



## **Response to Comments Low-Activity Waste Pretreatment System – Class 3 permit modification**

**June 22, 2020 to August 7, 2020  
September 28, 2020 to November 12,  
2020**

By Yoana Lucatero

For the **Nuclear Waste Program**

Washington State Department of Ecology

Richland, Washington

January 2021, Publication 21-05-005



## Publication Information

This document is available on the Department of Ecology's website at:

<https://apps.ecology.wa.gov/publications/summarypages/2105005.html>

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

### Cover photo credit

- Photo by Washington State Dept. of Ecology, July 26, 2020

## Contact Information

Yoana Lucatero, Lead Permit Writer

Nuclear Waste Program

3100 Port of Benton Blvd

Richland, WA 99354

Phone: 509-372-7950

Email: [Hanford@ecy.wa.gov](mailto:Hanford@ecy.wa.gov)

**Website**<sup>1</sup>: [Washington State Department of Ecology](#)

## ADA Accessibility

The Department of Ecology is committed to providing people with disabilities access to information and services by meeting or exceeding the requirements of the Americans with Disabilities Act (ADA), Section 504 and 508 of the Rehabilitation Act, and Washington State Policy #188.

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

---

<sup>1</sup> [www.ecology.wa.gov/contact](http://www.ecology.wa.gov/contact)

# Department of Ecology's Regional Offices

## Map of Counties Served



<b>Southwest Region</b> 360-407-6300	<b>Northwest Region</b> 425-649-7000	<b>Central Region</b> 509-575-2490	<b>Eastern Region</b> 509-329-3400
---	---	---------------------------------------	---------------------------------------

Region	Counties served	Mailing Address	Phone
<b>Southwest</b>	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300
<b>Northwest</b>	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	3190 160th Ave SE Bellevue, WA 98008	425-649-7000
<b>Central</b>	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
<b>Eastern</b>	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
<b>Headquarters</b>	Across Washington	PO Box 46700 Olympia, WA 98504	360-407-6000

# **Response to Comments Low-Activity Waste Pretreatment System – Class 3 permit modification**

---

**June 22, 2020 to August 7, 2020  
September 28, 2020 to November 12, 2020**

Nuclear Waste Program  
Washington State Department of Ecology  
Richland, WA

**January 2021 | Publication 21-05-005**



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

# Table of Contents

**Introduction ..... 6**

**Reasons for Issuing the Permit ..... 7**

**Public Involvement Actions ..... 8**

**List of Commenters ..... 9**

**Attachment 1: Comments and Responses ..... 10**

**Appendix A. Copies of All Public Notices..... 11**

## 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 provisions, 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	Low-Activity Waste Pretreatment System, June 22, 2020 to August 7, 2020 and September 28, 2020 to November 12, 2020
Permit	<i>Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit for the Treatment, Storage, and Disposal of Dangerous Waste, Part III, Operating Unit Group 1, Low-Activity Waste Pretreatment System (LAWPS)</i>
Permittees	U.S. Department of Energy – Office of River Protection and Washington River Protection Solutions
Original Issuance date	September 27, 1994
Effective date	March 1, 2021

To see more information related to the Hanford Site and nuclear waste in Washington, please visit our webpage, [Hanford Cleanup](#)<sup>2</sup>.

---

<sup>2</sup> <https://www.ecology.wa.gov/Hanford>

## Reasons for Issuing the Permit

This Class 3 Permit Modification adds a new Operating Unit Group, the Low-Activity Waste Pretreatment System (LAWPS), into the Hanford Facility Dangerous Waste Permit. The permit modification covers design and construction activities to support the LAWPS Project Phase One.

The LAWPS Project will be operated in phases, with LAWPS Phase One as a Tank Side Cesium Removal (TSCR) unit. LAWPS Phase Two will use either a permanent cesium removal capability or additional TSCR unit(s) to support full operations of the Waste Treatment and Immobilization Plant, Low-Activity Waste (WTP LAW) Facility.

**LAWPS Project Phase One:** The TSCR unit is a mixed waste treatment and storage unit that will treat double-shell tank supernatant waste, which contains undissolved solids and radionuclides.

The TSCR unit treatment consists of solids filtration and cesium removal by ion exchange, and tank and container storage for waste generated during the process.

During Phase One, the TSCR unit operations will account for approximately one-half of the required 10-gallon per minute treatment capacity throughput necessary to operate both melters in the WTP LAW Facility.

After waste is treated through the TSCR unit, it will be routed to Double-shell Tank 241-AP-106 for storage and subsequent transfer to the WTP LAW Facility. The first phase of the LAWPS Operating Unit Group will include three Dangerous Waste Management Units:

1. The TSCR Process Enclosure
2. The ion exchange column (IXC) Storage Pad
3. The IXC Staging Area

The following documents were included in the modification and provided to support the public comment period:

- Addendum A, Part A Form
- Addendum B, Waste Analysis Plan
- Addendum C, Process Information
- Addendum E, Security Requirements
- Addendum F, Preparedness and Prevention
- Addendum G, Personnel Training
- Addendum H, Closure Plan
- Addendum I, Inspection Plan
- Addendum J, Contingency Plan
- Supporting design media (specifications, calculations, reports, and engineering drawings)
- Seismic and traffic evaluations
- Unit Specific Permit Conditions
- SEPA Determination of Significance and Notice of Adoption

## Public Involvement Actions

Ecology encouraged public comment on the LAWPS Operating Unit Group 1 (OUG 1) permit modification during two 45-day public comment periods held June 22 through August 7, 2020, and September 28 through November 12, 2020.

The following actions were taken to notify the public:

- Mailed public notices announcing the comment periods to 1,152 members of the public.
- Distributed copies of the public notice to members of the public at Hanford Advisory Board meetings.
- Placed public announcement legal classified notices in the Tri-City Herald on June 21, 2020, and September 27, 2020.
- Emailed notices announcing the start of the comment periods to the Hanford-Info email list, which has 1,320 recipients.
- Posted the comment period notices on the Washington Department of Ecology – Hanford 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
- Fact Sheet for the proposed LAWPS OUG 1 permit modification
- Draft LAWPS OUG 1 permit modification

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

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



## List of Commenters

The table below lists the names of organizations or individuals who submitted a comment on the LAWPS OUG 1 permit modification. The comments and responses are in [Attachment 1](#).

Commenter	Organization
Madya Panfilio	Individual
Anonymous	Individual
Mike Conlan	Individual
Heart of America Northwest; Heart of America Northwest Research Center	Organization
US Department of Energy	Agency

# Attachment 1: Comments and Responses

## **Description of comments:**

Ecology accepted comments from June 22 through August 7, 2020, and again September 28 through November 12, 2020. 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: MIKE CONLAN**

### **Comment I-1-1**

- 1) Remove all nuclear waste,
- 2) Do not allow anymore nuclear waste into the facility,
- 3) Replace all the single storage tanks,
- 4) Stop all the nuclear leakage entering the Columbia River
- 5) Glassification!

### **Response to I-1-1**

*Ecology is working to ensure that long-term storage, treatment, and disposal of the waste is protective of human health and the environment.*

*The proposed permit changes are not to allow new waste, but to better manage the waste already at Hanford.*

*Single-shell tanks are not in the scope of this comment period.*

*Stopping any potential nuclear waste from impacting the Columbia River is not within the scope of the LAWPS Permit. Prevention of groundwater and surface water impacts are addressed in operations associated with other units.*

*Ecology agrees that tank waste does pose a threat. We believe a better approach to addressing it is to transfer waste from the single shell tanks to the double-shell tanks to prepare for eventual treatment in the Waste Treatment Plant.*

## **I-2: ANONYMOUS**

### **Comment I-2-1**

Ecology's August 24, 2020 SEPA Extrapolation<sup>1</sup> to adopt LAWPS with Cs Ion Exchange and eventual ion exchange media vitrification is too much of a stretch, and is based on Department of Energy abuse of discretion. The SEPA determination notes that the Tank Closure and Waste Management EIS allowed for a "sequenced" startup of the WTP that allowed WTP facilities such as pretreatment, Low Activity Vitrification, and HLW vitrification startup operations to be staggered.

I believe the original analyses in the TC&WM EIS envisioned and analyzed a startup that was staggered by months or a year, **not decades**. The sequenced startup in the EIS was not so exaggerated that a whole bunch of new facilities (such as the EMF and the LAWPS) would be needed. The abuse here is that the original scope has been stretched into a completely different flow sheet, including un-analyze risks.

---

<sup>1</sup> 1 SEPA Determination Located at <https://apps.ecology.wa.gov/separ/Main/SEPA/Record.aspx?SEPANumber=202004362>.

The TC&WM EIS has not evaluated the construction or operation of an imaginary loaded ion exchange column demolition and vitrification facility at WTP. The risks have not been analyzed.

