



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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September 18, 2014

14-NWP-203

Mr. Kevin Smith, Manager
Office of River Protection
United States Department of Energy
PO Box 450, MSIN: H6-60
Richland, Washington 99352

Ms. Peggy McCullough, Project Director
Bechtel National, Inc.
2435 Stevens Center Place, MSIN: H4-02
Richland, Washington 99354

Re: Approval of 24590-HLW-PCN-ENV-13-001, Class ¹1 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 Mr. Smith and Ms. McCullough:

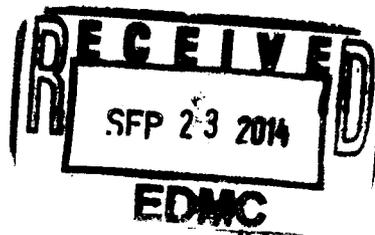
The Department of Ecology approves the referenced Class ¹1 Modification. The approved Hanford Facility RCRA Permit Modification Notification Form is enclosed.

This modification provides updated piping and instrumentation diagrams (P&IDs) for the High-Level Waste Melter Process System. These are listed on the enclosure and replace the corresponding permit P&IDs in Appendix 10.2 of the WTP Permit.

If there are any questions, please contact Arlene Tortoso, WTP Permit Writer, at arlene.tortoso@ecy.wa.gov or (509) 372-7956.

Sincerely,

Dan McDonald
Tank Waste Disposal Project Manager
Nuclear Waste Program



at/jc
Enclosure

cc: See page 2

Mr. Smith and Ms. McCullough
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Page 2

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Reference: Letter 14-ECD-0036, received August 21, 2014, from R. G. Hastings, USDOE-ORP, to J. A. Hedges, Ecology, "Submittal of Hanford Facility Resource Conservation and Recovery Act Permit Modification Notification Form 24590-HLW-PCN-ENV-13-001, Updated Piping and Instrumentation Diagrams for the High-Level Waste Melter Process System of the Reference"

cc electronic w/enc:

Dave Bartus, EPA
Dennis Faulk, EPA
Mary Beth Burandt, USDOE
Cliff Clark, USDOE
Lori Huffman, USDOE
Ed MacAlister, USDOE
Tony McKarns, USDOE
Gae Neath, USDOE
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Barry Curn, BNI
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Ken Niles, ODOE
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Gail Laws, WDOH
Arlene Tortoso, Ecology
Environmental Portal
Hanford Operating Record General File
USDOE-ORP Correspondence Control

cc w/o enc:

Jim Cox, CTUIR
Stuart Harts, CTUIR
Gabriel Bohnee, NPT

cc w/enc:

Russell Jim, YN
Steve Hudson, HAB
Administrative Record: Waste Treatment Plant (TSD #H-0-8)
BNI Correspondence Control

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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 5: Hanford Facility RCRA Permit, Part III, Operating Unit 10, Waste Treatment and Immobilization Plant
Update Piping and Instrumentation Diagrams (P&ID) for the High-Level Waste (HLW) Melter Process System
(HMP) in Appendix 10.2 of the Dangerous Waste Permit.

Submitted by Co-Operator:

Roger J. Landon 6/30/14
Roger J. Landon Date

Reviewed by ORP Program Office:

D. L. Noyes 8/13/14
D. L. Noyes Date

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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 update and replace the following Piping and Instrumentation Diagrams (P&IDs) for the High-Level Waste (HLW) Melter Process System (HMP) in Appendix 10.2 of the Dangerous Waste Permit (DWP). The thirteen (13) P&IDs incorporated into the DWP are being replaced with sixteen (16) revised P&IDs as indicated in the table below. In some cases, the additional drawings are the result of converting source drawings into multiple sheets in an effort to provide clearer representation of the HMP system, including additional details for instrumentation and logic controls.

Appendix 10.2

Replace:	With:
24590-HLW-M6-HMP-00002, Rev 5	24590-HLW-M6-HMP-00002001, Rev 0
24590-HLW-M6-HMP-00003, Rev 5	24590-HLW-M6-HMP-00002002, Rev 0
24590-HLW-M6-HMP-00004001, Rev 0	24590-HLW-M6-HMP-00003001, Rev 0
24590-HLW-M6-HMP-00006001, Rev 0	24590-HLW-M6-HMP-00004001, Rev 1
24590-HLW-M6-HMP-00012001, Rev 0	24590-HLW-M6-HMP-00006001, Rev 1
24590-HLW-M6-HMP-00012002, Rev 0	24590-HLW-M6-HMP-00006002, Rev 0
24590-HLW-M6-HMP-00013002, Rev 0	24590-HLW-M6-HMP-00012001, Rev 1
24590-HLW-M6-HMP-00014, Rev 4	24590-HLW-M6-HMP-00012002, Rev 1
24590-HLW-M6-HMP-20002, Rev 6	24590-HLW-M6-HMP-00013002, Rev 1
24590-HLW-M6-HMP-20003, Rev 6	24590-HLW-M6-HMP-00014001, Rev 0
24590-HLW-M6-HMP-20012001, Rev 0	24590-HLW-M6-HMP-20002001, Rev 0
24590-HLW-M6-HMP-20012002, Rev 0	24590-HLW-M6-HMP-20002002, Rev 0
24590-HLW-M6-HMP-20014, Rev 5	24590-HLW-M6-HMP-20003001, Rev 0
	24590-HLW-M6-HMP-20012001, Rev 1
	24590-HLW-M6-HMP-20012002, Rev 1
	24590-HLW-M6-HMP-20014001, Rev 0

