



Response to Comments

HLW-041, WTP Dangerous Waste Permit Modification

April 4 – May 20, 2022

For the **Nuclear Waste Program**

Washington State Department of Ecology

Richland, Washington

July 2022, Publication 22-05-016



Publication Information

This document is available on the Department of Ecology, [Nuclear Waste Program's Publication page](#).¹

Ecology publishes this document to meet the requirements of [Washington Administrative Code 173-303-840 \(9\)](#).

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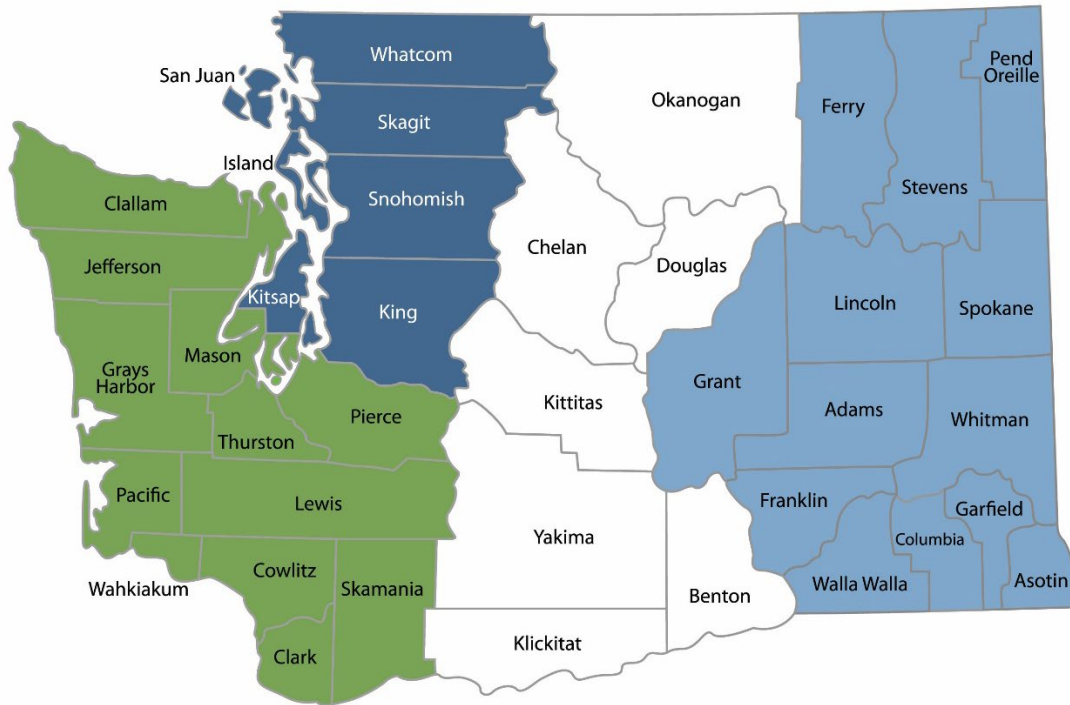
To request an ADA accommodation, contact Ecology by phone at 509-372-7950 or email at Daina.McFadden@ecy.wa.gov. For Washington Relay Service or TTY call 711 or 877-833-6341. Visit Ecology's website for more information.

¹ <https://apps.ecology.wa.gov/publications/summarypages/2205016.html>

² www.ecology.wa.gov/contact

Department of Ecology's Regional Offices

Map of Counties Served



Southwest Region 360-407-6300	Northwest Region 206-594-0000	Central Region 509-575-2490	Eastern Region 509-329-3400
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Region	Counties Served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	PO Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
Headquarters	Across Washington	PO Box 46700 Olympia, WA 98504	360-407-6000

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DEPARTMENT OF
ECOLOGY
State of Washington

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Introduction

The Washington State Department of Ecology’s Nuclear Waste Program (Ecology) manages dangerous waste within the state by writing permits to regulate its treatment, storage, and disposal. When a new permit or a significant modification to an existing permit is proposed, Ecology holds a public comment period to allow the public to review the change and provide formal feedback. (See [Washington Administrative Code \[WAC\] 173-303-830](#) for types of permit changes.)

