

Office of River Protection

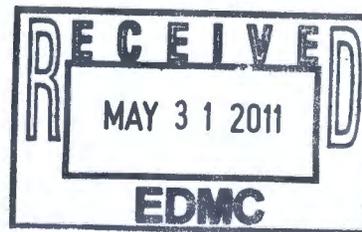


MAY 20 2011

11-ESQ-116

CCN: 230450

Mr. Ted Sturdevant, Director
Washington State
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504



Dear Mr. Sturdevant:

SUBMITTAL OF HANFORD TANK WASTE TREATMENT AND IMMOBILIZATION PLANT (WTP) 2011 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 Waste Removal Capability for the Pretreatment Facility (24590-PTF-PER-M-04-0010, Revision 2) Document," 10-ESQ-142, dated May 26, 2010. *0088376*
 3. ORP letter from S. J. Olinger to J. A. Hedges, Ecology, "Submittal of Waste Removal Capability for the Pretreatment Facility (24590-PTF-PER-M-04-0011, Revision 1) Document," 10-ESQ-041, dated April 6, 2010. *0086678*
 4. Ecology letter from D. McDonald to S. L. Charboneau, ORP, "Closure of Waste Treatment and Immobilization Plant Compliance Schedule Item 18 of 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 (WTP Permit)," 11-NWP-004, dated March 24, 2011. *0095007*

Please find in Attachment 1, the WTP 2011 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 May 26, 2011, 12 months after completion of the last permit deliverable under Compliance Schedule Item 18.

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The last Compliance Schedule submittal comprised the following documents:

- 24590-PTF-PER-M-04-0010, Revision 2, "Leak Detection Capability in the Pretreatment Facility;" and
- 24590-PTF-PER-M-04-0011, Revision 1, "Waste Removal Capability for the Pretreatment Facility."

The documents were submitted to the Washington State Department of Ecology under separate transmittals via References 2 and 3, respectively. The transmittal of Leak Detection Capability in the Pretreatment Facility (24590-PTF-PER-M-04-0010, Revision 2) on May 26, 2010, closed Compliance Schedule Item 18, to submit engineering information for secondary containment and leak detection for the Pretreatment Facility Miscellaneous Unit Systems. Closure of Compliance Schedule Item 18 is documented in Reference 4. 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.

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 Lori A. Huffman, Director, Environmental Compliance Division, (509) 376-0104, or Brad G. Erlandson, BNI, (509) 371-3703.



Scott L. Samuelson, Manager
Office of River Protection



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

ESQ:GMN

Attachments: (3)

cc: See page 3

Mr. Ted Sturdevant
11-ESQ-116

-3-

MAY 20 2011

CCN: 230450

cc w/attachs:

- R. W. Bradford, BNI
- R. E. Brown, BNI
- W. T. Clements, BNI
- S. S. Crawford, BNI
- J. H. Dunkirk, BNI
- B. G. Erlandson, BNI
- P. A. Fisher, BNI
- G. F. Futrell, BNI
- R. S. Hajner, BNI
- R. M. Kacich, BNI
- W. S. Oxenford, BNI
- R. L. Patterson, BNI
- F. M. Russo, BNI
- S. L. Sawyer, BNI
- J. A. Scarpino, BNI
- J. M. St. Julian, BNI
- J. Cantu, Ecology
- S. Dahl, Ecology
- J. A. Hedges, Ecology
- D. McDonald, Ecology
- J. Wallace, Ecology
- D. J. Sommer, North Wind
- D. M. Busche, URS
- J. M. Colby, URS
- B. L. Curn, URS

Administrative Record (WTP H-0-8)

BNI Correspondence

Attachment 1
11-ESQ-116
(6 Pages)

WTP 2011 Progress Report

WTP 2011 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 (RCRA) Permit (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. 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 hot 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 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 packages Low-Activity Waste (LAW) Facility LAW-034 and Pretreatment (PT) Facility PTF-099, 32 Permit Change Notices approved by Ecology, and an increased number of design change documents, since the last WTP Progress Report was submitted in February 2010 (10-ESQ-031/CCN: 211304). Piping and Instrumentation Diagrams (P&ID) are being replaced with enhanced P&IDs, providing a higher level of design detail. In addition, permit versions of design documentation continue to be replaced with updated source documents.