This modification requests Ecology approval and incorporation into the permit, the changes provided in applicable document change forms (e.g., DCNs) and changes associated with the resolution to comments on change documents since the issuance of the last revision of the permitted drawing. Revisions are the result of ongoing design changes.

The following are general changes made on drawings listed in the table above:

- Modified, deleted, and added notes, holds, and references
- Expanded instruments and logic controls information
- Added and updated off-sheet connectors
- Incorporated changes from change documentation identified in the Notes section on each drawing

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The following identifies the significant changes to the individual drawings:

24590-HLW-M6-HMP-00002001 (Rev 0) and 24590-HLW-M6-HMP-20002001 (Rev 0)

- Removed hold and redesigned film cooler cleaner air supply (Grid E4/F4/G4 through F7/G7) per DCN 24590-HLW-M6N-HMP-00088 provided previously in CCN 220109
- Removed and added valves (Grid A4 and B7), added restriction orifices (Grid A4 and B4), relocated flow transmitter upstream of flow valve (Grid B7), and added temperature indicator on demin water and instrument air supply lines (unclouded change in Grid C7) per DCN 24590-HLW-M6N-HMP-00087 provided previously in CCN 203897
- Changed rigid jumpers to flexible jumpers on instrument air supply lines (Grid C5 and D5) per DCN 24590-HLW-M6N-HMP-00084 provided previously in CCN 196291
- Added high point vent on instrument air supply line (Grid B3) per DCN 24590-HLW-M6N-HMP-20023 provided previously in CCN 203911
- Removed penetration data (unclouded change in Grid G8) per DCN 24590-HLW-M6N-HMP-00082 provided previously in CCN 196261
- Enhanced instrumentation and control presentation to define and clarify the functional requirements of the system controls (multiple unclouded changes) per DCN 24590-HLW-M6N-HMP-20026 provided previously in CCN 220128

24590-HLW-M6-HMP-00002002 (Rev 0) and 24590-HLW-M6-HMP-20002002 (Rev 0)

- Changed rigid jumper to flexible jumper on instrument air supply line (Grid D6), added HOP offgas in-line mister tag (Grid C5), and connected jumper to film cooler (Grid B6) per DCN 24590-HLW-M6N-HMP-00084 provided previously in CCN 196291
- Added high point vent to demin water supply line (Grid G5) and deleted demin water and instrument air supply tubing size designators (Grid F6/7 and G6/7) per DCN 24590-HLW-M6N-HMP-20023 provided previously in CCN 203911
- Added HOP process pipeline and jumper to connect to temperature element (Grid C3 through C4) per DCN 24590-HLW-M6N-HMP-00092 provided previously in CCN 203918
- Enhanced instrumentation and control presentation to define and clarify the functional requirements of the system controls (Grid D3 and F3; unclouded change in Grid F5 and G5) per DCN 24590-HLW-M6N-HMP-20026 provided previously in CCN 220128

24590-HLW-M6-HMP-00003001 (Rev 0) and 24590-HLW-M6-HMP-20003001 (Rev 0)

- Added TX tag to temperature element bundles in melter (Grid C3) per DCN 24590-HLW-M6N-HMP-00058 provided previously in CCN 183313
- Changed cooling water return lines/jumpers and sizes to fixed piping/tubing (Grid B2 through E4), added pipe section to cooling water return line and reducer (Grid D8), and added drain lines to PSV tree on cooling water return line (Grid D7) per DCN 24590-HLW-M6N-HMP-20023 provided previously in CCN 203911
- Reduced cooling water supply line size (Grid A6, C6, and F6) for increased instrument performance per DCN 24590-HLW-M6PR-HMP-00001 provided previously in CCN 183316
- Clarified pressure relief valve sizing on cooling water return line (Grid E7) per DCN 24590-HLW-M6N-HMP-00079 provided previously in CCN 170763
- Added block valves on cooling water return line to separate C5 from C2 areas during maintenance operations (Grid E6) per 24590-HLW-M6N-HMP-00081 provided previously in CCN 183328
- Corrected nozzle label on melter cooling water panel (Grid F4) per DCN 24590-HLW-M6N-HMP-00084 provided previously in CCN 196291
- Removed electrical jumpers (empty clouds in Grid G3) per DCN 24590-HLW-M6N-HMP-00082 in CCN 196261

