide Permit Renewal	CCN 149986, 4/12/07	Update/finalize to support operations prior to cold commissioning
	<b>III.10.C.11</b>					
9	Submit Risk Assessment Work plan, revised in consultation with Ecology	Complete	N/A	N/A	N/A	N/A
	<b>III.10.C.15</b>					
36	Submit System Descriptions for mechanical Handling Systems identified in Permit Table III.10.C.A., for incorporation into the Administrative Record.	Complete	N/A	N/A	N/A	N/A

**WTP INTERIM COMPLIANCE SCHEDULE  
2010 PROGRESS REPORT**

Item	Compliance Schedule Submittal	Interim Compliance Date In the Permit	Projected Completion Date <sup>1</sup> (III.10.C.2.h.iv)	Portion Complete (III.10.C.2.h.i)	Potential Issues (III.10.C.2.h.ii)	Plan for Completion (III.10.C.2.h.iii)
37	Submit Mechanical Handling Diagrams and Mechanical Handling Data Sheets for the following Pieces of equipment: a. HDH-CRN-00005; b. HEH-CRN-00003; c. HPH-CRN-00001; d. HPH-CRN-00002; e. HSH-CRN-00001; f. HSH-CRN-00014; g. LEH-CRN-00003; h. LPH-CRN-00002; i. HEH-CRN-00001.	Complete	N/A	N/A	N/A	N/A
38	Submit equipment instrument logic narrative description for mechanical handling equipment, as specified in Permit condition III.10.C.15.a.i.A.	Prior to initial receipt of dangerous waste	30-Jun-18 <sup>3</sup>			Update/finalize to support operations prior to cold commissioning
39	Submit descriptions of operational procedures for mechanical handling systems, as specified in Permit Condition III.10.C.15.a.ii.B.	Prior to initial receipt of dangerous waste	30-Jun-18 <sup>3</sup>			Update/finalize to support operations prior to cold commissioning
<b>CONTAINERS</b>						
10	Submit detailed information associated with containers and container management areas	22-Mar-06	18-Feb-2012 <sup>4</sup>	PT and HLW portion	-CCN 135234, 3/31/06 -IQRPE Final Design	BOF-001
11	Submit descriptions of container management practices	1-Apr-07	31-Dec-18 <sup>2</sup>		CCN 149986, 4/12/07	Update/finalize to support operations prior to cold commissioning
<b>TANK SYSTEMS</b>						
12	Submit engineering information for each secondary containment and leak detection system for the WTP Tank System to be included in the permit	30-Oct-05	Complete	N/A	N/A	N/A
13	Submit engineering information for each dangerous waste tank and primary sump to be included in the permit	29-Apr-06	17-Dec-14 <sup>5</sup>	LAW portion	-CCN 139800, 5/12/06 -IQRPE Final Design	LAW-035 HLW-013 PTF-042 PTF-094
14	Submit engineering information for each tank system ancillary equipment to be included in the permit	29-Apr-06	17-Dec-14 <sup>5</sup>	LAW and HLW portion	CCN 139800, 5/12/06 IQRPE Final Design	PTF-096
15	Submit descriptions of tank management practices	1-Apr-07	31-Dec-18 <sup>2</sup>		CCN 149986, 4/12/07	
40	Submit WTP document <i>Pipe Stress Design Criteria</i> including "Pipe Stress Criteria" and "Span Method Criteria," 24590-WTP-DC-PS-01-001.	Complete	N/A	N/A	N/A	N/A
<b>CONTAINMENT BUILDINGS</b>						
16	Submit engineering information for each containment building to be included in the permit	Complete	N/A	N/A	N/A	N/A
17	Submit descriptions of containment building management practices	1-Apr-07	31-Dec-18 <sup>2</sup>		CCN 149986, 4/12/07	CCN 149986, 4/12/07