Since the last WTP Progress Report was submitted in February 2010 (10-ESQ-031/CCN: 211304), one WTP permit modification has been implemented, and progress continues toward the Hanford Facility RCRA Permit renewal. Design packages LAW-034 and PTF-099 were submitted in July 2010 (10-ESQ-212/CCN 222644), and incorporated into the permit on January 31, 2011 (CCN: 230792). The January 2011 permit modification included information on LAW and PT Facility tank system secondary containment for the autosampling system; integrity assessment program and schedules for DWP-regulated equipment in the Analytical Laboratory (Lab), LAW, PT, and High-Level Waste (HLW) facilities; and PT Facility leak detection and waste removal capability documents, which closed Compliance Schedule Item 18. In addition, Permit Conditions III.10.C.9.d and III.10.C.9.h were revised to change the reporting period for minor nonconformances or construction deficiencies from five calendar days to seven calendar days. Updates to DWP Chapter 4, Process Information and Chapter 11, Closure, are currently in progress. Comment resolution is underway to support renewal of the Hanford Facility RCRA Permit.

3.2 Design and Construction

During 2010, Hanford Site contractors made significant progress on the WTP Project. For the PT Facility, the initial fifth lift concrete walls were installed, reaching the 98-foot (nearly 30 meters) elevation. In addition, a 30-ton (27-metric ton) capacity overhead crane and a 5-ton (4.5-metric ton) overhead crane, as well as an 85-ton (77-metric ton) shield door were installed in the hot cell.

Engineers for the HLW Facility completed the Heating, Ventilation and Air-Conditioning (HVAC) system design, which will contain more than 600 tons (544 metric tons) of materials and nearly 150 major pieces of equipment. Construction crews for the facility

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completed precision installations for four protective shield doors in the facility's melter area; two of the doors are 14 tons (12 metric tons), and two are 50 tons (45 metric tons).

Two 125-ton (113 metric ton) melter assemblies that will later be installed in the LAW Facility were delivered and staged at the construction site. They will be the world's largest waste-processing melters in operation.

For the Lab, engineers completed the mechanical systems design for the facility. Additionally, the equipment for the LAW and Lab autosampling system, an essential quality-control system, was received.

For the Balance of Facilities (BOF), crews continued to install underground piping for the anhydrous ammonia facility and air-receiving tanks and piping for the glass former building.

In September 2010, the construction site was awarded the DOE Voluntary Protection Program Star status for outstanding safety and health programs. Star status is the highest level of recognition under the program.

Major achievements in January of 2011 included setting a 102-ton (93-metric ton) shield door in the PT Facility hot cell, the largest of more than 100 shield doors that will be installed at WTP. Crews also erected the first of the structural steel that will reach PT's 98-foot (nearly 30 meters) elevation. This is the facility's last level of structural steel for a portion of the building, above which the roof will be installed. For a portion of the building, the roof level is at 119-foot (36 meter) elevation.

Additionally, WTP workers set a 10-ton (9-metric ton), 5-foot-diameter (1.5-meter diameter) HVAC duct in the HLW Facility. The nuclear-quality duct is the first of two that will connect to 50 primary HEPA filters. These components are part of HLW's extensive filter system, essential to maintaining contamination boundaries during plant operations.

In February 2011, WTP received a 50-ton (45-metric ton) carbon dioxide storage vessel that is integral to the LAW Facility's container decontamination system. The vessel will store up to 32,000 gallons of liquid carbon dioxide used for cleaning the outside of glass-filled stainless steel containers before they leave the facility.

As of February 28, 2011, the overall project is approximately 58% complete, including the following:

- Approximately 80% design complete (overall)
- Approximately 60% construction complete on BOF
- Approximately 62% construction complete on LAW
- Approximately 65% construction complete on Lab
- Approximately 34% construction complete on PT Facility (PTF)
- Approximately 33% construction complete on HLW

From project inception through January 2011, the WTP placed 159,250 cubic meters (5.6 million cubic feet) of concrete; erected 15,690 metric tons (17,300 tons) of structural

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steel; installed 71,800 meters (235,800 linear feet) of pipe; and 86,000 meters (282,600 linear feet) of cable and wire. The project is scheduled to complete design in 2013, complete construction in 2016, and operate in 2019.

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.

