



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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October 22, 2020

20-NWP-169

Brian T. Vance, Manager
Office of River Protection
United States Department of Energy
PO Box 450, MSIN: H6-60
Richland, Washington 99352

Valerie McCain, Project Director
Bechtel National, Inc.
2435 Stevens Center Place, MSIN: MS19-A
Richland, Washington 99354

Re: Approval of 24590-LAB-PCN-ENV-19-003, 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 Valerie McCain:

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 one Process Flow Diagram (PFD) and ten Piping and Instrumentation Diagrams (P&IDs) for the WTP Analytical Laboratory Radioactive Liquid Waste Disposal System.

These changes are listed on the enclosure and replace the corresponding permit PFD and P&IDs in Appendix 11.1 and 11.2 of the WTP Permit.

If there are any questions, please contact Yoana Lucatero, WTP Lead Permit Writer, at yoana.lucatero@ecy.wa.gov or (509) 372-7917, or Mandy Jones, Permit Coordinator, at mandy.jones@ecy.wa.gov or (509) 372-7916.

Sincerely,

 Digitally signed
by Schleif,
Stephanie (ECY)

Stephanie Schleif
Deputy Program Manager
Nuclear Waste Program

yl/ag
Enclosure

cc: See page 2

Reference: Letter 20-ECD-0046, dated September 30, 2020 “Submittal of Hanford Facility Resource Conservation and Recovery Act Permit Modification Notification Form 24590-LAB-PCN-ENV-19-003”

cc electronic w/enc:

Dave Bartus, EPA	Max Woods, ODOE
David Einan, EPA	Debra Alexander, Ecology
Mary Beth Burandt, USDOE-ORP	Jennifer Cantu, Ecology
Lori Huffman, USDOE-ORP	Annette Carlson, Ecology
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Curt Clement, MSA	Chris Wend, Ecology
Jon Perry, MSA	NWP RIM Coordinators, Ecology
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Mason Murphy, CTUIR	Correspondence Control
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Rex Buck Jr., Wanapum	Hanford Facility Operating Record
Laurene Contreras, YN	MSA Correspondence Control
ERWM Staff, YN	USDOE-ORP Correspondence Control
David Reeploeg, Hanford	USDOE-RL Correspondence Control
Communities	WRPS Correspondence Control
Jeff Burright, ODOE	

Attachment
20-ECD-0046

Hanford Facility RCRA Permit Modification Notification
Form 24590-LAB-PCN-ENV-19-003

(18 Pages Including Cover Sheet)