The NEPA Review Process described by EPA at <https://www.epa.gov/nepa/national-environmental-policy-act-review-process> requires an EIS to describe a reasonable range of alternatives. Leaving the new path to ion exchange column disposal out of the scope of alternatives is an egregious omission. EPA states that a **Supplement to the EIS** is required when an agency makes substantial changes to the proposed action that are **relevant to its environmental concerns**. Chopping up IX columns in an undesigned/unfunded WTP facility is certainly relevant to environmental concerns. A supplement to the EIS is not the same thing as the cursory and inaccurate "supplement analysis" DOE prepared for DFLAW. A formal Supplement to the EIS would require the same rigor as the original EIS. A "supplement analysis" is not the same thing.

### **Response to I-2-1**

*Ecology considered the following when deciding to adopt the US Department of Energy's "Supplemental Analysis of the Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington" (DOE/EIS-0391-SA-2).*

- *SEPA does not require that an EIS be an agency's only decision making document [WAC 197-11-448(1)] and Agencies have the option to combine EISs with other documents [WAC 197-11-448(4)]*
- *An agency may use environmental documents that have previously been prepared in order to evaluate proposed actions, alternatives, or environmental impacts. The proposals may be the same as, or different than, those analyzed in the existing documents. [WAC 197-11-600(2)]*
- *Ecology may adopt an existing environmental document "If a proposal is substantially similar to one covered in an existing EIS" [WAC 197-11-600(4)(e)], and Ecology considered the LAWPS with Cs Ion Exchange and eventual ion exchange media vitrification as substantially similar to the original proposal.*

*NEPA is a Federal regulation not a state regulation, so Ecology hasn't evaluated conformance with the NEPA review process.*

### **Comment I-2-2**

Comment 1, above, will have no impact on your decisions, given that DOE and Ecology have put all eggs in the DFLAW low activity vitrification basket, "no matter what."

I would ask, however, that you carefully consider the consequences of the LAWPS/DFLAW/WTP integrated flowsheet. Permitting decisions have been made piecemeal, without regard to unintended consequences.

My main concern is that this approach could cause the tank farms and secondary waste facilities to become awash in liquids, resulting in another panic type approach to disposal.

In a recent OIG<sup>2</sup> report on DST tank space: "According to a Department official, once the WTPs direct feed low-activity waste approach is operational, it will eliminate the concern regarding sufficient DST space availability." Contrary to the Department Official's confidence in future performance, it is much more likely that DSTs will receive off-spec condensate from the EMF evaporator and/or off-spec EMF evaporator feed.

The EMF evaporator is a product of the DFLAW/LAWPS decision. DFLAW and LAWPS could combine to add excessive liquid back to the tank farms. One solution proposed by DOE is to ship all that nuisance liquid to Perma-Fix in Richland as a convenient way to keep it out of the tank farms.

According to the Savannah River Nation Laboratory<sup>3</sup>: "*The current ILAW flowsheet is calculated to produce ~1.5 gallons of offgas effluent for each gallon of waste in the [WTP] system. For comparison, the SRS Defense Waste Processing Facility (DWPF) returns **5 gallons of liquid to the tank farm for each gallon of sludge vitrified.** Therefore, there is a risk that the current ILAW flowsheet underestimates the volume of liquid secondary waste that will be produced. Both DOE and the contractor are aware of this risk, and further discussion is outside the scope of this task.*"

I believe the time for "further discussion" is now. Liquids, condensates, or brines, produced by WTP, or any other tank waste facilities, should not be shipped for treatment at the Perma-Fix Northwest Facility (PFNW) in Richland, Washington. The PFNW Mixed Waste EIS did not even analyze liquid spills. The PFNW facility is less than 20 feet above the water table, and it is adjacent to a growing area of local businesses and homes. DOE should not transfer WTP's operation risk to the citizens of Richland.

I hope you will consider this comment in the future as you receive the inevitable requests to process more DOE liquids and other hazardous materials at PFNW. **Thank you.**

### **Response to I-2-2**

*Thank you for your comment. Ecology is also concerned about the generation and proper management of the liquid waste that will be created through the DFLAW waste treatment process. We are actively working with the Permittees to ensure that they have necessary permitted facilities to manage any secondary waste that will be generated once the DFLAW waste treatment process is operational.*

*Ecology letter 19-NWP-064 (April 12, 2019) to US DOE requested that USDOE conduct Tri-Party Agreement public involvement for shipment of tank waste liquids, to PFNW. Ecology's letter requested that US DOE collaborate with Ecology on a NEPA analysis for the transport and treatment of liquids at PFNW. To date US DOE hasn't responded to Ecology's letter. Perma-Fix*

---

<sup>2</sup> DOE-OIG-20-57, Department of Energy office of Inspector General Audit Report on "Tank Waste Management at the Hanford Site," September 30, 2020

<sup>3</sup> SRNL-RP-2018-00687, Report of Analysis of Approaches to Supplemental Treatment of Low-Activity Waste at the Hanford Nuclear Reservation, October 18, 2019, page 100.

*Northwest is not currently permitted to receive any waste that would be generated through the DFLAW waste treatment process.*

### **I-3: MADYA PANFILIO**

#### **Comment I-3-1**

After 40 years of reading proposal after proposal . One wonders if anything is really getting done in the cleanup of the most primitive and dangerous Nuclear Energy on Planet Earth!

I do believe that we earthlings must start making sure that we are doing THE BEST JOB POSSIBLE in cleaning up the MESS we have created!

Not just shift a little dirt here, shift a little dirt there. Strong tanks /American made to hold it. Until, we soon discover a greater alchemy to contain the waste!

#### ***Response to I-3-1***

*Ecology is working to ensure that long-term storage, treatment, and disposal of the waste is protective of human health and the environment.*

*Approval of the LAWPS Operating Unit Group permit will be an important step to support the initiation of treatment of the liquid waste that is currently held in the tank farms. This treated liquid will subsequently be sent to the Waste Treatment Plant for vitrification and then to the Integrated Disposal Facility for final disposal.*

### **O-1: US DEPARTMENT OF ENERGY**

#### **Comment O-1-1**

Unit Description, Line 16.

Line 16 states “Construction of TSCR will begin in 2020 with waste management operations anticipated to begin in 2022..” TSCR is scheduled to begin commissioning activities in 2021. Revise the permit language to reflect that waste management operations are anticipated to begin in 2021.

#### ***Response to O-1-1***

*Ecology will change the date.*

#### **Comment O-1-2**

III.1.B.1.a; III.1.B.11; III.1.B.12.

The language of draft condition III.1.B.1.a goes above and beyond the underlying regulation in WAC 173-303-810(14)(a). The remaining portions of III.1.B.1 are sufficient to ensure compliance with that requirement. The draft conditions III.1.B.11 and III.1.B.12 referenced in III.1.B.1.a are unnecessary because they simply provide the standard permit modification procedures set forth in WAC 173-303-830 and are redundant with the permit conditions in Condition I.C.3 of

the Part I Standard Conditions. Delete draft conditions III.1.B.1.a, III.1.B.11 and III.1.B.12. [[Note: Conditions III.1.B.11 and III.1.B.12 are also referenced in multiple other locations of draft permit conditions.]]

**Response to O-1-2**

*Ecology will delete permit condition III.1.B.12 in response to the comment, however we believe condition III.1.B.1.a and III.1.B.11 are valid conditions and will remain in place.*

**Comment O-1-3**

III.1.B.6.a

The draft condition states in part:

“The Permittees are not authorized to store dangerous and/or mixed waste identified in LAWPS OUG 1 until Compliance Schedule Items LAWPS-1 and LAWPS-2 are completed in full, as detailed below.

- Permittees will submit a complete operating permit modification request for the LAWPS OUG, which will also include related AP Farm operational requirements to support the LAWPS operations.”

To the extent that the draft permit condition requires the permittees to submit a complete operating permit modification request for LAWPS which will include “related” AP Farm operational requirements, the permittees cannot comply. The permit condition to submit a complete permit modification for the 241-AP Farm is inconsistent with the LAWPS permitting plan signed by DOE and Ecology which stated “This plan does not address RCRA permitting activities related to the AP Tank Farm within the context of the Double Shell Tank System (DST) Operating Unit Group. Those activities are separate from what is described herein.”

In addition TSCR only has start and stop control for the 241-AP-107 pump, which was described in the application material in Addendum C, Process Information, and RPP-RPT-61220, Tank Side Cesium Removal (TSCR) Control Logic Narrative. Ecology has already been provided all information on AP Farm operational requirements related to TSCR.

Permittees submitted a complete operating permit modification request for the LAWPS OUG. Ecology declared the permit modification request complete and the operations that TSCR controls were included in that request. The permittees are therefore unclear as to the additional information that is being requested and cannot comply with the conditions based on the existing draft language. Ecology previously indicated it would not permit AP tank farm as a standalone final status unit to support DFLAW. Ecology’s path forward is to place the relevant operating information in the LAWPS permit, which the permittees have done. Lastly the permittees cannot comply with a condition that requires submission or inclusion of ,”related” information which is undefined.

Either delete the permit condition or modify it to be very specific about what information Ecology is requesting to be provided that was not already included in the permit application.