**WTP INTERIM COMPLIANCE SCHEDULE  
2010 PROGRESS REPORT**

Item	Compliance Schedule Submittal	Interim Compliance Date In the Permit	Projected Completion Date <sup>1</sup> (Ill.10.C.2.h.iv)	Portion Complete (Ill.10.C.2.h.i)	Potential Issues (Ill.10.C.2.h.ii)	Plan for Completion (Ill.10.C.2.h.iii)
<b>PRETREATMENT PLANT MISCELLANEOUS UNITS SYSTEMS</b>						
18	Submit engineering information for secondary containment and leak detection system for the Pretreatment Plant Miscellaneous Unit Systems	30-Oct-06	17-Dec-14 <sup>5</sup>	PTF-006 PTF-058 PTF-064  DCNs for waste removal and leak detection completed in 2009	CCN 147905, 11/13/06	Submit waste removal and leak detection documents
19	Submit engineering information for Pretreatment Plant Miscellaneous Unit Systems	11-Feb-06	17-Dec-14 <sup>5</sup>	PTF-043 PTF-067 PTF-068 PTF-077	•CCN 136387, 2/23/06 •IQRPE Final Design	PTF-079a, PTF-079b PTF-079c, PTF-080a PTF-080b, PTF-080c PTF-080d, PTF-080e PTF-080f, PTF-080g
20	Submit engineering information for Pretreatment Plant Miscellaneous Unit Systems equipment	12-Apr-06	17-Dec-14 <sup>5</sup>	PTF-045 PTF-069 PTF-070 PTF-083	•CCN 139037, 4/24/06 •IQRPE Final Design	PTF-082 PTF-098
21	Submit descriptions of management practices for the Pretreatment Miscellaneous Treatment System	1-Apr-07	31-Dec-18 <sup>2</sup>		CCN 149986, 4/12/07	
<b>LAW SHORT TERM MELTER UNIT</b>						
22	Submit engineering information for LAW Vitrification Miscellaneous Treatment Unit secondary containment	Complete	N/A	N/A	N/A	N/A
23	Submit engineering information for LAW Vitrification Miscellaneous Treatment Unit sub-system	18-Aug-06	15-Mar-13 <sup>6</sup>	LAW-017	•CCN 144823, 9/1/06 •LAW secondary offgas redesign •IQRPE Final Design	LAW-016 LAW-025 LAW-026a LAW-026b LAW-026c LAW-027 LAW-028
24	Submit engineering information for equipment for each LAW Vitrification Miscellaneous Treatment Unit sub-system.	Complete	N/A	N/A	N/A	N/A
25	Submit descriptions of management practices for the LAW Vitrification Miscellaneous Treatment Unit System.	1-Apr-07	31-Dec-18 <sup>7</sup>		CCN 149986, 4/12/07	
26	Submit LAW Vitrification Environmental Performance Demonstration Test Plan for Ecology review and approval	2-Oct-06	30-Jun-18 <sup>8</sup>		CCN 146704, 10/16/06	CCN 161125, 11/20/07

**WTP INTERIM COMPLIANCE SCHEDULE  
2010 PROGRESS REPORT**

Item	Compliance Schedule Submittal	Interim Compliance Date in the Permit	Projected Completion Date <sup>1</sup> (III.10.C.2.h.iv)	Portion Complete (III.10.C.2.h.i)	Potential Issues (III.10.C.2.h.ii)	Plan for Completion (III.10.C.2.h.iii)
<b>HLW SHORT TERM MELTER UNIT</b>						
27	Submit engineering information for HLW Vitrification Miscellaneous Treatment Unit secondary containment	Complete	N/A	N/A	N/A	N/A
28	Submit engineering information for HLW Vitrification Miscellaneous Treatment Unit sub-system	Complete	N/A	N/A	N/A	N/A
29	Submit engineering information for equipment for each HLW Vitrification Miscellaneous Treatment Unit sub-system.	Complete	N/A	N/A	N/A	N/A
41	Submit the following source drawings to complete HLW melter permit packages HLW-018 and HLW-019: P&ID <i>HLW Melter 1 System Film Cooler Utilities</i> , 24590-HLW-M6- HMP-00012, P&ID <i>HLW Melter 2 System Film Cooler Utilities</i> , 24590-HLW-M6-HMP-20012, HLW Melter Mechanical Drawings showing the melter physical attributes and overall dimensions.	Complete	N/A	N/A	N/A	N/A
30	Submit descriptions of management practices for the HLW Vitrification Miscellaneous Treatment Unit System.	1-Apr-07	30-Jun-18 <sup>3</sup>		CCN 149986, 4/12/07	
31	Submit HLW Vitrification Environmental Performance Demonstration Test Plan for Ecology review and approval	2-Oct-06	30-Jan-18 <sup>9</sup>		CCN 146704, 10/16/06	CCN 161125, 11/20/07
<b>Report of Progress</b>						
35	Submit 2005 Report of Progress	Complete	N/A	N/A	N/A	N/A
42	Submit 2007 Report of Progress	Complete	N/A	N/A	N/A	N/A
<b>Final Compliance Date</b>						
32	Final Compliance Date	28-Feb-09	31-Dec-18 <sup>2</sup>		CCN 192379, 3/11/09	

<sup>1</sup>Projected Compliance Schedule dates to be renegotiated upon issuance of HFFACO and will be submitted on a PCN per III.10.c.2.h.