Quarter Ending: 09/30/2020

24590-LAB-PCN-ENV-19-003

RCRA Operating Record Number: R605

Hanford Facility RCRA Permit Modification Notification Form			
Unit: Waste Treatment and Immobilization Plant		Permit Part: Part III, Operating Unit Group 10	
<u>Description of Modification:</u>			
The purpose of this Class 1 prime modification is to update revisions of a Lab facility Process Flow Diagram and ten P&IDs in Appendix 11.1 and 11.2 of the DWP:			
Replace:	24590-LAB-M5-V17T-00029, Rev. 004	With:	24590-LAB-M5-V17T-00029, Rev. 005
Replace:	24590-LAB-M6-RLD-00001002, Rev. 000	With:	24590-LAB-M6-RLD-00001002, Rev. 001
Replace:	24590-LAB-M6-RLD-00001003, Rev. 000	With:	24590-LAB-M6-RLD-00001003, Rev. 001
Replace:	24590-LAB-M6-RLD-00001004, Rev. 000	With:	24590-LAB-M6-RLD-00001004, Rev. 001
Replace:	24590-LAB-M6-RLD-00002001, Rev. 001	With:	24590-LAB-M6-RLD-00002001, Rev. 002
Replace:	24590-LAB-M6-RLD-00002003, Rev. 002	With:	24590-LAB-M6-RLD-00002003, Rev. 003
Replace:	24590-LAB-M6-RLD-00006001, Rev. 000	With:	24590-LAB-M6-RLD-00006001, Rev. 001
Replace:	24590-LAB-M6-RLD-00006002, Rev. 000	With:	24590-LAB-M6-RLD-00006002, Rev. 001
Replace:	24590-LAB-M6-RLD-00006003, Rev. 000	With:	24590-LAB-M6-RLD-00006003, Rev. 001
Replace:	24590-LAB-M6-RLD-00007001, Rev. 000	With:	24590-LAB-M6-RLD-00007001, Rev. 001
Replace:	24590-LAB-M6-RLD-00007002, Rev. 000	With:	24590-LAB-M6-RLD-00007002, Rev. 001
<p>This modification requests Ecology approval and incorporation into the permit the specific changes to the Process Flow Diagram and Piping and Instrument Diagrams (P&IDs).</p> <p>Changes to the Process Flow Diagram and Piping and Instrument Diagrams for the Lab Facility are summarized below:</p> <p>24590-LAB-M5-V17T-00029, Rev. 005, WTP Analytical Laboratory Process Flow Diagram Radioactive Liquid Disposal</p> <ul style="list-style-type: none"> • Note 4: For “Cold Commissioning” only. Prior to the start of radiological waste processing at the WTP, the Lab RLD System shall have the capability to transfer the non-radioactive, dangerous liquid waste from each of the Lab RLD vessels by tanker truck. Temporary filters will be used as needed. • Note 11 and 14: Deleted • Note 20: Revision 5: Revised to clarify process engineering design requirements and align with PFD desktop instruction 24590-WTP-3DI-V04W-00001. Also corrected destination of RLD-VSL-000164 ventilation to show C5 ventilation system destination. • References 7-9 added to describe above in Note 20 • Atomic Energy Act statement added <p>24590-LAB-M6-RLD-00001002, Rev. 001, P&ID – Lab Radioactive Liquid Waste Disposal System C5 Collection and Transfer RLD-PMP-00183A</p> <ul style="list-style-type: none"> • Note 10: Mesh Screen Cap • Note 13: Revision 1: Incorporated 24590-LAB-M6N-RLD-00075, -00081, -00093, -00095, -00098, 24590-WTP-M6N-50-00073, 24590-WTP-EIE-J-16-0001, Rev. 0, and 24590-WTP-EIE-PR-15-0001, Rev. 1. 24590-WTP-EIE-J-16-0001 was incorporated by 24590-WTP-M6N-50-00073. No changes were required for incorporation of 24590-WTP-EIE-PR-15-0001. Revised reference 1 and updated ADR revision number • Reference 1 added to support revision outlined in Note 13. 			

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24590-LAB-M6-RLD-00001003, Rev. 001, P&ID – Lab Radioactive Liquid Waste Disposal System C5 Collection and Transfer RLD-PMP-00183B

- Note 10: Mesh Screen Cap
- Note 13: Revision 1: Incorporated 24590-LAB-M6N-RLD-00075, -00081, -00093, -00098, 24590-WTP-M6N-50-00073, 24590-WTP-EIE-J-16-0001, Rev. 0, and 24590-WTP-EIE-PR-15-0001, Rev. 1. 24590-WTP-EIE-J-16-0001 was incorporated by 24590-WTP-M6N-50-00073. No changes were required for incorporation of 24590-WTP-EIE-PR-15-0001. Revised reference 1 and updated ADR revision number
- Reference 1 added to support revision outlined in Note 13.

24590-LAB-M6-RLD-00001004, Rev. 001, P&ID – Lab Radioactive Liquid Waste Disposal System C5 Collection and Transfer Valve Pit

- Note 21: Mesh Screen Cap
- Note 23: Valve hand wheel is accessible above the valve pit cover plate. A portion of the valve extension shaft and shield plug components are safety significant, Quality Level Q, and Seismic Category III. Refer to specification 24590-LAB-3PS-MJW0-T0001.
- Note 24: Revision 1: Incorporated 24590-LAB-M6N-RLD-00075, -00081, -00092, -00093, -00098, 24590-LAB-M6N-60-00003, 24590-WTP-M6N-50-00073, and 24590-WTP-EIE-J-16-0001, Rev. 0. 24590-WTP-EIE-J-16-0001 was incorporated by 24590-WTP-M6N-50-00073. Revised reference 1, added off sheet connector flag from PWD-LAH-5109 to YC-6131 & YC-6113, updated ADR revision number and off sheet connectors flag.
- Reference 1 added to support revision outlined in Note 24.