The Response to Comments is the last step before issuing the final permit, and its purpose is to:

- Specify which changes, if any, of a permit will become effective upon issuance of the final permit, providing reasons for those changes.
- Describe and document public involvement actions.
- List and respond to all significant comments received during the public comment period and any related public hearings.

This Response to Comments is prepared for:

Comment period	HLW-041, WTP Dangerous Waste Permit Modification, April 4 – May 20, 2022
Permit	<i>Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit for the Treatment, Storage, and Disposal of Dangerous Waste, Waste Treatment and Immobilization Plant (WTP)</i>
Permittees	U.S. Department of Energy, Richland Office and Bechtel National, Inc.
Original Issuance date	9/25/2002
Effective date	8/28/2022

To see more information related to the Hanford Site and nuclear waste in Washington, please visit our webpage, [Hanford Cleanup](#)³.

³ <https://www.ecology.wa.gov/Hanford>

Reasons for Issuing the Permit

The purpose of this agency-initiated permit modification was to focus on redesign elements of the High-Level Waste (HLW) Radioactive Liquid Waste Disposal (RLD) system vessels and ancillary equipment at the HLW Vitrification Facility. The HLW RLD system receives radioactive effluents from several different process systems. The system will handle and condition liquid waste for interim storage. Effluents will then be transferred to the Pretreatment Facility Plant Wash and Disposal system for processing and final disposition. The vessels covered by this permit package include the Acidic Waste Vessel (RLD-VSL-00007), and the Plant Wash and Drains Vessel (RLD-VSL-00008).

This Permit Modification updates the following documents in the WTP Permit:

- Unit-Specific Permit Conditions
- Chapter 4F
- Appendix 10.1
- Appendix 10.2
- Appendix 10.6
- Appendix 10.9
- Appendix 10.11

Public Involvement Actions

Ecology encouraged public comment on the agency-initiated permit modification during a 45-day public comment period held April 4 through May 20, 2022.

The following actions were taken to notify the public:

- Mailed a public notice announcing the comment period to 1,005 members of the public.
- Placed a public announcement legal classified notice in the Tri-City Herald on April 3, 2022.
- Emailed a notice announcing the start of the comment period to the Hanford-Info email list, which has 1,284 recipients.
- Posted the comment period notice on the Washington Department of Ecology – Hanford’s Facebook and Twitter pages.

The Hanford information repositories located in Richland, Spokane, and Seattle, Washington, and Portland, Oregon, received the following documents for public review:

- Focus sheet
- Transmittal letter
- Statement of Basis for the proposed WTP Permit Modification
- Draft WTP Permit Modification

The following public notices for this comment period are in [Appendix A](#) of this document:

- Focus sheet
- Classified notice in the Tri-City Herald
- Notices sent to the Hanford-Info email list
- Notices posted on the Washington Department of Ecology – Hanford’s Facebook and Twitter pages

List of Commenters

The table below lists the names of organizations or individuals who submitted a comment on the HLW-041, WTP Dangerous Waste Permit modification. The comments and responses are in [Attachment 1](#).

Commenter	Organization
Dean Sigler	Citizen
Hanford Challenge	Hanford Challenge

Attachment 1: Comments and Responses

Description of comments:

Ecology accepted comments from April 4 through May 20, 2022. This section provides a summary of comments that we received during the public comment period and our responses, as required by RCW 34.05.325(6)(a)(iii). Comments are grouped by individual and each comment is addressed separately.

I-1: DEAN SIGLER

Comment I-1-1

I worked as a technical writer on the original plan to move nuclear sludge on Tank Farm C from single-wall leaking tanks to new double-wall tanks. At that time, I suggested adding vitrification to the process, sealing the tanks in leaded glass that could have been obtained from then abundant CRTs and defunct televisions. That idea was rejected.

I think vitrification has been demonstrated in France to be a viable solution and should be incorporated at Hanford.

Response to I-1-1

Thank you for your comment. This proposed agency-initiated modification focuses on redesign elements of the HLW Radioactive Liquid Waste Disposal (RLD) system vessels and ancillary equipment at the HLW Vitrification Facility. This comment is outside the scope of this permit modification.