24590-HLW-M6-HMP-00004001 (Rev 1)

- Changed gate valves to ball valves on instrument air supply lines (Grid B7 and D7)

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- Added "spare" description to spare instrument air supply line HMP-GL-02005-S10A-001/2 (Grid C6)

24590-HLW-M6-HMP-00006001 (Rev 1)

- Rev 0 of this P&ID was split into two drawings for expanded details (-00006001 Rev 1 and -00006002 Rev 0)
- Removed hold and added PDSA requirement for Safety Significant interlock with pour tunnel bogie drive (Grid F4 and Note 9) per DCN 24590-HLW-M6N-HMP-00074 provided previously in CCN 233567
- Added, deleted, and revised instrument air supply line sizes and valve tags (Grid E3, D5 through F5)
- Changed gate valve to ball valve on instrument air supply lines (Grid F3)
- Added vendor details for argon gas supply system, including line and valve tags (Grid A5/B5/C5 through A8/B8/C8/D8)

24590-HLW-M6-HMP-00006002 (Rev 0)

- This P&ID is a new drawing split from -00006001 (Rev 0) for expanded details
- Re-aligned jumper and wallbox details on instrument air supply line (Grid B6) per 24590-HLW-M6N-HMP-00094 provided previously in CCN 246348
- Added new instrument air supply pipe sections (Grid D6) per DCN 24590-HLW-M6N-HMP-20047 provided previously in CCN 254071
- Changed gate valve to ball valve on instrument air vent line (Grid F6)

24590-HLW-M6-HMP-00012001 (Rev 1) and 24590-HLW-M6-HMP-20012001 (Rev 1)

- Changed gate valves to ball valves on demin water supply lines (Grid E6 and F6)

24590-HLW-M6-HMP-00012002 (Rev 1) and 24590-HLW-M6-HMP-20012002 (Rev 1)

- Changed gate valves to ball valves on demin water and instrument air supply lines (Grid C4, D4, F4, D6, and F6)

24590-HLW-M6-HMP-00013002 (Rev 1)

- Changed gate valves to ball valves on instrument air and argon gas supply lines (Grid A7 through E5)
- Added tubing sizes to instrument air and argon gas supply lines, including DWP instruments lines (Grid A3 through E3 and A8 through E8)
- Changed depiction of instrumentation for post-accident monitoring function of argon gas and instrument air lines (Grid F5 through F7)

24590-HLW-M6-HMP-00014001 (Rev 0) and 24590-HLW-M6-HMP-20014001 (Rev 0)

- Reduced size on cooling water supply lines for increased instrument performance (Grid C7 and E7) per DCN 24590-HLW-M6PR-HMP-00001 provided previously in CCN 183316

This PCN updates information in Appendix 10.2 to reflect current design. This DWP component may be re-evaluated to confirm design adequacy. If the re-evaluation results in future design changes, the changes will be reviewed by Ecology in subsequent permit modifications.

The following outstanding change documents have been submitted to Ecology pursuant to permit condition III.10.C.9.h and are maintained in the WTP Operating Record.

DCN 24590-HLW-M6N-30-00039 (CCN 241663) applies to the following P&IDs:

- 24590-HLW-M6-HMP-00002001, Rev 0
- 24590-HLW-M6-HMP-00002002, Rev 0
- 24590-HLW-M6-HMP-20002001, Rev 0
- 24590-HLW-M6-HMP-20002002, Rev 0

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DCN 24590-HLW-M6N-HMP-00094 (CCN 246348) applies to the following P&IDs:

- 24590-HLW-M6-HMP-00002001, Rev 0
- 24590-HLW-M6-HMP-20002001, Rev 0

DCN 24590-HLW-M6N-HMP-20047 (CCN 254071) applies to the following P&IDs:

- 24590-HLW-M6-HMP-00002001, Rev 0

DCN 24590-HLW-M6N-HMP-20012 (CCN 233564) applies to the following P&IDs:

- 24590-HLW-M6-HMP-00002002, Rev 0
- 24590-HLW-M6-HMP-20002002, Rev 0

In accordance with Permit Condition III.10.C.2.e, this permit modification sent to Ecology may include page changes to the Permit, attachments, and permit application supporting documentation.

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."

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

Reason for denial:

Reviewed by Ecology:


 S. Dahl Date 9/18/14