24590-LAB-M6-RLD-00002001, Rev. 002, P&ID – Lab Radioactive Liquid Waste Disposal System C3 Collection and Transfer RLD-VSL-00164

- Note 5: The maximum elevation difference between the inside bottom of the vessel and the inside bottom of the overflow line (at its highest point) shall be 6.84 ft. to yield the maximum operating volume (MOV) of 2740 gal. Moreover, piping beyond the high point shall be free draining with no pockets to the vessel cell.
- Note 14: Revision 2: Incorporated 24590-LAB-M6N-M80T-00008, 24590-LAB-M6N-RLD-00098, 24590-WTP-M6N-50-00073, and 24590-WTP-EIE-J-16-0001, Rev. 0. 24590-WTP-EIE-J-16-0001 incorporated by 24590-WTP-M6N-50-00073. Revised Reference 1, off sheet connectors and updated ADR revision number.
- Reference 1 added to support revision outlined in Note 14

24590-LAB-M6-RLD-00002003, Rev. 003, P&ID – Lab Radioactive Liquid Waste Disposal System C3 Collection and Transfer RLD-PMP-00182A/B

- Note 19: Revision 3: Incorporated 24590-WTP-FC-P-18-0199, 24590-BOF-EIE-M-15-0123, Rev. 0, 24590-EIE-MS-17-0032, Rev. 1, and 24590-WTP-EIE-J-19-0003, Rev. 0. 24590-BOF-EIE-M-15-0123 incorporated in Rev. 1 of this P&ID. Incorporated 24590-WTP-EIE-SYSE-16-0082 with no impact. Revised off sheet connector coordinates and references
- References 1-3 updated to support revision outlined in Note 19

24590-LAB-M6-RLD-00006001, Rev. 001, P&ID – Lab Radioactive Liquid Waste Disposal System C3 Rad Lab Collection

- Note 13: Construction shall field route tubing from pipe-to-tube break to C3V duct work. See 24590-WTP-M0-50-00040001, and -00040003 for routing detail
- Note 14: RLD-HOOD-00059/ -00060/ -00061/ -00062 under sink drains are provided with secondary containment upstream of P-traps. A drain hole at the low point of the outer pipe is provided to direct potential leakage from the annular space of the double wall pipe to the drain pan under each P-trap.
- Note 15: Revision 1: Incorporated 24590-LAB-M6N-RLD-00079, -00097, 24590-WTP-FC-IN-11-0068, and 24590-WTP-FC-IN-12-0109. Incorporated 24590-WTP-FC-P-12-0465 (by reference) and further revised to add drains to support addition of ARL-HOOD-00061/00062. Revised material specification

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from N11E to S11C for ARL-HOOD-00059/60/61/62 drains. Added Note 14, revised Reference 1 and updated ADR revision number

- Reference 1 added to support revision outlined in Note 15

24590-LAB-M6-RLD-00006002, Rev. 001, P&ID – Lab Radioactive Liquid Waste Disposal System C3 Rad Lab Collection

- Note 11: Deleted
- Note 14: Construction shall field route tubing from pipe-to-tube break to C3V duct work. See 24590-WTP-M0-50-00040002 for routing details
- Note 15: Revision 1: Incorporated 24590-LAB-M6N-RLD-00097. Deleted decon shower drain plugs and Note 11. Revised Reference 1 and updated ADR revision number
- Reference 1 added to support revision outlined in Note 11

24590-LAB-M6-RLD-00006003, Rev. 001, P&ID – Lab Radioactive Liquid Waste Disposal System C3 Rad Lab Collection