### **Response to O-1-3**

Ecology will edit the first bullet to read:

*"Permittees will submit a complete operating permit modification request for the LAWPS OUG, which will also include related AP Farm tanks 241-AP-106, 241-AP-107 and 241-AP-108 operational requirements to support the LAWPS operations."*

*The operating details will be discussed and agreed upon when the permittees submit the permit modification to support LAWPS Operations.*

### **Comment O-1-4**

III.1.B.6.a

The draft condition states in part:

"The Permittees are not authorized to store dangerous and/or mixed waste identified in LAWPS OUG 1 until Compliance Schedule Items LAWPS-1 and LAWPS-2 are completed in full, as detailed below.

- Tri-Party Agreement Milestones will be in place for the long term treatment and disposal pathway of the IXCs and waste media."

The agreement reached between Ecology and DOE to negotiate appropriate TPA milestones addressing the long term treatment and disposal of IXC media, as documented in the permitting plan signed by both Parties in March 2019, was not intended to be a pre-operational requirement. DOE and Ecology agreed to the following strategy to address this issue:

*"Interim storage of spent IX columns containing cesium at a permitted location will be necessary. In support of determining a final disposition pathway for the cesium, DOE will continue to evaluate potential options available. To ensure waste streams have a disposal pathway, DOE and Ecology have agreed to engage in near term workshops to identify what is known about columns treatment and disposal. From this effort it is anticipated that a project plan TPA milestone would be developed for the disposition of the spent IX columns. This evaluation will consider (1) current laws and regulations that affect disposal pathways, (2) potential changes to laws and regulations, (3) existing and reasonably possible options for the disposal of nuclear waste, (4) comparison of the baseline disposal scenario (i.e. vitrification at WTP) and alternative disposal pathways including direct disposal at a deep geological criteria for all reasonably possible disposal pathways, (6) capability to vitrify the cesium media at WTP, and (7) comparison of the baseline interim storage scenario with alternative interim storage options including shipment to a permitted treatment and storage facility off the Hanford Site.*

Negotiation of TPA milestones follows a specific, agreed upon required process that takes some time to complete. TSCR operations is scheduled to begin in approximately 12 months. Inclusion of this requirement is unnecessary. Compliance Schedule item LAWPS-1 in draft Appendix 1.0 provides sufficient opportunity for Ecology to ensure DOE engages

in the necessary discussions and can be used to establish an appropriate timeline for doing so. DOE recognizes that Ecology wants a "hook" in the permit to have TPA milestones negotiated prior to TSCR operations. However, an appropriate "hook" was already agreed to in the



permitting plan, and we are concerned that the details of the milestones may not be able to be worked out prior to scheduled start of TSCR operations since resolution of issues is taking longer during the current work situation.

Delete the portion of the draft permit condition related to Compliance Schedule Item LAWPS-1 and the establishment of new/updated TPA milestones as a prerequisite for TSCR operations.

**Response to O-1-4**

*Ecology plans to keep this portion of the condition as currently written.*

**Comment O-1-5**

III.1.B.6.c

The draft condition references Addendum C, Section C.3 for the authorized container storage areas. Section C.3 described waste transfer lines. The correct reference for description of proposed container storage areas is Section C.5.

Revise draft condition to reference the correct section of Addendum C for Container storage areas (C.5).

**Response to O-1-5**

*Ecology will make the requested edit.*

**Comment O-1-6**

III.1.B.8 A

The draft permit condition states *“A modified Closure Plan must be submitted as a permit modification request with a detailed description of the methods to be used during partial closures and final closure, including, but not limited to, methods for removing, transporting, treating, storing, or disposing of all dangerous wastes, and identification of the type(s) of the off-site dangerous waste management units to be used. WAC 173-303-610(3)(a)(iv).”*

The permittees cannot comply with a condition to submit materials absent a specific date by which to submit.

Modify the condition to state *“One hundred and eighty days prior to commencing final closure of the Operating Unit Group, the permittees will submit a final closure plan...”* to make this condition consistent with the WTP permit. Reference draft condition III.I.K.2.

**Response to O-1-6**

*The requirement of the 180-day timeframe is already documented in Permit Condition III.1.K.2. Ecology will make a reference to III.1.K.2 in this permit condition.*

**Comment O-1-7**

III.1.B.13.a

The draft permit condition states *“The Permittees must meet Land Disposal Restrictions (LDR) standards for disposal of final waste forms for waste codes based on the Double-Shell Tank Part A Permit Application, dated December 14, 2009. All waste forms subject to LDR standards must*

*be demonstrated to meet all applicable treatment standards and requirements (WAC 173-303-140/40 CFR Part 268) prior to land disposal. For waste that has treatment standards that are not concentration based, the generator and/or treatment facility must demonstrate that the waste meets the applicable treatment standards using process knowledge and/or by waste analysis, as required by this Permit and the applicable sections of WAC 173-303-140/40 CFR 268."*

Characteristic waste codes identified on any given Part A do not necessarily reflect the actual nature of the waste being managed within a dangerous waste management unit. Rather, waste codes on a Part A simply establish the types of waste the facility is designed and allowed (either through a final status permit or interim status) to receive and manage. Reference Ecology publication ECY 030-31, *Washington State Dangerous Waste Permit Application: Part A Form and Instruction*. Section XIV: Description of Dangerous waste requires an applicant to "Describe all the dangerous wastes that will be treated, stored, or disposed at the facility. In addition, for each dangerous waste, provide the processes that will be used to treat, store, or dispose of the waste and the estimated annual quantity of the waste." Section XIVA of the instructions further stipulates four-digit numbers from WAC 173-303-081, -082, -090, and -100 are to be entered "for each dangerous waste that you will manage." It is neither explicit nor implied in the Part A Form instructions that these waste codes must actually represent the types and characteristics of waste within a facility at any given time. Thus, assigning LDRs based on Part A Form waste codes is incorrect. LDRs are assigned based on knowledge of the waste through either sampling and analysis, process knowledge, or a combination of both.

Lastly, dangerous waste numbers were added to the DTS Part A as a protective filing in the 1989 timeframe. An example is number F039, multi-source leachate. The Part A carries this number, but the DST System has never received multi-source leachate.

Modify the draft permit condition to delete reference to the DST Part A form as the basis for assigning LDRs. The condition as currently written, with reference to the Part A included, can put the permittees in conflict with meeting the LDR regulations.

#### **Response to O-1-7**

*Ecology will edit the permit condition to read:*

*"The Permittees must assign LDR treatment standards for disposal of final waste forms for appropriate waste codes, underlying hazardous constituents, and other information based on the waste's original point of generation according to the applicable provisions of 40 Code of Federal Regulations [CFR] 268, incorporated by reference by WAC 173-303-140. All waste forms subject to LDR standards must be demonstrated to meet all applicable treatment standards and requirements (40 CFR 268, incorporated by reference by WAC 173-303-140) prior to land disposal. For waste that has treatment standards that are not concentration based, the generator and/or treatment facility must demonstrate that the waste meets the applicable treatment standards using process knowledge and/or by waste designation, as required by this Permit and the applicable section of WAC 173-303-140/40 CFR 268."*

*We agree that LDRs are assigned at the point of generation based on knowledge of the waste through either sampling and analysis, process knowledge, or a combination of both. For the DST System the Part A detailed the characteristic waste codes that apply to the waste stream based*

*on process knowledge and previous sample data, therefore Ecology believes that the Part A is a reasonable place to start. Ecology acknowledges the key point made in the comment, distinguishing between the waste a unit is authorized to manage on the one hand, and the specific characterization of any volume of waste actually placed in the unit.*

**Comment O-1-8**

III.1.B.13.a.i

The draft permit condition states; *“Ecology has determined that the HLVIT treatment standard is attached to this IX media waste in addition to the applicable 40 CFR 268.40 treatment standards for the dangerous waste codes other than D002 and D004-011 identified in the Double-Shell Tank Part A.”*

Assigning treatment standards based on Part A Form waste codes is incorrect (reference Permittee comment #7 above). LDRs are assigned based on knowledge of the waste through either sampling and analysis, process knowledge, or a combination of both. The Permittees are not contesting the applicability of the HLVIT. LDRs for the balance of characteristic dangerous waste numbers are established based on knowledge of the waste (see item number 7 above).

Modify the draft permit condition to delete reference to the DST Part A form as the basis for assigning LDR treatment standards.

