



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Richland Field Office

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

April 10, 2025

25-NWP-057

Brian T. Vance, Manager
Hanford Field Office
United States Department of Energy
PO Box 550
Richland, Washington 99352

Brian Hartman, Project Director
Bechtel National, Inc.
450 Hills Street
Richland, Washington 99354

Re: Approval of 24590-HLW-PCN-ENV-25-002, Class ¹ Modification to 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 Group 10, Waste Treatment and Immobilization Plant (WTP Permit), WA7890008967*

Reference: See page 2

Dear Brian T. Vance and Brian Hartman:

The Department of Ecology approves the referenced Class ¹ Modification. The approved Hanford Facility RCRA Permit Modification Notification Form is enclosed.

This modification provides updates to two High-Level Waste (HLW) Process Flow Diagrams (PFDs), six Piping and Instrumentation Diagrams (P&IDs), two Mechanical Drawings, and one Engineering Specification drawing. This modification also removes two P&IDs associated with the HLW Melter Offgas Treatment Process System.

These changes are listed on the enclosure and replace or remove the corresponding permit documents in Appendices 10.1, 10.2, 10.6 and 10.7 of the WTP Permit.

If there are any questions, please contact Ana Laura Robles, Permit Writer, at (509) 412-5805 or ana.robles@ecy.wa.gov or Dan McDonald, Project Manager, at (509) 942-4972 or dan.mcdonald@ecy.wa.gov.

Sincerely,

 Digitally signed
by Holbrook,
Edward (ECY)

Edward Holbrook
Deputy Program Manager
Nuclear Waste Program

ar/mo
Enclosure

cc: See page 2

Reference: Letter 25-ECD-0034, dated March 17, 2025, "Submittal of Hanford Facility Resource Conservation and Recovery Act Permit Modification Notification Form 24590-HLW-PCN-ENV-25-002"

cc electronic w/enc:

Laura Buelow, EPA	Crystal Mathey, WDOH
David Einan, EPA	Kotaiba Abugazleh, Ecology
Michelle Mullin, EPA	Andrea Adams, Ecology
Davis Zhen, EPA	Jennifer Cantu, Ecology
Duane Carter, USDOE	Annette Carlson, Ecology
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Brian Harkins, USDOE	Douglas D'Hondt, Ecology
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Corey Low, USDOE	Tracy Gao, Ecology
Tony McKarns, USDOE	Amie Green, Ecology
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Paul Pak, USDOE	Edward Holbrook, Ecology
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Bob Haggard, BNI	Jeff Marusich, Ecology
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Mason Murphy, CTUIR	Stacie Sexton, Ecology
Anthony Smith, NPT	Oliver Wang, Ecology
Alyssa Buck, Wanapum	Environmental Portal
Laurene Contreras, YN	Hanford Administrative Record
ERWM Staff, YN	Hanford Facility Operating Record
Susan Coleman, HAB	BNI Correspondence Control
David Reeploeg, Hanford Communities	HAB Correspondence Control
Max Woods, ODOE	HMIS Correspondence Control
Lauren Jenks, WDOH	USDOE Correspondence Control

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

Index

Page 2 of 3: Hanford Facility RCRA Permit, Part III, Operating Unit Group 10, Waste Treatment and Immobilization Plant Updates High-Level Waste (HLW) Process Flow Diagrams (Appendix 10.1), Piping and Instrumentations Diagrams (Appendix 10.2), Mechanical Drawings (Appendix 10.6), and Specifications (Appendix 10.7)

Submitted by Co-Operator:

Robert Haggard
Robert D. Haggard

2/12/2025
Date

Reviewed by HFO Program Office:

DUANE CARTER Digitally signed by DUANE CARTER
Date: 2025.02.25 07:58:43 -08'00'
Duane B. Carter Date

Hanford Facility RCRA Permit Modification Notification Form

Unit: Waste Treatment and Immobilization Plant	Permit Part: Part III, Operating Unit Group 10
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Description of Modification:

This Class 11 modification updates the following document types in the WTP DWP for the HLW Melter Offgas Treatment Process (HOP) and the Radioactive Liquid Waste Disposal (RLD) systems: process flow diagram (PFD); piping and instrumentations diagram (P&ID); mechanical drawing; and specifications.

The changes included in this modification are described below:

Appendix 10.1

Replace:	24590-HLW-M5-V17T-P0003, Rev 1	With:	24590-HLW-M5-V17T-00003, Rev 8 ¹
Replace:	24590-HLW-M5-V17T-P20003, Rev 1	With:	24590-HLW-M5-V17T-20003, Rev 4 ²

¹ Revision history for 24590-HLW-M5-V17T-00003 is as follows:

- Revision 2 – updates material balance, and incorporates design changes, per 24590-HLW-DCN-PR-02-003, 24590-HLW-DCN-PR-02-011, 24590-HLW-DCN-PR-02-012, and 24590-HLW-DCN-PR-02-014;
- Revision 3 – documents discipline manager's review and approval of PFD;
- Revision 4 – updates notes and incorporates design changes per 24590-HLW-DCN-PR-02-021 and 24590-HLW-M5N-V17T-00005;
- Revision 5 – deletes stream table, simplified WESP and HEME inlet spray control, and changed plant service air (PSA) to instrument service air (ISA);
- Revision 6 – provides alternate path for HOP-SCB-00001 discharge to RLD-VSL-00008 and adds SBS bypass to HEME low point drains; and
- Revision 7 – aligns drawing with engineering instruction 24590-WTP-3DI-V04W-00001 by incorporating 24590-HLW-EIE-PE-19-0005, 24590-HLW-EIE-PE-19-0016, 24590-HLW-EIE-PE-19-0020, and 24590-HLW-EIE-MS-14-0003.