- Note 13: Construction shall field route tubing from pipe-to-tube break to C3V duct work. See 24590-WTP-M0-50-00040002 and -00040003 for routing details
- Note 14: Revision 1: Incorporated 24590-LAB-M6N-RLD-00097, 24590-WTP-FC-IN-12-0109 and 24590-WTP-FC-P-12-0465. Revised Reference 1 and updated ADR Revision number
- Reference 1 added to support revision outlined in Note 14

24590-LAB-M6-RLD-00007001, Rev. 001, P&ID – Lab Radioactive Liquid Waste Disposal System C3 Leak Detection Boxes

- Note 10: Revision 1: Incorporated 24590-LAB-M6N-RLD-00095. Revised Reference 1, added line numbers, and updated ADR Revision number.
- Reference 1 added to support revision outlined in Note 10

24590-LAB-M6-RLD-00007002, Rev. 001, P&ID – Lab Radioactive Liquid Waste Disposal System C3 Collection Drain Header

- Note 13: Construction shall field route tubing from pipe-to-tube break to C3V duct work. See 24590-WTP-M0-50-00040002 for routing details
- Note 14: Revision 1: Incorporated 24590-LAB-M6N-RLD-00097. Revised Reference 1, added line numbers, and updated ADR Revision number.
- Reference 1 added to support revision outlined in Note 14

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 1 modification. WAC 173-303-830(4)(d)(i)(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.

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<p>Modification Approved/Concur: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Denied (<i>state reason below</i>)</p> <p><u>Reason for denial:</u> </p>	<p>Reviewed by Ecology:</p> <p>Digitally signed by Schleif, Stephanie (ECY) <u>10/22/2020</u></p> <hr/> <p>S. Schleif Schleif Date</p>
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- NOTE 1: C3 COLLECTION HEAD ASSEMBLY (SEE DRAWING 24590-LAB-M6-RLD-00007001)
- NOTE 2: C3 COLLECTION LINE (SEE DRAWING 24590-LAB-M6-RLD-00007001)
- NOTE 3: C3 COLLECTION HEAD ASSEMBLY (SEE DRAWING 24590-LAB-M6-RLD-00007001)
- NOTE 4: C3 COLLECTION LINE (SEE DRAWING 24590-LAB-M6-RLD-00007001)
- NOTE 5: C3 COLLECTION HEAD ASSEMBLY (SEE DRAWING 24590-LAB-M6-RLD-00007001)
- NOTE 6: C3 COLLECTION LINE (SEE DRAWING 24590-LAB-M6-RLD-00007001)
- NOTE 7: C3 COLLECTION HEAD ASSEMBLY (SEE DRAWING 24590-LAB-M6-RLD-00007001)
- NOTE 8: C3 COLLECTION LINE (SEE DRAWING 24590-LAB-M6-RLD-00007001)

HOLDS/OPEN ITEMS: NONE

REFERENCES: 1. 24590-LAB-M6-RLD-00007001 RADIOACTIVE LIQUID

1. SEE DRAWINGS 24590-LAB-M6-RLD-00007001 THROUGH 24590-LAB-M6-RLD-00007008 FOR GENERAL NOTES, DIMENSIONS AND LEGEND AND GENERAL SLOPE REQUIREMENTS.
2. PERMIT AFFECTING DOCUMENT ARE DANGEROUS WASTE.
3. THE PRESSURE BOUNDARY FOR ALL COMPONENTS ON THIS DRAWING IS CATEGORY 1 UNLESS OTHERWISE NOTED.
4. ALL LINES SHOWN ON THIS DRAWING SHALL BE SELF DRAINING, UNLESS OTHERWISE NOTED.
5. QUICK CONNECTION IS PROVIDED FOR PNEUMATIC TESTING OF THE LEAK DETECTION BOX AND THE PIPE JOINTS.
6. OPERATOR SHALL BE ADVISED THAT EXISTING PIPING HAS BEEN OPERATED REMOVED VIA ADDS THAT EXTEND UP TO GRADE POSITION TO CREATE A VERTICAL LEVEL, UNLESS OTHERWISE NOTED. THE OPERATOR IS TO BE RESPONSIBLE FOR OBTAINING PROTECTION, BOTH P-LUGS WILL BE CLOSED FOR PNEUMATIC TESTING OF THE LEAK DETECTION BOX.
7. LEVEL SENSOR TO BE MOUNTED DIRECTLY TO THE VENDOR FLANGE.
8. SLOPE C3 COLLECTION HEADERS AND ENCASMENT PIPE DRAIN LINE INCH PER FOOT (IN/FT) SLOPE.
9. THIS DRAWING IS CONVERTED FROM A SINGLE SHEET TO MULTISHEET DRAWING. IN PART, THIS DRAWING INCLUDES INFORMATION FROM 24590-LAB-M6-RLD-00007001 AND 24590-LAB-M6-RLD-00007002. REFERENCED DRAWING NUMBERS AND SHEET NUMBERS ARE LISTED IN THE DRAWING NOTES.

