



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

3100 Port of Benton Blvd • Richland, WA 99354 • (509) 372-7950

July 30, 2010

RECEIVED  
AUG 03 2010

EDMC

Mr. David A. Brockman, Manager  
Office of River Protection  
United States Department of Energy  
P.O. Box 450, MSIN: H6-60  
Richland, Washington 99352

Mr. Frank Russo, Project Director  
Bechtel National, Inc.  
2435 Stevens Center Place, MSIN: H4-02  
Richland, Washington 99354

Re: Approval of 24590-LAW-PCN-ENV-09-005, Class <sup>1</sup>1 Modification to the *Hanford Facility Resource Conservation and Recovery Act (RCRA) 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*

Reference: See page 2

Dear Mr. Brockman and Mr. Russo:

The Department of Ecology approves the referenced Class <sup>1</sup>1 modification with the following corrections and actions. The approved Hanford Facility RCRA Permit Modification Notification Form (PCN Form) is enclosed.

**Corrections:**

- The Corrosion Evaluation reference 24590-LAW-MKE-LVP-00004, *LAW Melters Offgas Caustic Scrubbers (LVP-SCB-00001) Process Conditions and Requirements* in 24590-LAW-N1D-LVP-00002, Revision 2, is incorrect. The correct Corrosion Evaluation reference is 24590-LAW-MKC-LVP-00004, *LAW Caustic Scrubber Process Operating Conditions and Design Requirements*.
- The Corrosion Evaluation reference sections for both 24590-LAW-N1D-RLD-00001, Revision 5, and 24590-LAW-N1D-RLD-00005, Revision 4, should contain 24590-LAW-3YD-20-00001.

**Actions:**

- Update the Process Corrosion Data Sheet in the Corrosion Evaluations based on the current Waste Treatment Plant Process Corrosion Data (24590-WTP-RPT-PR-04-0001).
- Submit the affected offspring (pumps) Corrosion Evaluations for LFP-PMP-00001A, LFP-PMP-00001B, LFP-PMP-00003A, LFP-PMP-00003B, LFP-PMP-00002, and LFP-PMP-00004 when available.

H-0-8



Mr. Brockman and Mr. Russo  
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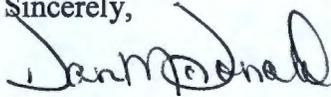
The referenced modification replaces Material Selection Data Sheets with the updated Corrosion Evaluations for the following Low Activity Waste Facility Systems:

- Melter Feed Process System.
- Portions of the Primary Offgas Process System.
- Portions of the Secondary Offgas/Vessel Vent Process System.
- Radioactive Liquid Waste Disposal System.

In addition to the changes listed on the PCN Form, we are replacing the Material Selection Data Sheets with the updated Corrosion Evaluations.

If there are any questions, contact Misty Carhart at 509-372-7895 or Tracy Gao at 509-372-7901.

Sincerely,



Dan McDonald  
Tank Waste Disposal Project Manager  
Nuclear Waste Program

mc/jc  
Enclosure

Reference: Letter 10-ESQ-150, received May 27, 2010, from William J Taylor, USDOE-ORP, to J. A. Hedges, Ecology, "Submittal of Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit Modification Notification Form 24590-LAW-PCN-ENV-09-005" 0082223

cc electronic w/enc:

Dave Bartus, EPA  
Guy Girard, USDOE  
Lori Huffman, USDOE  
Tony McKarns, USDOE  
Gae Neath, USDOE  
Don Sommer, USDOE  
William Taylor, USDOE

Donna Busche, BNI  
Julie Colby, BNI  
Barry Curn, BNI  
Brad Erlandson, BNI  
Sandi Murdock, BNI  
Suzette Thompson, FHI  
Gail Laws, WDOH

cc w/enc:

**Administrative Record: Tank Waste Treatment Requirements**  
BNI Correspondence Control  
Environmental Portal  
Hanford Operating Record General File  
USDOE-ORP Correspondence Control

Quarter Ending June 30, 2010

24590-LAW-PCN-ENV-09-005

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**Hanford Facility RCRA Permit Modification Notification Form**  
**Part III, Operating Unit 10**  
**Waste Treatment and Immobilization Plant**

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Page 2 of 3: Hanford Facility RCRA Permit, Part III, Operating Unit 10, Waste Treatment and Immobilization Plant  
Replace LAW Facility Material Selection Data Sheets With Updated Corrosion Evaluations in Appendix 9.9 of  
the Dangerous Waste Permit (DWP).

Submitted by Co-Operator:

*D. M. Busche*

D. M. Busche

4/27/10

Date

Reviewed by ORP Program Office:

*G. A. Girard*

G. A. Girard

5/14/10

Date

Quarter Ending June 30, 2010

24590-LAW-PCN-ENV-09-005

### Hanford Facility RCRA Permit Modification Notification Form

Unit:

**Waste Treatment and Immobilization Plant**

Permit Part:

**Part III, Operating Unit 10**Description of Modification:

The purpose of this Class 1 prime modification is to replace Material Selection Data Sheets with updated Corrosion Evaluations for the following LAW Facility systems in Appendix 9.9 of the DWP.