<sup>2</sup>Date based on Proposed Consent Decree and TPA Modifications for Hanford Tank Waste Treatment, start of PTF Cold Chemical Commissioning.

<sup>3</sup>Date based on Proposed Consent Decree and TPA Modifications for Hanford Tank Waste Treatment, start of HLW Cold Chemical Commissioning.

<sup>4</sup>Date based on one year prior to start of construction of Failed Melter Storage Facility

<sup>5</sup>Date based on completion of PTF design plus one year.

<sup>6</sup>Date based on completion of LAW secondary offgas system design plus one year.

<sup>7</sup>Date based on Proposed Consent Decree and TPA Modifications for Hanford Tank Waste Treatment, start of LAW Cold Chemical Commissioning.

<sup>8</sup>Date based on Proposed Consent Decree and TPA Modifications for Hanford Tank Waste Treatment, 180 days prior to start of LAW Cold Commissioning.

<sup>9</sup>Date based on Proposed Consent Decree and TPA Modifications for Hanford Tank Waste Treatment, 180 days prior to start of HLW Cold Commissioning.

## Appendix 2

Letter from R. J. Schepens, ORP, and J. P. Henschel, BNI,  
“Waste Treatment and Immobilization Plant (WTP) Dangerous Waste  
Permit Compliance Schedule,” 06-WTP-011, dated February 1, 2006

**Office of River Protection**



FEB 01 2006

06-WTP-011

Ms. Jane Hedges, Program Manager  
Nuclear Waste Program  
State of Washington  
Department of Ecology  
3100 Port of Benton Blvd.  
Richland, Washington 99352

**RPP-WTP  
RECEIVED**

FEB 01 2006

**BY PDC**

Dear Ms. Hedges:

**WASTE TREATMENT AND IMMOBILIZATION PLANT (WTP) DANGEROUS WASTE  
PERMIT COMPLIANCE SCHEDULE**

- References:
1. WA7890008967, "Dangerous Waste Portion of the Hanford Facility Resource Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of Dangerous Waste, Chapter 10 and Attachment 51, Waste Treatment and Immobilization Plant."
  2. ORP letter from R. J. Schepens to M. A. Wilson, Ecology, "Independent Qualified Registered Professional Engineer (IQRPE) Reports for the Hanford Tank Waste Treatment and Immobilization Plant (WTP)," 05-ED-052, dated June 17, 2005.

The purpose of this letter is to provide you with notice that the near term items in the Compliance Schedule of the WTP portion of the Hanford Facility Resource Conservation and Recovery Act of 1976 Permit are in jeopardy and are unrecoverable. In addition, this letter is also intended to provide notification to the U.S. Department of the Ecology (Ecology) pursuant to WAC 173-303-815(3)(a)(iii). Though the resulting final WTP cost and schedule are still not known, based on the initial revised Estimate at Completion (EAC) submittal from Bechtel National, Inc. (BNI) December 22, 2005, the remaining Compliance Schedule Items in the attachment incorporated into the permit as of January 17, 2006 (Reference 1) will not be met. Though the work could potentially be re-sequenced to accomplish some items, this would negate the necessary consistency required between facilities as designs are advanced. Completion of the remaining compliance schedule items is dependent upon the finalization of the WTP EAC, and resolution of related Hanford Federal Facility Agreement and Consent Order (HFFACO) milestone issues.

Factors affecting our ability to meet the compliance due dates include:

- Commodity growth;
- Revised seismic criteria affecting structural design of the Pretreatment (PT) and High-Level Waste Facilities;
- Evaluation of hydrogen buildup in piping and vessels in the PT Facility;
- Difficulty in mixing slurries in the PT Facility;
- A reduced Fiscal Year 2006 funding level; and
- Use of final rather than initial design for permit packages.