CM

REV	BY	DATE	DESCRIPTION
1	WJW	11/05/2024	ISSUED FOR CONSTRUCTION SEE NOTE 1
2	WJW	11/05/2024	REVISED FOR CONSTRUCTION SEE NOTE 1

REV	DATE	DESCRIPTION
1	11/05/2024	ISSUED FOR CONSTRUCTION SEE NOTE 1
2	11/05/2024	REVISED FOR CONSTRUCTION SEE NOTE 1

24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007002

DRIVING INDEX
 TITLE
 24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007002

REVISION HISTORY
 REVISED FOR CONSTRUCTION SEE NOTE 1
 11/05/2024
 WJW
 11/05/2024
 WJW
 11/05/2024
 WJW

PROJECT NO. 24590-LAB-M6-RLD-00007001
 CONTRACT NO. 24590-LAB-M6-RLD-00007001
 CONTRACTOR
 24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007001

PROJECT TITLE
 RADIOACTIVE LIQUID WASTE DISPOSAL SYSTEM
 C3 LEAK DETECTION BOXES

SCALE: AS SHOWN
 SHEET NO. 24590-LAB-M6-RLD-00007001
 OF 1

DATE: 11/05/2024
 TIME: 11:00 AM
 DRAWN BY: WJW
 CHECKED BY: WJW
 APPROVED BY: WJW

24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007002

DRIVING INDEX
 TITLE
 24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007002

REVISION HISTORY
 REVISED FOR CONSTRUCTION SEE NOTE 1
 11/05/2024
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 11/05/2024
 WJW

PROJECT NO. 24590-LAB-M6-RLD-00007001
 CONTRACT NO. 24590-LAB-M6-RLD-00007001
 CONTRACTOR
 24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007001

PROJECT TITLE
 RADIOACTIVE LIQUID WASTE DISPOSAL SYSTEM
 C3 LEAK DETECTION BOXES

SCALE: AS SHOWN
 SHEET NO. 24590-LAB-M6-RLD-00007001
 OF 1

DATE: 11/05/2024
 TIME: 11:00 AM
 DRAWN BY: WJW
 CHECKED BY: WJW
 APPROVED BY: WJW

24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007002

DRIVING INDEX
 TITLE
 24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007002

REVISION HISTORY
 REVISED FOR CONSTRUCTION SEE NOTE 1
 11/05/2024
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 11/05/2024
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 11/05/2024
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PROJECT NO. 24590-LAB-M6-RLD-00007001
 CONTRACT NO. 24590-LAB-M6-RLD-00007001
 CONTRACTOR
 24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007001
 24590-LAB-M6-RLD-00007001



This document has been digitally signed using the Electrosign process.

Document for Signature

Document Number: 24590-LAB-PCN-ENV-19-003 **Rev:** NA

Participants	Signature	Completed	Status	Result	Comments
Signers	9/8/2020 5:51 PM				
Haggard, Robert		9/8/2020 6:54 PM	Completed	Approve	
Final Approver	9/8/2020 6:54 PM				
Haggard, Robert		9/14/2020 12:14 PM	Completed	Approve	