- Pulse Jet Mixing Design. The M3 technical issue was closed in 2010. The issue involved ensuring the adequacy of mixing technologies in pretreatment vessels. The M3 Mixing Test Platform was used to provide data needed to close the M3 technical issue. The platform demonstrated the effectiveness of WTP's Pulse-Jet Mixers (PJM) for specific PTF vessels. 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.
- Large-scale Integrated Mixing Test for PJM Vessels. Plans are underway to implement a large-scale integrated testing program. The program will validate the scaling factors used to close the M3 issue and introduce representative simulants that will allow WTP and the Tank Farms to identify batching and control strategies. Testing at a larger scale is necessary to address uncertainties and increase confidence in the projected full scale mixing performance and operations. Integrated testing on a large scale should be completed prior to cold commissioning to address full scale vessel mixing performance and operation.
- PJM Vessel Design Confirmation. In response to concerns regarding the use of Computational Fluid Dynamics (CFD) for the design of PJM-mixed vessels, a Verification and Validation (V&V) of the CFD code is being performed. The objective of the V&V effort is to verify CFD for use in calculations for PJM vessel design confirmation.
- PJM Vessel Alterations. The PJM-mixed 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. Additional changes to the PJMs resulting from the mixing tests are also being incorporated.
- Additional Actions to Close Non-Newtonian Vessel Issues. Non-Newtonian Ultrafiltration Process System vessels UFP-VSL-00002A/B and HLW Lag Storage and Feed Blending Process System vessels HLP-VSL-00027A/B and HLP-VSL-00028 require additional Low Order Accumulation Model benchmark testing and impact evaluations; corrections and updates to the technical bases documentation for

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non-Newtonian vessels; verification of resultant safety and throughput changes; and recalculating the lower operating rheology control limits.

- Hydrogen in Piping and Ancillary Vessels (HPAV). Concern about potential generation of HPAV necessitates designing systems to prevent or mitigate postulated hydrogen detonation events. Bechtel National, Inc. 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. After a year of testing, followed by another year of testing and analysis, WTP issued the HPAV analysis and design criteria which now includes a quantitative risk analysis process and products. A DWP modification will be implemented that describes the HPAV design strategy and meets regulatory requirements.
- PT Vessel Vent Process (PVP) and PT Vessel Vent (PVV) Exhaust System Upgrades. The PVP and PVV systems are being upgraded from passive to active safety systems to maintain negative pressure in non-Newtonian vessel headspace during all normal and accident conditions. Several issues have emerged resulting from the change in the entrainment factor requirement that may affect system performance. A strategy has been developed to perform additional testing and evaluation to determine the extent of modifications that may be needed to meet the performance requirement.
- Secondary Containment in PT Decontamination Areas. A design change and associated permit modification are underway to address decontamination activities in the Pretreatment In-Cell Handling System. In a draft permit change, WTP proposed using the P-0123A room floor as primary containment for decontamination activities. The proposal also added primary containment sumps and a new miscellaneous unit to the room. In general, Ecology concurs with the permitting approach. Following comment incorporation, the revised proposal will be transmitted to Ecology to support an agency initiated permit modification.
- 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.
- 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 documentation 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.

WTP 2011 Progress Report

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)

Projected completion dates for remaining Compliance Schedule items are provided in Appendix 1. 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.

Appendix 1
11-ESQ-116
(3 Pages)