**Response to O-1-8**

*Ecology will edit the permit condition to read:*

*“Ecology has determined that the HLVIT treatment standard is attached to the IX media waste in addition to the applicable 40 CFR 268.40 treatment standards for the dangerous waste codes other than D002 and D004-011 identified in association with the original point of generation of the tank waste.”*

*We agree that LDRs are assigned at the point of generation based on knowledge of the waste through either sampling and analysis, process knowledge, or a combination of both. For the DST System the Part A detailed the characteristic waste codes that apply to the waste stream based on process knowledge and previous sample data, therefore Ecology believes the Part A is a reasonable place to start. Ecology acknowledges the key point made in the comment, distinguishing between the waste a unit is authorized to manage on the one hand, and the specific characterization of any volume of waste actually placed in the unit.*

**Comment O-1-9**

III.1.D.1

The draft permit condition states; *“The unit-specific portion of the Hanford Facility Operating Record will include the documentation specified in Permit Attachment 6, Permit Condition II.I, (applicable to the LAWPS OUG), and other documentation specified in Operating Unit Group 1. Permit Attachment 6 provides a list of required records, and the methods of submittal for the facility and each unit group. Records will also include documentation related to the Operation of DST AP Farm as it relates to LAWPS OUG.”*

Other documentation specified in Operating Unit Group 1. Permit Attachment 6 provides a list of required records, and the methods of submittal for the facility and each unit group that the Permittees feel are adequate and complete for the LAWPS OUG. *“Records will also include documentation related to the Operation of DST AP Farm as it relates to LAWPS OUG.”* is so unduly broad and vague, since for example it could be interpreted to include most any record for DSTs could also be required to be included in the LAWPS operating record. As described in the LAWPS application the TSCR unit can only start and shut down transfers from 241-AP-107 to TSCR.

Modify the draft permit condition to state the following; *“Records related to operations of 241-AP 107 as it relates to LAWPS operations should be included in the LAWPS operating record.”*

**Response to O-1-9**

*Ecology will revise the permit condition to read, “Records related to operations of 241-AP-106, 241-AP-107, and 241-AP-108 as they relate to LAWPS operations will be included in the LAWPS Operating Record.”*

**Comment O-1-10**

III.1.H.2

The draft permit condition states *“When adverse conditions result in access restrictions to the active portions of LAWPS (Process Enclosure, IXC Storage Pad, and Staging Area), inspections will be performed immediately upon return to normal conditions. Any delayed or missed inspection will be recorded and entered into the LAWPS OUG 1 Operating Record.”*

The draft condition should acknowledge ALARA principles as well as weather conditions.

Modify the draft condition to acknowledge ALARA principles as well as weather conditions. In addition, allow weekly inspections of the IXC Staging Area and IXC Storage Area from the fence line. Any required remedies which prevents hazards to the public health and environment will be completed immediately upon return to normal conditions. “Immediately” for the purposes of this permit condition is proposed to mean within 24-hours.

**Response to O-1-10**

*Ecology will add the text “within 24 hours” to the permit condition. The ALARA limitations are detailed in the Inspection Addenda. All of the agreed to inspection schedules are already detailed in Table I-1 Inspection Schedule.*

**Comment O-1-11**

III.1.I.2

The draft permit conditions states; *“The Permittees will ensure that the LAWPS systems are operated and maintained, at all times, by persons who are trained and qualified to perform these and any other duties that may reasonably be expected to properly operate the LAWPS systems.”*

The sentence “any other duties that may reasonably be expected to properly operate the LAWPS systems” is written so broadly that the permittees do not know how to comply with the condition.

Modify the condition to read “The permittees will ensure that the LAWPS systems are operated and maintained by persons who are trained and qualified to perform these duties.” It meets the same regulatory requirement without the broad and unclear language.

**Response to O-1-11**

*Ecology will re-write the permit condition to state, "The Permittees will ensure that the LAWPS systems are operated and maintained, at all times, by persons who are trained and qualified to properly operate the LAWPS systems."*

**Comment O-1-12**

III.1.J.4

The draft condition states in part “The Permittees will formally document, with a NCR or CDR, as applicable, incorporation of minor nonconformance or construction deficiency from the approved designs, plans, and specifications into the construction of non-critical systems subject to this Permit.”

The permittees are unable to comply with this condition as currently written. The term or concept "critical systems" does not appear in WAC 173-303. The term has been created for the Hanford Facility Dangerous Waste Permit. The LAWPS Permit contains no information for determining what constitutes a "critical system." Federal solid/hazardous waste statutes or regulations do not set forth standards with respect to what constitutes a "critical system." In the absence of any such definition, the Permittee has no means of determining whether its actions are permitted or prohibited by the permit condition. Non-critical systems are not defined in the Hanford Site RCRA Permit General Conditions, nor is that term defined in the draft condition. The permittees cannot comply with a condition that includes terms or phrases that lack definitions.

Either delete the condition because there is no basis in federal regulation or define the term “non-critical system” in the draft condition or modify the condition to only address “critical systems”, which is defined in the Hanford Site RCRA Permit.

**Response to O-1-12**

*Ecology will revise the permit condition to read; "III.1.J.3 The Permittees will submit a Nonconformance Report (NCR) or Construction Deficiency Report (CDR) to the Ecology representative(s), as applicable, within seven (7) calendar days of the Permittees becoming aware of incorporation of minor nonconformance or construction deficiency from the approved designs, plans, and specifications into the construction of the LAWPS OUG. Such minor nonconformance or construction deficiency will be defined, for the purposes of this Permit Condition, as nonconformance or construction deficiency that is necessary to accommodate proper construction and the substitution or the use of equivalent or superior materials or equipment that do not substantially alter the Permit Conditions or reduce the capacity of the facility to protect human health or the environment. Such minor nonconformance or*

*construction deficiency will not be considered a modification of this Permit. If Ecology determines that the nonconformance or construction deficiency is not minor, it will notify the Permittees in writing that a permit modification is required for the deviation and whether prior approval is required from Ecology before work proceeds which affect the nonconforming or construction deficiency item."*

*Delete III.1.J.4*

*Leave III.1.J.5 as currently written but renumbered to III.1.J.4.*

**Comment O-1-13**

III.1.J.6.a

This permit condition is redundant with Condition II.R in the Part II General Facility Conditions. It will cause unnecessary confusion for facility staff trying to implement the requirement.

Delete this condition

**Response to O-1-13**

*Ecology plans to keep this permit condition as currently written. While this permit condition relates to General Permit Condition II.R this Unit Specific Permit Condition is much more descriptive and relevant to the design and construct work that is occurring at LAWPS.*

**Comment O-1-14**

III.1.J.8

The draft condition states in part; *"Permittees will provide Ecology operating and monitoring data, with regular weekly reports and quarterly summaries."*

There is no regulatory requirement to provide weekly reports, and therefore this is an onerous condition without basis in regulation. It would take longer than a week to clear and issue a report, let alone write one. Weekly reports or quarterly summaries are not defined. Other reporting mechanisms already currently exist to report information to Ecology so it is unclear why special reporting requirements are being imposed on TSCR. Permit Attachment 6 provides a list of required records, and the methods of submittal for the facility and each unit group that the Permittees feel are adequate and complete for the LAWPS OUG.

Delete this condition.

**Response to O-1-14**

*The second sentence of this permit condition will be deleted. The renumbered Permit Condition III.1.J.7 will read, "Permittees will provide Ecology operating and monitoring data, with quarterly reports and summaries."*

*As the LAWPS OUG gets closer to startup of operations, we will discuss with the project if any changes need to be made to this text.*

**Comment O-1-15**

III.1.J.8

The draft condition states the permittees will maintain access for site visits for Ecology to the TSCR Control Enclosure.

During operations Ecology may exercise its inspection authority to determine compliance with the permit. It is unclear what maintaining access for site visits means in terms of Ecology's role. The permittees cannot comply with a permit condition that sets forth vague or ambiguous requirements for maintaining access for site visits and that purport to expand without justification the reason for which Ecology's inspection authority and permittees existing obligations are insufficient. The TSCR unit will be processing mixed waste and it is unclear what the visits to the control enclosure will be if not an inspection.

Delete this condition.

**Response to O-1-15**

*The second sentence of this permit condition will be deleted. Permit Condition III.1.J.7 will read, "Permittees will provide Ecology operating and monitoring data, with quarterly reports and summaries."*

**Comment O-1-16**

III.1.J.9

*The permittees will provide Ecology access to the LAWPS site during construction to support Ecology's construction oversight requirements.*

Conditions out at the site can change rapidly due to evolving nature of the work being done and the permittees have a responsibility to keep anyone on the work site safe and make sure the rules are understood and followed.

Modify the condition to read "The permittees will provide Ecology escorted access to the LAWPS site during construction to support Ecology's construction oversight requirements."

**Response to O-1-16**

*Ecology will add the word "escorted" to the permit condition.*

**Comment O-1-17**

III.1.K.2

The draft condition cites permit conditions II.D, III.1.C.2.e and III.1.C.2.f as references for permit modification requirements related to revised closure plans. Those permit conditions either do not exist or do not appear to be related to closure plan revisions.

Revise the draft condition to reference the correct permit conditions.

**Response to O-1-17**

*The permit condition will be revised to refer to II.J and III.1.B.11.*

**Comment O-1-18**

III.1.K.4

The draft condition states in part; *“In addition to the items in LAWPS OUG 1, “Sampling and Analysis Plan,” the documentation must include the following and other information Ecology may request.”*

This leads the reader to believe a Sampling and Analysis Plan for closure exists. This is not the case. The permittees cannot comply with a condition that refers to a plan that does not exist. In addition, the Permittees cannot include *“and other information Ecology may request.”* This is an undefined requirement and must be revised so that permittees can comply with the obligation the permit condition purports to impose.