Ms. Jane Hedges  
06-WTP-011

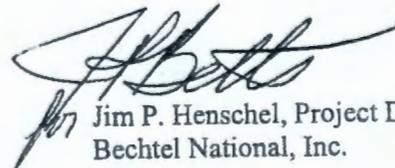
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As Ecology is aware, the compliance schedule was based on submittal of permit design packages, and IQRPE reports, based on initial design information, not final vendor information. This approach resulted in the IQRPE including words regarding "design intent" in their reports. Ecology has advised the U.S. Department of Energy (DOE), Office of River Protection (ORP) and BNI that they will not accept permit packages based on initial design information any longer. ORP and BNI have agreed to provide permit design packages based on vendor information and calculations, so that the "design intent" language can be deleted from IQRPE certifications (Reference 2). As part of these discussions, Ecology was advised that this would impact the schedule for permit design package submittal.

DOE, BNI, and the U. S. Army Corps of Engineers are in the process of evaluating the impact of these changes through the development of a revised cost and schedule estimate with completion scheduled for the summer of 2006. Additional information is contained in the Semi-Annual Compliance Report for the period July - December 2005 to be submitted in accordance with HFFACO milestone M-62-01 under separate cover. DOE and BNI will continue to constrain construction activities to those elements that have been incorporated into the permit or are authorized by Ecology.

Should you have any questions, please contact us, or your staffs may contact Lori Huffman, ORP, (509) 376-0104 or Bradley Erlandson, BNI, (509) 371-3826.

  
Roy J. Schepens, Manager  
Office of River Protection

  
Jim P. Henschel, Project Director  
Bechtel National, Inc.

WPD:JLS

Attachment

cc: See page 3

Ms. Jane Hedges  
06-WTP-011

-3-

cc w/attach:

B. G. Erlandson, BNI  
J. P. Henschel, BNI  
R. E. Lawrence, BNI  
J. Markillie, BNI  
J. Cox, CTUIR  
S. Harris, CTUIR  
M. Anderson-Moore, Ecology  
B. L. Becker-Khaleel, Ecology  
R. K. Biyani, Ecology  
L. Cusack, Ecology  
S. L. Dahl, Ecology  
G. P. Davis, Ecology  
K. Elsethagen, Ecology  
E. A. Fredenburg, Ecology  
T. Z. Gao, Ecology  
J. Hensley, Ecology  
G. Bohnee, NPT  
K. Niles, Oregon Energy  
A. C. McKarns, RL  
R. Jim, YN  
Administrative Record  
Environmental Portal, LMSI

### Near Term WTP Compliance Schedule Items

Item Number	Description	Due Date
Item 10	Submit detailed information associated with containers and container management area	03/22/06
Item 13	Submit engineering information for each dangerous waste tank and primary sump to be included in the permit	04/29/06
Item 14	Submit engineering information for each tank system ancillary equipment to be included in the permit	04/29/06
Item 19	Submit engineering information for Pretreatment Plant Miscellaneous Unit Systems	02/11/06
Item 20	Submit engineering information for Pretreatment Plant Miscellaneous Unit Systems equipment	04/12/06
Item 24	Submit engineering information for equipment for each LAW Vitrification Miscellaneous Treatment Unit subsystem	06/02/06
Item 28,	Submit engineering information for HLW Vitrification Miscellaneous Treatment Unit sub-system	06/18/06
Item 29	Submit engineering information for equipment for each HLW Vitrification Miscellaneous Treatment Unit sub-system	06/18/06

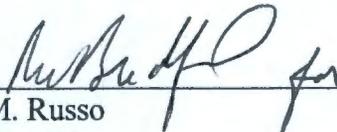
Attachment 2  
10-ESQ-031  
(1 Page)

Bechtel National, Inc. Certification Statement

## Bechtel National, Inc. Certification

The following certification statement is provided consistent with Contract No. DE-AC27-01RV14136, Section H.26, Environmental Permits, paragraph (g) for the submittal Hanford Facility RCRA 2010 WTP Progress Report.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

  
\_\_\_\_\_  
F. M. Russo  
Project Director

  
\_\_\_\_\_  
Date

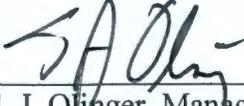
**Attachment 3  
10-ESQ-031  
(1 Page)**

**U.S. Department of Energy, Office of River Protection  
Certification Statement**

## U.S. Department of Energy, Office of River Protection Certification

The following certification statement is provided for the submittal of Hanford Facility RCRA 2010 WTP Progress Report.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

  
\_\_\_\_\_  
S. J. Olinger, Manager  
U.S. Department of Energy  
Office of River Protection

2/18/10  
\_\_\_\_\_  
Date