WTP Interim Compliance Schedule 2011 Progress Report

**WTP INTERIM COMPLIANCE SCHEDULE
2011 PROGRESS REPORT**

Item	Compliance Schedule Submittal	Interim Compliance Date in the Permit	Projected Completion Date ¹ (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)
III.10.C.2						
1	Submit documentation stating the WTP has been constructed in compliance with the Permit	3/1/2008	12/31/2018 ²		CCN 173308	Engineering/Construction to certify per 24590-WTP-PL-MGT-09-0001, WTP DWP Certification Plan
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
III.10.C.3						
3	Revise and Submit Waste Analysis Plan and associated Quality Assurance Project Plan to Ecology for review and approval	4/1/2007	12/30/2017 ³	Addendum update provided to Ecology for Sitewide Permit Renewal	CCN 149986, 4/12/07	Update/finalize to support operations prior to cold commissioning
III.10.C.5						
4	Update and submit for approval "Procedures to Prevent Hazards", Chapter 6.0 Sections 6.3, 6.4, 6.5 and the Inspection Schedule	4/1/2007	12/30/2017 ³	Addendum update provided to Ecology for Sitewide Permit Renewal	CCN 149986, 4/12/07	Update/finalize to support operations prior to cold commissioning
III.10.C.6						
5	Update and submit the Contingency Plan	4/1/2007	12/30/2017 ³	Addendum update provided to Ecology for Sitewide Permit Renewal	CCN 149986, 4/12/07	Update/finalize to support operations prior to cold commissioning
III.10.C.7						
6	Update and resubmit for review and approval Training Program description in Chapter 8 of the Permit	4/1/2007	12/30/2017 ³	Addendum update provided to Ecology for 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	4/1/2007	12/30/2017 ³		CCN 149986, 4/12/07	Update/finalize to support operations prior to cold commissioning
III.10.C.8						
8	Update and resubmit the Closure Plan for approval	4/1/2007	12/30/2017 ³	Addendum update provided to Ecology for Sitewide Permit Renewal	CCN 149986, 4/12/07	Revision in progress
III.10.C.11						
9	Submit Risk Assessment Work plan, revised in consultation with Ecology	Complete	N/A	N/A	N/A	N/A
III.10.C.15						
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
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	12/30/2017 ³			Item 38/39 to be addressed via one PER document Work in progress
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	12/30/2017 ³			Item 38/39 to be addressed via one PER document Work in progress

**WTP INTERIM COMPLIANCE SCHEDULE
2011 PROGRESS REPORT**

Item	Compliance Schedule Submittal	Interim Compliance Date in the Permit	Projected Completion Date ¹ (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)
CONTAINERS						
10	Submit detailed information associated with containers and container management areas	3/22/2006	12/20/2012 ⁴	PT and HLW portion	•CCN 135234, 3/31/06 •QRPE Final Design	BOF-001
11	Submit descriptions of container management practices	4/1/2007	12/30/2017 ³		CCN 149986, 4/12/07	Submittal to support operations prior to cold commissioning
TANK SYSTEMS						
12	Submit engineering information for each secondary containment and leak detection system for the WTP Tank System to be included in the permit	10/30/2005	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	4/29/2006	12/31/2017 ⁵	LAW and Lab portion	•CCN 139800, 5/12/06 •QRPE Final Design	HLW-013 PTF-042 PTF-094
14	Submit engineering information for each tank system ancillary equipment to be included in the permit	4/29/2006	12/31/2017 ⁵	LAW, Lab and HLW portion	CCN 139800, 5/12/06 QRPE Final Design	PTF-096
15	Submit descriptions of tank management practices	4/1/2007	12/30/2017 ³		CCN 149986, 4/12/07	Submittal to support operations prior to cold commissioning
40	Submit WTP document <i>Pipe Stress Design Criteria including "Pipe Stress Criteria" and "Span Method Criteria,"</i> 24590-WTP-DC-PS-01-001.	Complete	N/A	N/A	N/A	N/A
CONTAINMENT BUILDINGS						
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	4/1/2007	12/30/2017 ³		CCN 149986, 4/12/07	CCN 149986, 4/12/07
PRETREATMENT PLANT MISCELLANEOUS UNITS SYSTEMS						
18	Submit engineering information for secondary containment and leak detection system for the Pretreatment Plant Miscellaneous Unit Systems	10/30/2006	Complete	N/A	N/A	N/A
19	Submit engineering information for Pretreatment Plant Miscellaneous Unit Systems	2/11/2006	12/31/2017 ⁵	PTF-043 PTF-067 PTF-068 PTF-077	•CCN 136387, 2/23/06 •QRPE 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	4/12/2006	12/31/2017 ⁵	PTF-045 PTF-069 PTF-070 PTF-083	•CCN 139037, 4/24/06 •QRPE Final Design	PTF-082 PTF-098
21	Submit descriptions of management practices for the Pretreatment Miscellaneous Treatment System	4/1/2007	6/30/2018 ⁶		CCN 149986, 4/12/07	Submittal to support operations prior to cold commissioning
LAW SHORT TERM MELTER UNIT						
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	8/18/2006	12/31/2014 ⁷	LAW-017	•CCN 144823, 9/1/06 •LAW secondary offgas redesign •QRPE 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