Modify the draft condition to state the following; *“In addition, a LAWPS OUG 1, “Sampling and Analysis Plan,” will be developed and must include the following information.*

***Response to O-1-18***

*Ecology will add a reference to Addendum H, Section H.4 in this permit condition.*

**Comment O-1-19**

III.1.K.4.h

The condition states in part; *“Copy of all contamination survey results.”*

The Permittees assume “contamination refers” to radionuclides, which are not regulated by RCRA.

Delete this condition; there is no regulatory basis for providing radiological information to Ecology under the dangerous waste regulations.

***Response to O-1-19***

*Ecology will leave the permit condition as written. This condition is necessary because the Permittees informed Ecology that their most reliable way to determine if there is a leak in the HIHTLs is to perform radiation surveys. This operational information is necessary to support proper closure.*

**Comment O-1-20**

III.1.M and III.1.N

The draft conditions jump from III.1.L to III.1.O. Conditions III.1.M and III.1.N appear to be missing.

Provide missing permit conditions in III.1.M and III.1.N or renumber permit conditions sequence to avoid gaps.

***Response to O-1-20***

*Ecology will perform a final editorial review prior to issuance. We will verify that error is fixed. This revision will lead to a numbering change throughout the back half of the permit conditions.*

**Comment O-1-21**

III.1.O.1.a



The name of the type of IX exchange media is incorrectly identified as “crystoline silicotitane”. It should be “crystalline silicotitanate” or “CST”.

Revise the permit condition to correctly identify the IX media type. This correction also needs to be made to the footnote for Table III.1.O.

**Response to O-1-21**

*Ecology will perform a final editorial review prior to issuance. We will verify that error is fixed.*

**Comment O-1-22**

III.1.O.2.e

The cited underlying regulation for this permit condition of “WAC 173-303-41 630(7)(c)(ii)” is inaccurate. This draft condition contains a typographical error, WAC-173-303-630(7) does not include any labeling requirements.

Revise the permit condition to identify the correct underlying regulatory requirement.

**Response to O-1-22**

*Ecology will correct and delete the reference to WAC 173-303-630(7).*

**Comment O-1-23**

III.1.O.2.g

The draft condition states; “The Permittees will submit to Ecology a copy of the final TSCR Factory Acceptance Testing (FAT) report demonstrating removal of IXC media from an ion exchange column. The report shall document proof of concept results showing that IX media can be physically removed from a column prior to LAWPS Unit Group operational.” The condition appears to be missing “becoming” operational.

Insert “becoming” after Group and before operational.

**Response to O-1-23**

*Ecology will insert "becoming" in the permit condition.*

**Comment O-1-24**

III.1.O.2.h

The draft condition states; “*Submit to Ecology a test plan, and associated schedule that evaluates the performance of the IX waste media over time as it relates to the ability for it to be extracted. This test plan will also evaluate if the physical form of the media will change over time and can still be extracted after 30 plus years in the column. Perform testing related to test plan and provide results of testing in reports.*”

This condition is unnecessary as DOE has agreed to develop TPA Milestones that address disposition of the spent IX media.

Delete the draft condition and sub-conditions in their entirety. See comment # 4 above.

**Response to O-1-24**

*Ecology agrees to remove these three permit conditions. We believe the TPA Milestones direct the Permittees to provide the requested information.*

**Comment O-1-25**

III.1.P.1.i

The draft condition states *“Replacement of any component of the tank system, e.g., ion exchange columns, are subject to the Permit Conditions as detailed in III.1.P.1, specifically including Permit Condition III.1.P.1.h.”*

There is no basis in regulation for this permit condition, which will not allow for processing in a manner to meet LAW facility feed rate requirements which could adversely impact the LAW melters. Replacement in kind of consumable equipment is not subject to IQRPE installation certification as it does not constitute a modification to a tank system. Reference WAC 173-303-640(3)(a), Design and installation of new tank system components. The system will undergo a leak check prior to resumption of processing after IXC change-out.

Modify condition to be consistent with the regulations by removing reference to Condition III.1.P.1.h. (installation certification) and add a leak check so the condition would read *“Replacement of any component of the tank system are subject to a leak check”*.

**Response to O-1-25**

*Ecology will revise the permit condition to read as follows, "Replacement of any component of the tank system, e.g., ion exchange columns, are subject to the Permit Conditions as detailed in III.1.N.1. and require:*

- a) a leak test for replacement of any component of the tank system, and*
- b) submission for review and approval, any changes to the TSCR column design"*

**Comment O-1-26**

III.1.P.2 (General)

Numerous draft conditions and sub-conditions in Section III.1.P.2 “Tank System Operating Requirements” include underlying regulatory citations to required Part B application content in WAC 173-303-806(4)(c) that are inappropriate. Ecology has determined the Part B application to be complete. These requirements are no longer applicable for future operating requirements. The regulatory bases are sufficiently documented by the various citations to WAC 173-303-640 requirements.

Delete all references to various subsections of WAC 173-303-806(4)(c) as underlying regulatory bases for conditions in this section of the draft permit.

**Response to O-1-26**

*Ecology plans to keep this permit condition as currently written. As the LAWPS OUG gets closer to startup of operations, we will discuss with the project if any changes need to be made to this text.*

### **Comment O-1-27**

#### **III.1.P.2.l**

Condition reads:

*The Permittees will submit to Ecology, prior to initial receipt of dangerous and/or mixed waste at the LAWPS, descriptions of operational procedures demonstrating appropriate controls and practices are in place to ensure the LAWPS DWMUs will be operated in a safe and reliable manner that will not result in damage to regulated tank systems.*

This condition is already addressed by compliance schedule item LAWPS-2 and is unnecessary.

Delete this draft permit condition.

### **Response to O-1-27**

*Ecology plans to keep this permit condition as currently written. This permit condition is more specific than the details provided in Permit condition III.1.B.6.a and Compliance Schedule Item LAWPS-2 is specific to the proper management of the IXCs not the operations of the LAWPS DWMU.*

### **Comment O-1-28**

#### **III.1.P.2.m**

The draft condition states “If liquids (e.g., dangerous and/or mixed waste leaks and spills, precipitation, fire water liquids from damaged or broken pipes) cannot be removed from the secondary containment system within twenty-four (24) hours, Ecology will be verbally notified within twenty-four (24) hours of discovery. The notification will provide the information in A, B, and C listed below. The Permittees will provide Ecology with a written demonstration within seven (7) business days, identifying at a minimum [WAC 173-303-37 640(4)(c)(iv), WAC 173-303-640(7)(b)(ii), WAC 173-303-806(4)(c)(vii)]:

*A. Reasons for delayed removal;*

*B. Measures implemented to ensure continued protection of human health and the environment;*

*C. Current actions being taken to remove liquids from secondary containment.”*

This condition is not based in regulation and reflects ongoing Revision 9 Process Information CAP discussions that have not been agreed to. Although Ecology has directed their staff to include anticipated Hanford Revision 9 information in Revision 8C permit modifications if they feel there is a basis in the regulations, the permittees do not believe the permit condition matches what the cited regulatory citations state. [WAC 173-303-37 640(4)(c)(iv), WAC 173-303-640(7)(b)(ii), WAC 173-303-806(4)(c)(vii)]. The permittees would rather work out this discrepancy issue in the ongoing Revision 9 discussions.

Delete this condition or repeat what the regulations require verbatim as the condition.

**Response to O-1-28**

*Ecology plans to keep this permit condition as currently written. This permit condition is not written because of Rev. 9 discussions this exact condition is also currently in the approved WTP Permit Conditions.*

**Comment O-1-29**

III.1.P.2.o.v

This condition states; *“Description of procedures for investigation and repair of tank systems [WAC 173-303-33 320, WAC 173-303-640(6), WAC 173-303-640(7)(e) and (f), WAC 173-303-806(4)(a)(v), 34 WAC 173-303-806(4)(c)(vii)];”*

Procedures for repair would depend on the nature of the required corrective action and cannot be predicted. In addition, this condition is already addressed by compliance schedule item LAWPS-2 and is unnecessary and duplicative.

Delete the condition as unnecessary.

**Response to O-1-29**

*Ecology agrees to delete this permit condition. We believe all of the cited regulatory requirements listed in this permit condition have been detailed in other permit conditions within the LAWPS Unit Specific permit conditions.*

**Comment O-1-30**

III.1.P.2.o.vi

The draft condition states; *“A description of the tracking system used to track dangerous and/or mixed waste throughout the TSCR Unit tank system, pursuant to WAC 173-303-380;”*

WAC 173-303-380 does not require a tracking system. WAC 173-303-380(2) already establishes “instructions for recording the portions of the operating record which are related to describing the types, quantities, and management of dangerous wastes at the facility. This information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility.” The permittees do not know how to comply with this condition, with respect to TSCR operations. It is not known what is meant by a tracking system. TSCR will record throughput during processing. There is not something specific which gets “tracked” like you do for a waste drum or waste container.