O-1: HANFORD CHALLENGE

Comment O-1-1

It is really important to Hanford Challenge that technical issues related to the Waste Treatment Plant and tank waste treatment are effectively resolved.

Response to O-1-1

Thank you for your comment. This proposed agency-initiated modification focuses on redesign elements of the HLW Radioactive Liquid Waste Disposal (RLD) system vessels and ancillary equipment at the HLW Vitrification Facility. This comment is outside the scope of this permit modification. Ecology agrees with this comment and is committed to work diligently to resolve any technical issues related to the Waste Treatment Plant and tank waste treatment.

Appendix A. Copies of All Public Notices

Public notices for this comment period:

- Focus sheet
- Classified notice in the Tri-City Herald
- Notices sent to the Hanford-Info email list
- Notices posted on Washington Department of Ecology – Hanford’s Facebook and Twitter pages

High-Level Waste Vitrification Facility

Waste Treatment Plant Permit Modification



Figure 1. Columbia River looking at the Hanford site

- Public comment period April 4 – May 20, 2022
- Agency-initiated permit modification
- Focuses on the redesign of system vessels and ancillary equipment

Public comment invited

The Washington State Department of Ecology (Ecology) is proposing a change to the Hanford Facility Resource Conservation and Recovery Act Permit, Revision 8C.

This change affects the Dangerous Waste Portion for the Treatment, Storage, and Disposal of Dangerous Waste for the Waste Treatment and Immobilization Plant (WTP) Operating Unit Group (OUG) 10.

The permittees are:

U.S. Department of Energy
Office of River Protection
P.O. Box 450
Richland, WA 99352

Bechtel National, Inc.
2435 Stevens Center Place
Richland, WA 99354

Background

The Hanford Site occupies 580 square miles in southeastern Washington State. The site produced plutonium for the nation's defense program from 1943 to the late 1980s.

Today, the site's primary missions are waste management and environmental cleanup.

The High-Level Waste (HLW) Vitrification Facility is located within the WTP OUG in the 200 East Area of the Hanford Site.

Overview & Changes

This proposed agency-initiated modification focuses on redesign elements of the HLW Radioactive Liquid Waste Disposal (RLD) system vessels and ancillary equipment at the HLW Vitrification Facility. The vessels covered by this permit package include the Acidic Waste Vessel (RLD-VSL-00007), and the Plant Wash and Drains Vessel (RLD-VSL-00008).

The following documents are included in the permit modification to support the public comment period:

- Unit-Specific Permit Conditions
- Chapter 4F
- Appendix 10.1
- Appendix 10.2
- Appendix 10.6
- Appendix 10.9
- Appendix 10.11

Facility Background

The HLW RLD system receives radioactive effluents from several different process systems. The HLW RLD system will handle and condition liquid waste for

interim storage. Effluents will then be transferred to the Pretreatment Facility Plant Wash and Disposal system for processing and final disposition.

Reviewing the proposed changes

Ecology invites you to review and comment on this proposed WTP permit modification. See the last page for comment period dates and information on how to submit comments.

Copies of the application for the proposed permit, the draft permit and fact sheet, and supporting documentation will be available during the public comment period online at Ecology's website¹. The documents will also be available electronically at the Hanford Public Information Repositories listed on the next page.

Ecology will consider and respond to all significant comments received during the public comment period. We will document our responses and issue a response to comments document when we make our final permitting decision.



Figure 2. Aerial view of the Waste Treatment and Immobilization Plant

¹ [Ecology.wa.gov/Waste-Toxics/Nuclear-waste/Public-comment-periods](https://ecology.wa.gov/Waste-Toxics/Nuclear-waste/Public-comment-periods)

Hanford's Information Repositories

Ecology Nuclear Waste Program
Resource Center
3100 Port of Benton Blvd.
Richland, WA 99354
509-372-7950

U.S. Department of Energy
Administrative Record
2440 Stevens Drive, Room 1101
Richland, WA 99354
509-376-2530

Washington State University Tri-Cities
Department of Energy Reading Room
2770 Crimson Way, Room 101L
Richland, WA 99354

University of Washington
Suzzallo Library
Box 352900
Seattle, WA 98195
206-543-5597

Gonzaga University
Foley Center
502 E Boone Avenue
Spokane, WA 99258
509-313-6110

Portland State University
Millar Library
1875 SW Park Avenue
Portland, OR 97207
503-725-4542

For information on other comment periods or ways to get involved, go to ecology.wa.gov/Hanford and click "Public comment periods" on the left bar or visit Hanford.gov "public involvement opportunities".