- LFP - LAW Melter Feed Process System
- LOP - LAW Primary Offgas Process System
- LVP - LAW Secondary Offgas/Vessel Vent Process System
- RLD - Radioactive Liquid Waste Disposal System

Appendix 9.9			
Replace:		With:	
	24590-LAW-N1D-LFP-P0004, Rev. 0		24590-LAW-N1D-LFP-00004, Rev. 2
	See discussion below		24590-LAW-N1D-LFP-00006, Rev. 0
	24590-LAW-N1D-LOP-P0003, Rev. 0		24590-LAW-N1D-LOP-00003, Rev. 3
	24590-LAW-N1D-LVP-P0002, Rev. 0		24590-LAW-N1D-LVP-00002, Rev. 2
	24590-LAW-N1D-RLD-P0001, Rev. 1		24590-LAW-N1D-RLD-00001, Rev. 5
	24590-LAW-N1D-RLD-P0002, Rev. 0		24590-LAW-N1D-RLD-00002, Rev. 3
	24590-LAW-N1D-RLD-P0005, Rev. 0		24590-LAW-N1D-RLD-00005, Rev. 4

This modification requests Ecology approval and incorporation into the permit the specific changes that are identified by revision bars that have been issued since the last revision of the permitted version. Revisions are the result of ongoing design review. The following identifies the changes:

24590-LAW-N1D-LFP-00004 (LFP-VSL-00001/-00003, Melter 1 & 2 Feed Preparation Vessels)

- Removed LFP-VSL-00002/-00004 from MSDS and added to Corrosion Evaluation 24590-LAW-N1D-LFP-00006, Rev.0
- Incorporated new Process Corrosion Data Sheet
- Updated Section j – Erosion
- Added Section p – Inadvertent Addition of Nitric Acid
- Revised agitator materials recommendation
- Updated References and Bibliography

24590-LAW-N1D-LFP-00006 (LFP-VSL-00002/-00004, Melter 1 & 2 Feed Vessels)

- A Material Selection Data Sheet was not prepared since the Melter 1 & 2 Feed Vessels LFP-VSL-00002/-00004 were previously incorporated into the DWP under 24590-LAW-N1D-LFP-P0004
- Vessels were subsequently removed from 24590-LAW-N1D-LFP-P0004 and placed under Corrosion Evaluation 24590-LAW-N1D-LFP-00006

24590-LAW-N1D-LOP-00003 (LOP-WESP-00001 & LOP-WESP-00002, Melter 1 and 2 WESP)

- Updated wear allowance based on *Evaluation of Stainless Steel Wear Rates in WTP Waste Streams at Low Velocities*, 24590-WTP-RPT-M-04-0008
- Updated References and Bibliography

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24590-LAW-N1D-LVP-00002 (LVP-TK-00001, Caustic Collection Tank)

- Updated wear allowance based on *Evaluation of Stainless Steel Wear Rates in WTP Waste Streams at Low Velocities*, 24590-WTP-RPT-M-04-0008
- Updated Section g -- Microbiologically Induced Corrosion (MIC)
- Updated References and Bibliography

24590-LAW-N1D-RLD-00001 (RLD-VSL-00004, C3/C5 Drains/Sump Collection Vessel)

- Updated wear allowance based on *Evaluation of Stainless Steel Wear Rates in WTP Waste Streams at Low Velocities*, 24590-WTP-RPT-M-04-0008
- Incorporated new Process Corrosion Data Sheet (PCDS)
- PCDS includes data for "Leach" and "No Leach." "Leach" refers to the process of adding caustic to HLW feed to dissolve aluminum
- Added Section p -- Inadvertent Addition of Nitric Acid
- Updated References and Bibliography

24590-LAW-N1D-RLD-00002 (RLD-VSL-00005, SBS Condensate Collection Vessel)

- Updated wear allowance based on *Evaluation of Stainless Steel Wear Rates in WTP Waste Streams at Low Velocities*, 24590-WTP-RPT-M-04-0008
- Incorporated new Process Corrosion Data Sheet
- PCDS includes data for "Leach" and "No Leach." "Leach" refers to the process of adding caustic to HLW feed to dissolve aluminum
- Added Section p -- Inadvertent Addition of Nitric Acid
- Updated References and Bibliography

24590-LAW-N1D-RLD-00005 (RLD-VSL-00003, Plant Wash Vessel)

- Modified Operating Description
- Updated wear allowance based on *Evaluation of Stainless Steel Wear Rates in WTP Waste Streams at Low Velocities*, 24590-WTP-RPT-M-04-0008
- Incorporated new Process Corrosion Data Sheet
- PCDS includes data for "Leach" and "No Leach." "Leach" refers to the process of adding caustic to HLW feed to dissolve aluminum
- Added Section p -- Inadvertent Addition of Nitric Acid
- Updated References and Bibliography

There are no outstanding change documents associated with this modification.

WAC 173-303-830 Modification Class:	Class 1	Class <sup>1</sup> 1	Class 2	Class 3
Please mark the Modification Class:		X		

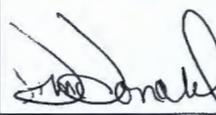
Enter relevant WAC 173-303-830, Appendix I Modification citation number:

Enter wording of WAC 173-303-830, Appendix I Modification citation:

In accordance with WAC 173-303-830(4)(d)(i), this modification notification is requested to be reviewed and approved as a Class <sup>1</sup>1 modification. WAC 173-303-830(4)(d)(ii)(A) states, "Class 1 modifications apply to minor changes that keep the permit current with routine changes to the facility or its operation. These changes do not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment. In the case of Class 1 modifications, the director may require prior approval."

Modification Approved/Concur:  Yes  Denied (state reason below)  
 Reason for denial:

Reviewed by Ecology:



Kelly Elsethagen

7-30-10

Date