Either clarify what is meant by a tracking system in the context of how TSCR operates as described in Addendum C, or delete this condition.

**Response to O-1-30**

*Ecology will edit the permit condition to read:*

*“A description of the system used to record dangerous and/or mixed waste through the TSCR Unit tank system, pursuant to WAC 173-303-380;”*

### **Comment O-1-31**

III.1.P.2.o.vii

The draft condition states; *“Permit Table III.1.P.A will be completed for TSCR Unit tank system process and leak detection system monitors and instruments (to include but not limited to: instruments and monitors measuring and/or controlling flow, pressure, temperature, density, pH, level, humidity, and emission).”*

The permittees cannot comply with this condition, because TSCR does not utilize instruments for measurement or monitoring of density, pH, level, humidity, and emissions. TSCR will monitor for flow-rate, temperature, and pressure. Permit Table III.1.P.A will be populated with relevant monitoring data as part of a modification request to add operational information for the LAWPS OUG. Much of this information about the instruments is already in Addendum I.

Either delete the draft condition or modify the condition to say *“The permittees will complete the information in Permit Table III.1.P.A prior to operations”*.

### **Response to O-1-31**

*Ecology will edit the permit condition to read:*

*“Permit Table III.1.N.A will be completed for TSCR Unit tank system process and leak detection system monitors and instruments (to include instruments and monitors measuring and/or controlling flow, pressure, differential pressure, and temperature).”*

*On Table III.1.N.A we will also change the column heading from "Instrument Tag Number" to "Equipment Identification Number" and the "Vessel Overflow" column will be deleted as noted in response to comment #37 below.*

### **Comment O-1-32**

III.1.P.2.o.viii

The draft condition states; *“Supporting documentation for operating trips and expected operating range as specified in Permit Table III.1.P.A for the TSCR Unit tank systems are to include but not be limited to the following: WA7890008967 Low-Activity Waste Pretreatment System Conditions*

*A. Procurement specifications;*

*B. Location used;*

*C. Range, precision, and accuracy;*

*D. Detailed descriptions of calibration/functionality test procedures (e.g., method number [ASTM] or provide a copy of the manufacturer’s recommended calibration procedures.*

*E. Calibration/functionality test, inspection, and routine maintenance schedules and checklists, including justification for calibration, inspection, and maintenance frequencies, criteria for identifying instruments found to be significantly out of calibration, and corrective action to be taken for instruments found to be significantly out of calibration (e.g., increasing frequency of calibration, instrument replacement, etc.).”*

The permittees cannot comply with the condition as drafted because it is vague and ambiguous. For example permittees are unsure as to the meaning of “operating trips”. Then the condition appears to switch and request information on range, then lists location use, range, precision, and accuracy of what? It could be assumed these are references to pH, temperature and humidity in the condition above but it is not clear. Items D and E remain under dispute in the CAP process. In addition

“Significantly out of calibration” is not defined which is vague and ambiguous. .

Delete the condition if it applies to III.1.P.2.o.vii. If it does not, rewrite the draft condition so it is clear what is being requested. Delete items D and E because they are under dispute in the Revision 9 CAP process and this is a Revision 8c unit.

**Response to O-1-32**

*Ecology will edit the permit condition to read:*

*"Supporting documentation for operating trips and expected operating range as specified in Permit Table III.1.N.A for the TSCR Unit tank systems are to include but not limited to the following:*

*A. Procurement specifications*

*B. Data Sheets*

*C. Range, precision, and accuracy as appropriate to specific instrumentation*

*D. Detailed descriptions of calibration/functionality test procedures (e.g., method number [ASTM] or provide a copy of the manufacturer's recommended calibration procedures*

*E. Calibration/functionality test, inspection, and routine maintenance schedules and checklists, including justification for calibration, inspection, and maintenance frequencies, and corrective action to be taken for instruments found to be out of calibration."*

*This permit condition is not written because of Rev. 9 discussions, a similar permit condition is also currently in the approved WTP Permit Conditions.*

**Comment O-1-33**

III.1.P.3.a

The draft condition states; *“The Permittees will install a sample port on the Tank AP-108 drop-leg assembly in order to sample and analyze the air return from the TSCR skid to the AP Tank Farm.”*

Air is returned from the TSCR Process Enclosure to the 241-AP-108 tank.

Modify the condition to replace “TSCR skid” with “TSCR Process Enclosure”. And, state the air return is to tank 241-AP-108.

**Response to O-1-33**

*Ecology will make the necessary edit to the permit condition.*

**Comment O-1-34**

III.1.P.3.a.i

The draft condition states; *“The Permittees will sample this air return to determine the levels of hazardous constituents in the air stream.”*

“Hazardous constituents” are not defined in the regulations, Hanford Site RCRA Permit, or the draft condition. Furthermore, the LAWPS Permitting Plan, Section 5.0 documents that only organic emissions will be monitored for.

Modify the condition to include a definition of what “hazardous constituents” are in the context of the specific dangerous waste regulation this refers to and specify the condition only applies to organic compounds.

**Response to O-1-34**

*Ecology will change the permit condition to read, “The Permittees will sample this air return to determine the total organic emission rate of the air stream.”*

**Comment O-1-35**

III.1.P.3.a.iii

The draft condition states; *“The samples will be analyzed for flowrate, total organics and mercury and a report will be submitted to Ecology.”*

In all previous discussions regarding TSCR process emissions, only organic constituents were the topic of concern and conversation with Ecology. The LAWPS Permitting Plan, Section 5.0 documents that only organic emissions will be monitored for.

Flow-rate and mercury monitoring were never mentioned during discussions and it is not possible to obtain a flow-rate from the sample port. The Permittees cannot comply with the draft condition as written.

Modify condition to remove flow-rate and mercury.

**Response to O-1-35**

*Ecology will change the permit condition to read, “The samples will be analyzed for total organics. A report estimating emissions of total organics will be submitted annually to Ecology.”*

**Comment O-1-36**

Table III.1.P.A, Vessel Overflow

The draft condition Table establishes Process and Leak Detection System Instruments and Parameters.

There is no vessel overflow function within TSCR tank system components. The permittees suggest “Reserving” Permit Table

III.1.P.A, which will be populated with relevant monitoring data as part of a modification request to add operational information for the LAWPS OUG.

Modify condition to remove “Vessel Overflow” from table, or just reword to “Reserve” the full table as TBD and eliminate headings to avoid confusion.

**Response to O-1-36**

*Ecology will remove Vessel Overflow from Table III.1.P.A. This is now Table III.1.N.A in the permit conditions.*

**Comment O-1-37**

III.1.Q.1.c

The draft condition states; *“When a HIHTL connection is broken and remade, leak testing will be required and reviewed by an Independent Qualified Installation Inspector or Independent Qualified Registered Professional Engineer.”*

Replacement of in kind consumable equipment is not subject to IQRPE installation certification as it does not constitute a modification to a tank system. The system will undergo a leak check prior to resumption of processing after HIHTL change-out. Reference WAC 173-303-640(3(a), *Design and installation of new tank system components.*

Modify condition to remove review by an IQRPE because it is beyond the scope of what the WAC regulations require. Modify the condition to be consistent with the regulations, which should read *“When a HIHTL connection is broken and remade, leak testing will be required to verify the new hose is properly installed.”*

**Response to O-1-37**

*Ecology will re-write the permit condition to read, “When a HIHTL connection is broken and remade, leak testing will be required. The leak testing will be reviewed to verify the new hose is properly installed.” In permit condition III.1.O.1.h, we plan to change the first sentence to read, “The Permittee must ensure that proper handling procedures are adhered to in order to prevent damage to the TSCR HIHTL transfer system during installation. Prior to covering, enclosing, placing the system in use, or replacing a HIHTL, an Independent, Qualified Installation Inspector or an Independent Qualified Registered Professional Engineer, either of whom is trained and experienced in the proper installation of tank systems or components, must inspect the system. The Permittee shall provide to Ecology a copy of the installation assessment prior to the start of operations. [WAC 173-303-640(3)(c)]”*

**Comment O-1-38**

III.1.Q.1.d

The draft condition states; *“If the TSCR unit exceeds the approximate 5-year duration for Phase 1, the Permittees will replace HIHTL waste transfer lines with hard-walled pipe transfer lines.”*

HIHTLs will be used for Phase 1 of TSCR as documented in the LAWPS Permitting Plan. The “approximate 5-year duration” is not defined.

Modify condition to delete “approximate 5-year duration”



### **Response to O-1-38**

*After discussions with the permittees on this comment it was determined that the permit condition to will remain as written.*

### **Comment O-1-39**

III.1.Q.1.g

The draft condition states; "The following information from the Annual HIHTL status report will be kept in the Operating Record for the LAWPS OUG.