**WTP INTERIM COMPLIANCE SCHEDULE
2011 PROGRESS REPORT**

Item	Compliance Schedule Submittal	Interim Compliance Date in the Permit	Projected Completion Date ¹ (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)
25	Submit descriptions of management practices for the LAW Vitrification Miscellaneous Treatment Unit System.	4/1/2007	6/30/2018 ⁸		CCN 149986, 4/12/07	Submittal to support operations prior to cold commissioning
26	Submit LAW Vitrification Environmental Performance Demonstration Test Plan for Ecology review and approval	10/2/2006	1/1/2018 ⁹		CCN 146704, 10/16/06	CCN 161125, 11/20/07
HLW SHORT TERM MELTER UNIT						
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.	4/1/2007	12/30/2017 ³		CCN 149986, 4/12/07	Submittal to support operations prior to cold commissioning
31	Submit HLW Vitrification Environmental Performance Demonstration Test Plan for Ecology review and approval	10/2/2006	1/1/2018 ⁹		CCN 146704, 10/16/06	CCN 161125, 11/20/07
Report of Progress						
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
43	Submit 2010 Report of Progress	Complete	N/A	N/A	N/A	N/A
44	Submit 2011 Report of Progress	N/A	5/26/2011			
Final Compliance Date						
32	Final Compliance Date	2/28/2009	12/31/2018 ²		CCN 192379, 3/11/09	Final Compliance Date revised via TPA Consent Decree signed 10/25/2010
45	Update and resubmit Chapter 4, Process Information (NEW)	N/A	12/30/2017 ³	Addendum update provided to Ecology for Site-wide Permit Renewal		Revision in progress

¹Proposed Compliance Schedule dates to be renegotiated with Ecology and will be submitted on a PCN per Ill.10.c.2.h.
²Date based on Consent Decree Appendix A: WTP Consent Decree Milestones, Schedule, Assumptions; Start PT Facility Cold Commissioning.
³Date based on Consent Decree Appendix A: WTP Consent Decree Milestones, Schedule, Assumptions; 6 months prior to start of (earliest) HLW Cold Commissioning.
⁴Date based on 6 months prior to BOF-001 construction start, WTP L4 Baseline. Note that date is subject to change based on decisions regarding the Failed Melter Storage Facility.
⁵Date based on Consent Decree Appendix A: WTP Consent Decree Milestones, Schedule, Assumptions; (latest) PT Facility Construction Substantially Complete.
⁶Date based on Consent Decree Appendix A: WTP Consent Decree Milestones, Schedule, Assumptions; 6 months prior to start of PT Facility Cold Commissioning.
⁷Date based on Consent Decree Appendix A: WTP Consent Decree Milestones, Schedule, Assumptions; LAW Facility Construction Substantially Complete.
⁸Date based on Consent Decree Appendix A: WTP Consent Decree Milestones, Schedule, Assumptions; 6 months prior to start of LAW Facility Cold Commissioning.
⁹Date based on Consent Decree Appendix A: WTP Consent Decree Milestones, Schedule, Assumptions; 180 days prior to start of HLW Facility Cold Commissioning.

Appendix 2
11-ESQ-116
(4 Pages)

ORP Letter from R. J. Schepens to 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.

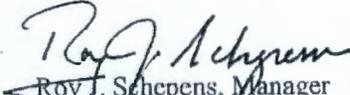
Ms. Jane Hedges
06-WTP-011

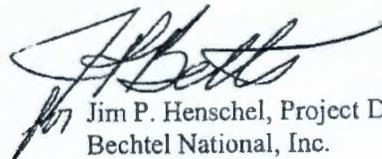
-2-

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

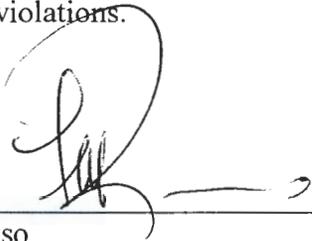
Attachment 2
11-ESQ-116
(1 Page)

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 WTP 2011 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

5/21/11

Date

Attachment 3
11-ESQ-116
(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 WTP 2011 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.

A. Charbonneau for

5/20/11

Scott L. Samuelson, Manager
U.S. Department of Energy
Office of River Protection

Date