² Revision history for 24590-HLW-M5-V17T-20003 is as follows:

- Revision 2 – provides alternate path for HOP-SCB-00001 discharge to RLD-VSL-00008 and adds SBS bypass to HEME low point drains; and
- Revision 3 – aligns drawing with engineering instruction 24590-WTP-3DI-V04W-00001 by incorporating 24590-HLW-EIE-PE-19-0005, 24590-HLW-EIE-PE-19-0016, 24590-HLW-EIE-PE-19-0020, and 24590-HLW-EIE-MS-14-0003.

Appendix 10.2

Action	Document Number	Document Description
Add:	24590-HLW-M6-HOP-00012001, Rev 0	P&ID - HLW Melter Offgas Treatment Process System, Melter 1 HOP-BULGE-00011 AND HOP-PMP-00001
Add:	24590-HLW-M6-HOP-00012002, Rev 0	P&ID - HLW Melter Offgas Treatment Process System, Melter 1 HOP-BULGE-00012 AND HOP-PMP-00002
Add:	24590-HLW-M6-HOP-20012001, Rev 0	P&ID - HLW Melter Offgas Treatment Process System, Melter 2 HOP-BULGE-00013 AND HOP-PMP-00003
Add:	24590-HLW-M6-HOP-20012002, Rev 0	P&ID - HLW Melter Offgas Treatment Process System, Melter 2 HOP-BULGE-00014 AND HOP-PMP-00004

Appendix 10.2		
Action	Document Number	Document Description
Remove ³ :	24590-HLW-M6-HOP-00004002, Rev 0	P&ID - HLW Melter 1 Offgas Fluidics Air Rack HOP-RK-00025
Remove ³ :	24590-HLW-M6-HOP-20004002, Rev 0	P&ID - HLW Melter Offgas Treatment Process System Melter 2 Fluidics Air Rack HOP-RK-00048

³ These P&IDs have been cancelled because the reverse flow diverters (RFD) and associated piping and equipment they represent have been removed from the HOP system design. The RFDs have been replaced with pumps in bulges.

Appendix 10.2			
Replace:	24590-HLW-M6-RLD-00015001, Rev 1	With:	24590-HLW-M6-RLD-00015001, Rev 2
Replace:	24590-HLW-M6-RLD-20004001, Rev 1	With:	24590-HLW-M6-RLD-20004001, Rev 2


Appendix 10.6			
Replace:	24590-HLW-MV-HOP-P0001, Rev 2	With:	24590-HLW-MV-HOP-00001, Rev 3
Replace:	24590-HLW-MV-HOP-P0003, Rev 2	With:	24590-HLW-MV-HOP-00003, Rev 3

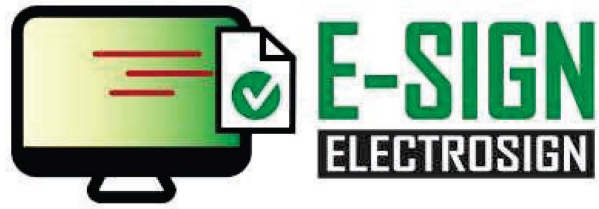
Appendix 10.7		
Action	Document Number	Document Description
Add:	24590-HLW-3PS-MX00-T0011, Rev 0	Engineering Specification for Fabrication of HOP Recirculation Pump Bulges

WAC 173-303-830 Modification Class:	Class 1	Class ¹ 1	Class 2	Class 3
Please mark the Modification Class:		x		

Enter relevant WAC 173-303-830, Appendix I Modification citation number: N/A
 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 ¹1 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."

Please note that source, special nuclear, and byproduct materials, as defined in the Atomic Energy Act of 1954 (AEA) are regulated at the U. S. Department of Energy (DOE) facilities exclusively by DOE acting pursuant to its AEA authority. DOE asserts that pursuant to AEA, it has sole and exclusive responsibility and authority to regulate source, special nuclear, and byproduct materials at DOE-owned nuclear facilities. Information contained herein on radionuclides is provided for process description purposes only.

Modification Approved/Concur: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Denied (state reason below) Reason for denial:	Reviewed by Ecology: Digitally signed by Holbrook, Edward (ECY) Date: 2025.04.10 15:56:47 -07'00' 
	E. Holbrook Date



This document has been digitally signed using the Electrosign process.

Document for Signature

Document Number: 24590-HLW-PCN-ENV-25-002 **Rev:** N/A

Participants	Signature	Completed	Status	Result	Comments
Final Approver	2/12/2025 9:12 AM				
Haggard, Robert		2/12/2025 7:23 PM	Completed	Approve	