*A. HIHTL assembly serial number.*

*B. Location - Originating point (from) and destination point (to) of the HIHTL.*

*C. Hose assembly drawing number.*

*D. Date of manufacture of the HIHTL.*

*E. HIHTL in-service date.*

*F. Service life expiration date - For HIHTLs that have not been exposed to mixed waste, the expiration date is 7 years from the date of manufacture (shelf life). For HIHTLs that have been put in service, the expiration date is 3 years from the initial date of mixed waste use (service life).*

*G. HIHTL length.*

*H. Shelf life expired HIHTLs that have not been used - Shelf life expired hoses that have not been used and are expired will be identified to prevent mixed waste use.*

*I. Disposal package identification number (PIN) - The PIN for the container that the HIHTL was placed in for shipping."*

These protocols were derived from the HIHTL Management Plan and were intended to track the more than 150 HIHTLs both in service and being removed from service as a waste management tool. TSCR uses five hoses in fixed locations, and there is no value or added protection to human health and the environment by implementing this unnecessary system. Much of what is required by the draft condition (length, drawing number, location, etc.) has already been provided in the application.

Delete this condition

### **Response to O-1-39**

*Ecology will delete the text "from the Annual HIHTL status report", but the rest of the permit condition will remain.*

### **Comment O-1-40**

III.1.Q.1.j.A

The draft condition states in part; "Based on the Permittees' design and calculations, the TSCR HIHTL leak detection systems are capable of detecting a leak equal to or less than 5 gph within

24 hours. When these lines are transitioned to hard walled lines the Permittees will follow permit condition III.1.Q.2.g. [WAC 173-303-13 640(4)(c)(iii)]”

It is believed the III.1.Q.2.g reference in the draft condition is incorrect (“The Permittees will notify and report releases to the environment to Ecology in 23 accordance with WAC 173-303-640(7)(d).”). Is the referenced condition supposed to be III.1.Q.2.f?

If so, it is critical to note the interferences with the HIHTL routes will be the same for hard walled pipe (i.e., crane crossings and existing infrastructure). It will not be possible to continuously slope hard wall pipe following LAWPS Phase 1.

Confirm referenced permit condition and correct if necessary.

**Response to O-1-40**

*Ecology will correct the reference to III.1.O.2.f.*

**Comment O-1-41**

III.1.Q.1.j.C

The draft condition states in part; “Until such time as the secondary containment for the TSCR HIHTL transfer system meets the requirements of -640(4), a functional leak test or other integrity assessment, as approved by Ecology, must be conducted on the system annually. 24 [WAC 173-303-640(4) (I) (iii)]”

The permittees are unclear as to what system the condition refers to. However, if the draft permit condition applies to the HIHTL encasement, the permittees cannot comply with the condition since there is no way to test the outer hose following installation. Nor is there regulatory basis for having to leak test secondary containment. The regulation cited is incorrect and should be WAC 173-303-640(4)(i)(iii). This rule only applies to nonenterable underground tanks seeking a waiver from secondary containment. The HIHTLs have secondary containment and leak detection and are compliant with WAC 173-303-640(4). No waiver to secondary containment and leak detection is being pursued.

The permittees are unable to comply with this permit condition. Furthermore, since the HIHTLs will be in fluid service almost continuously, an annual leak test adds no value.

Delete this condition since it goes beyond the scope of what the regulations require.

**Response to O-1-41**

*Ecology will ensure this permit condition references the correct citation, WAC 173-303-640(4)(i)(iii). It appears accurate on the electronic version, but we will confirm. WAC 173-303-640(4)(i)(iii) is specific to ancillary equipment. Ecology will edit the permit condition to read: "Until such time as the secondary containment for the TSCR HIHTL transfer system meets the requirements of -640(4), a functional leak test, as approved by Ecology, must be conducted on the system annually. [WAC 173-303-640(4)(i)(iii)]”*

#### **Comment O-1-42**

III.1.Q.1.k

The draft condition states; *“Since TSCR HIHTLs are installed with low points which do not readily drain, the TSCR HIHTL transfer system shall employ an integrated system of administrative and engineered leak detection systems. The leak detection system shall include in-pit leak detection, and inspection of radiological conditions along HIHTL transfer routes.”*

The permittees cannot comply with this draft condition because in part it does not specify a frequency for the radiological inspections. In addition, there is no definition of the term *“integrated system of administrative and engineered leak detection systems”*. The HIHTLs are supported by an engineered leak detection system and are compliant with WAC 173-303-640(4). The only available leak detection systems have been described in the permit application and no other options are available. Permittees have already committed to perform the inspections referenced herein as part of the Inspection Schedule.

Recommend adding a once per column change-out frequency.

#### **Response to O-1-42**

*Ecology accepts the permittees suggested edit to the permit condition. We will add, "once during column change-out" to the end of the sentence.*

#### **Comment O-1-43**

III.1.Q.2.f

The draft condition states in part; *“The Permittees will install and test all process and leak detection system monitoring/instrumentation, as specified in Permit Tables III.1.P.A, in accordance with LAWPS OUG 1 Permit Appendices 2.2 and 2.6. 6.”*

The permittees cannot comply with this condition. Both of the pipe-in-pipe transfer lines are continuously sloped from the 241-AP Farm to WTP and rely on low-point leak detection at EMF. Tank farms does not install and test WTP leak detectors.

It is unclear why this information is being requested in the LAWPS Operating Unit Group permit when DOE and BNI are currently working with Ecology to include this information in the EMF permit in Chapter WTP Chapter 4G under 24590-BOF-PCN-ENV-20-001, which is the operating unit group responsible for the EMF low point drain.

Modify condition to acknowledge the requirements do not apply to the EMF low-point leak detector.

#### **Response to O-1-43**

*Currently Table III.1.N.A is blank and has not been filled out. This issue will be resolved when this table is populated prior to operations. Permit Change Notice - 24590-BOF-PCN-ENV-20-001 has not yet been approved by Ecology. Once approved, all necessary changes will be incorporated into the WTP Operating Unit Group permit.*

#### **Comment O-1-44**

III.1.Q.2.f.A

The draft condition states in part; *“The leak detection system for the TSCR waste transfer lines must be designed and operated so that it will detect a leak of 0.1 gph within 24 hours, or at the earliest practicable time if the Permittee can demonstrate to Ecology that existing leak detection technologies or site conditions will not allow detection of a release of 0.1 gph within 24 hours. The demonstration shall quantify that the sensitivity of the waste transfer line leak detection systems is capable of detecting a leak equal to or less than XX gph within 24 hours. [WAC 173-303-640(4)(c)(iii)]”*

Subcondition “A” is problematic for a number of reasons. 1) Ecology has repeatedly stated that the 0.1 gph leak rate only applies to design internal to the WTP facility. When that rate was negotiated for WTP Ecology stated it would not apply to other facilities. No other operating unit group on site has a 0.1 gph leak detection rate, except WTP. This permit condition is inconsistent with the design in the application that Ecology has declared complete.

In addition, the permittees have already provided a leak rate calculation to Ecology showing a leak of 0.1 gph cannot be detected within 24-hours (Reference 8/22/18 LAWPS Meeting Minutes). Both the AP Farm to EMF and EMF back to AP Farm transfer lines have a 0.5 gph calculated leak rate. It is not possible to perform a demonstration of the leak rate because AP Farm has no means to introduce water to test a leak rate scenario. WTP will flush lines uphill back to AP Farm. The Permittees are unable to comply with this portion of the condition as written,

Delete the “A” subcondition.

#### **Response to O-1-44**

*During informal review it was documented that the permittees could not meet the 0.1 gph leak rate and an agreement was made and documented in the RCR's that the permittees would perform a formal calculation to establish that leak rate for these specific hard walled transfer lines. Once this calculation is provided to Ecology, this permit condition will be revised and the "XX" will be replaced with the leak rate documented in the formal calculation. These calculations would specifically address the pipelines that are installed between existing AP farm components and between AP farm, the existing W-211 project pipelines, and the WTP interface.*

#### **Comment O-1-45**

III.1.Q.2.f.A and B

The condition states in part; *“The leak detection system for the TSCR waste transfer lines must be designed and operated so that it will detect a leak of 0.1 gph within 24 hours, or at the earliest practicable time if the Permittee can demonstrate to Ecology that existing leak detection technologies or site conditions will not allow detection of a release of 0.1 gph within 24 hours. The demonstration shall quantify that the sensitivity of the waste transfer line leak detection systems is capable of detecting a leak equal to or less than XX gph within 24 hours. [WAC 173-303-640(4)(c)(iii)]”*

*B. The secondary containment for the TSCR waste transfer lines must be sloped or operated to drain and remove liquids resulting from leaks. Leaked waste must be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human health and the environment, if the Permittee can demonstrate to Ecology that removal of the released waste or accumulated precipitation cannot be accomplished within 24 hours. [WAC 173-303-640(4)(c)(iv)]”*

Both subsections A. and B. use the term “TSCR waste transfer lines”. TSCR will have no operational control of these transfer lines and they are not associated with TSCR beyond design and installation within the LAWPS OUG. Per agreement with Ecology, these transfer lines will be transferred to another OUG (either DSTs or WTP) prior to operations.