You can also follow us on social media.



@EcologyWAHanford



@ecyHanford



Figure 3. Nuclear Waste Program office - Richland



Nuclear Waste Program
3100 Port of Benton Blvd
Richland, WA 99354

HLW-041, WTP Permit Modification

Apr. 4 – May 20, 2022



Electronic submission (preferred):

<https://nw.ecology.commentinput.com/?id=JspGF>

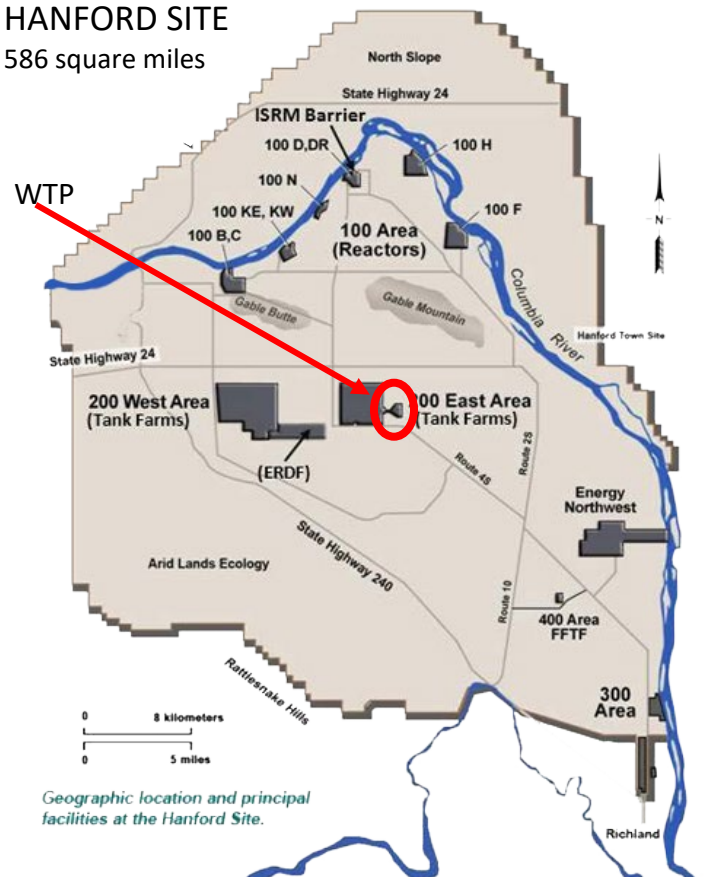
Mail or hand delivery

Daina McFadden
3100 Port of Benton Blvd
Richland, WA 99354

A public hearing is not scheduled, but if there is enough interest, we will consider holding one. To request a hearing or for more information, contact:

Daina McFadden
509 372 7950
Hanford@ecy.wa.gov

HANFORD SITE 586 square miles



Geographic location and principal facilities at the Hanford Site.

From: [Washington Department of Ecology](#)
To: [McFadden, Daina \(ECY\)](#)
Subject: Public comment period starting in April 2022
Date: Friday, March 4, 2022 9:06:30 AM



HLW Vitrification Facility permit modification

30-Day Advance Notice

Ecology will be holding a 45-day public comment period addressing proposed modifications to the *Dangerous Waste Portion for the Treatment, Storage, and Disposal of Dangerous Waste* Waste Treatment and Immobilization Plant (WTP) Operating Unit Group (OUG) 10 starting in early April 2022. The Permittees are the U.S. Department of Energy and Bechtel National, Inc. The High-Level Waste (HLW) Vitrification Facility is located within the WTP OUG in the 200 East Area of the Hanford Site with design work in progress.

What changes are being proposed?

This proposed Agency-Initiated modification focuses on redesign elements of the HLW Radioactive Liquid Waste Disposal (RLD) System vessels and ancillary equipment at the HLW Vitrification Facility.

Public hearing

A public hearing is not scheduled, but if there is enough interest, we will consider holding one. To request a hearing or for more information, contact:

Daina McFadden

Permit Communication Specialist

✉ Hanford@ecy.wa.gov

☎ 509-372-7950

From: [Washington Department of Ecology](#)
To: [McFadden, Daina \(ECY\)](#)
Subject: High-Level Waste Vitrification Facility public comment period
Date: Monday, April 4, 2022 8:30:58 AM



High-Level Waste Vitrification Facility public comment period

Waste Treatment and Immobilization Plant permit modification

Ecology is holding a 45-day public comment period addressing proposed modifications to the *Dangerous Waste Portion for the Treatment, Storage, and Disposal of Dangerous Waste* for the Waste Treatment and Immobilization Plant (WTP) Operating Unit Group (OUG) 10. The permittees are The U.S. Department of Energy and Bechtel National, Inc. The High-Level Waste (HLW) Vitrification Facility is located within the WTP OUG in the 200 East Area of the Hanford Site.

The [proposed modification](#) is now available for public review:

Starting: April 4, 2022

Ending: May 20, 2022

Proposed changes

This proposed agency-initiated modification focuses on redesign elements of the HLW Radioactive Liquid Waste Disposal (RLD) system vessels and ancillary equipment at the HLW Vitrification Facility. The vessels covered by this permit package include the Acidic Waste Vessel (RLD-VSL-00007), and the Plant Wash and Drains Vessel (RLD-VSL-00008).

How to comment

The proposed modification is available for review online at the Nuclear Waste Program's [public comment page](#).

Electronic copies of the proposed modification are also located at the [Administrative Record](#) and [Information Repositories](#).

Please submit comments by **May 20, 2022**. Electronic submission is preferred.

[Comment](#)

Mail or hand-deliver to:

Daina McFadden, 3100 Port of Benton Blvd, Richland WA 99354

Public hearing

A public hearing is not scheduled, but if there is enough interest, we will consider holding one. To request a hearing or for more information, contact:

Daina McFadden

Permit Communications Specialist

✉ Hanford@ecy.wa.gov

☎ 509-372-7950

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...

We began two new #Hanford public comment periods today! One involves the High-Level Waste Vitrification Facility and the other the Southern Area Fire Station Emergency Generator.

Check them out and get comments in: ecology.wa.gov/Waste-Toxics/N...
@EcologyWA @HanfordSite @EPAnorthwest



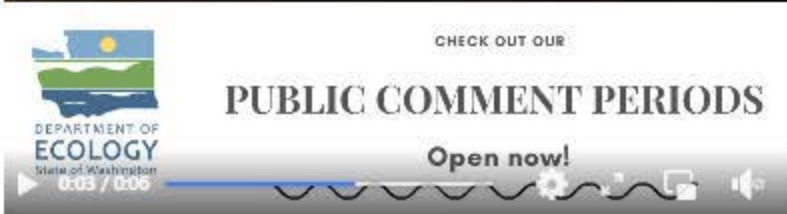
Washington Department of Ecology - Hanford

...

Published by Ecology Ryan · 10m ·

We began two new #Hanford public comment periods today! One involves the High-Level Waste Vitrification Facility and the other the Southern Area Fire Station Emergency Generator.

Check them out and get your comments in:
<https://ecology.wa.gov/.../Nuclear.../Public-comment-periods>



See Insights

Boost post

Like

Comment

Share



Write a comment...



Proposed permit modifications to the High-Level Waste Vitrification Facility


April 4, 2022 - May 20, 2022

We're holding a 45-day public comment period addressing proposed modifications to the Hanford Dangerous Waste Permit for the Waste Treatment and Immobilization Plant (WTP) Operating Unit Group (OUG) 10. The permittees are the U.S. Department of Energy and Bechtel National, Inc. The High-Level Waste (HLW) Vitrification Facility is located within the WTP OUG in the 200 East Area of the Hanford Site.

Proposed changes

This proposed agency-initiated modification focuses on redesign elements of the HLW Radioactive Liquid Waste Disposal (RLD) system vessels and ancillary equipment at the HLW Vitrification Facility. The vessels covered by this permit package include the Acidic Waste Vessel (RLD-VSL-00007), and the Plant Wash and Drains Vessel (RLD-VSL-00008).

How to comment

Copies of the proposed permit and supporting documentation are available below, at the Information Repositories at the bottom of this page, or at the [Administrative Record](#) .

Please submit comments by **May 20, 2022**, [electronically](#)  (preferred), or deliver to:

Daina McFadden
3100 Port of Benton Blvd
Richland WA 99354

Public hearing


A public hearing is not scheduled, but if there is enough interest, we will consider holding one. To request a hearing or for more information, contact Daina McFadden by [email](#) or call 509-372-7950.

Documents

Permit Files

[Transmittal Letter](#) 

[Focus Sheet](#) 

[Cover Sheet](#) 

[Conditions](#) 

[Chapter 4F: High-Level Waste Vitrification Facility](#) 

[Statement of Basis](#) 

Appendix 10.1: High-Level Waste Building Process Flow Diagrams

[24590-HLW-M5-V17T-00007001 008](#) 

[24590-HLW-M5-V17T-00007002 008](#) 

Appendix 10.2: High-Level Waste Building Piping and Instrumentation Diagrams

24590-HLW-M6-RLD-00001001 002 	24590-HLW-M6-RLD-00008002 001 
24590-HLW-M6-RLD-00001002 001 	24590-HLW-M6-RLD-00015001 001 
24590-HLW-M6-RLD-00002001 002 	24590-HLW-M6-RLD-00015004 000 
24590-HLW-M6-RLD-00002002 002 	24590-HLW-M6-RLD-00016001 001 
24590-HLW-M6-RLD-00002003 001 	24590-HLW-M6-RLD-00017001 001 
24590-HLW-M6-RLD-00003001 001 	24590-HLW-M6-RLD-00017002 001 
24590-HLW-M6-RLD-00003003 001 	24590-HLW-M6-RLD-00018001 000 
24590-HLW-M6-RLD-00006001 000 	24590-HLW-M6-RLD-00018002 000 
24590-HLW-M6-RLD-00006002 000 	24590-HLW-M6-RLD-00018003 000 
24590-HLW-M6-RLD-00006003 000 	24590-HLW-M6-RLD-00018004 000 

24590-HLW-M6-RLD-00007001 030	24590-HLW-M6-RLD-00020001 000
24590-HLW-M6-RLD-00007002 030	24590-HLW-M6-RLD-20003001 001
24590-HLW-M6-RLD-00007003 030	24590-HLW-M6-RLD-20004001 001
24590-HLW-M6-RLD-00008001 031	24590-HLW-M6-RLD-20005001 001

Appendix 10.6: High-Level Waste Building Mechanical Drawings

24590-HLW-MVD-RLD-00005 011	24590-HLW-MV-RLD-00026002 000
24590-HLW-MVD-RLD-00007 009	24590-HLW-MV-RLD-00026003 000
24590-HLW-MV-RLD-00025001 031	24590-HLW-MV-RLD-00026004 000
24590-HLW-MV-RLD-00025002 031	24590-HLW-MV-RLD-00026005 000
24590-HLW-MV-RLD-00025003 031	24590-HLW-MXD-RLD-00016 001
24590-HLW-MV-RLD-00025004 031	24590-HLW-MXD-RLD-00017 001
24590-HLW-MV-RLD-00025005 030	24590-HLW-MXD-RLD-00018 000
24590-HLW-MV-RLD-00026001 030	

Appendix 10.9: High-Level Waste Building Material Selection and Corrosion Evaluation Documents

[24590-HLW-N1D-RLD-00001 010](#)

[24590-HLW-N1D-RLD-00006 009](#)

Appendix 10.11: High-Level Waste Building Independent Qualified Registered Professional Engineering Reports

[24590-CM-HC4-HXYG-00240-02-00036 00A](#)

[24590-CM-HC4-HXYG-00240-02-00037 00A](#)

[24590-CM-HC4-HXYG-00240-02-00038 00A](#)

[24590-CM-HC4-HXYG-00240-02-00039 00A](#)

Supplemental Information

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[24590-HLW-3ZD-RLD-00001 001](#)