Remove the word TSCR from both sections when referring to the transfer lines. Recommend adding a permit condition to transfer these lines to another OUG prior to start-up.

#### **Response to O-1-45**

*Ecology will remove "TSCR" in both III.1.Q.2.f.A and B (which is now III.1.O.2.f.A and B). Ecology will also add a permit condition that states, "Prior to operations of the LAWPS OUG, the transfer lines will be added to their respective operating permit (DST or WTP), or the LAWPS Permit will add a detailed description of how the transfer lines are controlled and what operating parameters manage the transfer of liquid from the TSCR Process Enclosure to the AP Farm and from the AP Farm to the WTP Facility."*

## **O-2: HEART OF AMERICA NORTHWEST & HOANWRC**

### **Comment O-2-1**

#### **Permitting can not proceed without SEPA and NEPA analyses and documentation accompanying the proposed permit for comment**

HoANW believes that Ecology cannot proceed with permitting absent a Supplemental Environmental Impact Statement (SEIS) pursuant to both the State and National Environmental Policy Acts (SEPA and NEPA). We have voiced this concern repeatedly over the course of several years. We documented this lack of compliance with SEPA, NEPA and Ecology’s own rules in our August 2019 comments on the draft permit and modifications for Direct Feed LAW (Low Activity Waste) System, of which the Tank Side Cesium Removal (TSCR) facility is an element of. Had USDOE listened to concerns, there would be no delay in permitting. However, USDOE has been intransigent and failed to prepare a SEIS.

Each of these concerns was raised by our organizations In November 2016, for the initial review of this set of related draft permit additions and modifications. USDOE has now had four years to properly respond, and to prepare a SEIS.

Without an analysis of potential releases, accidents, upset conditions, variations in waste stream, and other elements which would be analyzed in a Supplemental EIS or new EIS specific to TSCR, Ecology can not determine if the proposed conditions in the permit are adequate to prevent or mitigate human health and environmental risks. For example, the contingency plan

essentially is a house of cards resting on absolutely no analysis for permit conditions to respond to releases, accidents, upset conditions, etc. There is no analysis on the record for the public or Ecology to consider of the range of potential releases, accidents, upset conditions, exposures, etc... Therefore,

The purpose of a contingency plan as part of the permit, is laid out in WAC 173-303-350(1):

The purpose of this section and WAC 173-303-360 is to lessen the potential impact on the public health and the environment in the event of any emergency event, including, but not limited to, a fire, natural disaster, explosion, or unplanned sudden or nonsudden release of dangerous waste, hazardous substance, or dangerous waste constituents to air, soil, surface water, or groundwater by a facility. A contingency plan must be developed to lessen the potential impacts of such emergency event, and the plan must be implemented immediately whenever such an emergency event occurs.

### **Response to O-2-1**

*Ecology cooperated with USDOE in the preparation of the Tank Closure Waste Management Environmental Impact Statement, which included the evaluation of the waste streams that will be managed under the Direct Feed LAW (DFLAW) configuration, and thereby looked comprehensively at the management, treatment, and disposal of Hanford tank waste and solid waste. As USDOE makes proposals that are "different than, those analyzed in the existing documentation" (WAC 197-11-600), Ecology may still use the existing NEPA documentation and other information if Ecology reviews it and finds them to be adequate for Ecology's purposes.*

*Ecology extended the public comment period for this draft permit modification to ensure the public had an opportunity to evaluate the included SEPA analysis (DS/NOA) that was prepared to accompany the proposed permit.*

### **Comment O-2-2**

Without an EIS analyzing the range of reasonably foreseeable accidents, fires, or events causing an unplanned release, neither Ecology nor the public can ascertain if the contingency plan actually addresses all potentially significant events that have a reasonable potential to occur. This denies the public of our right to comment.

Without an EIS analyzing the range of potential significant impacts from all reasonably foreseeable events that may cause releases or exposures, neither Ecology nor the public can ascertain if the contingency plan is adequate to mitigate the impacts of such releases.

Without an EIS analyzing all reasonable alternatives to TSCR, including for specific equipment, configurations, potential for use of defense in depth containment, locations, piping, emission controls, etc. neither Ecology nor the public can ensure that requirements are met for mitigation of potential impacts, use of best available control technology, most effective treatment to ensure that final treated wastes disposed in Hanford IDF landfill will minimize releases of contamination over thousands of years. Nor is it possible to comment on alternatives and whether there are more effective environmental choices or safer technologies and configurations to be used.

### **Response to O-2-2**

*WAC 197-11-060 states the following, "Environmental review consists of the range of proposed activities, alternatives, and impacts to be analyzed in an environmental document, in accordance with SEPA's goals and policies.". The level of detail suggested in this comment is more specific than the SEPA rules require. The level of detail suggested in this comment is also more specific than the WAC 173-303-350 requirements for a dangerous waste contingency plan.*

*Ecology has prepared the necessary SEPA documentation and reviewed and commented on the associated Contingency Plan for the LAWPS OUG and we believe all of the necessary information is included. Prior to the first receipt of waste the Permittees will provide an updated Building Emergency Plan and it will be incorporated into the LAWPS Permit.*

### **Comment O-2-3**

While TSCR relies on Cesium removal, for example, reasonable alternatives to use of the partially abandoned High Level Waste Pretreatment Plant and current DFLAW plan might include additional removal of "key radionuclides" and variations on the extent of removal. Both of these alternatives have potential significant environmental and human health impacts in regard to the disposal of final treated wastes in the IDF landfill.

USDOE is seeking a separate determination to allow High Level Waste Tank wastes treated through TSCR as part of DFLAW to be disposed in IDF based on "removal of key radionuclides to the degree practical." This is the "Waste Incidental to Reprocessing" determination, for which a concurrent comment period is now underway along with proposed modifications to the permit for the IDF landfill to accept waste.

These are inter-related proposals and their inter-related impacts and reasonable alternatives must be considered in one supplemental EIS. Ecology and USDOE cannot pretend that piecemeal consideration of the degree to which key radionuclides are removed in one process is not related to the potential significant impacts from the determinations relating to disposal in a concurrent process.

There is no consideration in the record of reasonable alternatives to ensure that some modification of TSCR is utilized to remove additional "key" radionuclides. This illustrates just one of many reasonable alternatives that have not been considered and should be considered in an EIS / SEIS accompanying this permit proposal. See WAC 197-11-360(3)(b)

197-11-600(b)(i) requires a supplemental or new EIS if there are "Substantial changes to a proposal so that the proposal is likely to have significant adverse environmental impacts" It is indisputable that Tank Side Cesium Removal was never considered as a potential technology in the Tank Closure and Waste Management EIS (TCWMEIS: USDOE EIS-0391, December 2012; RoD 2013).

It is indisputable that Tank Side Cesium Removal is a major change to the system analyzed in the TCWMEIS.

It is indisputable that there are potential significant environmental impacts from Tank Side Cesium Removal.

However, there is not even a legally required threshold determination finding that there are no significant unanalyzed potential impacts accompanying the proposal. Without even that fig leaf, the proposed permit modification may not be granted.

**Response to O-2-3**

*WAC 197-11-600 states, "An agency may use environmental documents that have previously been prepared in order to evaluate proposed actions, alternatives, or environmental impacts. The proposals may be the same as, or different than, those analyzed in the existing documents." The currently proposed treatment train substitutes TSCR for the Pre-treatment building described in the TC&WM EIS but doesn't change the disposal of LAW in IDF that was described in the TC&WM EIS.*

*Ecology is in the process of addressing technical deficiencies in the application submitted by the Permittees for IDF. Ecology continues to refine and verify disposal impacts through the risk budget tool mitigation measures required in the IDF permit. Ecology also provided comments on the Waste Incidental to Reprocessing document that DOE hosted for public comment.*

**Comment O-2-4**

Prior responses that the TCWMEIS considered the full range of potential impacts from TSCR are disingenuous and do not stand up to the slightest scrutiny. Even if the bounds of all accidents were theoretically considered for pumping and treating High Level Nuclear Wastes from Hanford's tanks, it is indisputable that TSCR is a substantial change to the proposal with a new range of reasonable alternatives and potential impacts to be considered, along with potential for mitigation. Thus, WAC 197-11-600 requires either a Supplemental EIS or new, stand alone EIS to accompany the proposal.

**Response to O-2-4**

*A Supplemental Analysis (SA) was attached to the SEPA determination (DS/NOA) that accompanied the permit modification. As stated in the SA, location and functional equivalency were the basis for the comparative evaluation and assessment. The comparison concluded that the proposed action does not represent substantial changes to the proposal evaluated in the TC&WM EIS.*



## Appendix A. Copies of All Public Notices

Public notices for this comment period:

- Focus Sheet
- Classified notices 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

# Low-Activity Waste Pretreatment System, OUG 1 Permit Modification



## Public comment period

June 22 to August 7, 2020

Please submit comments

Electronically (preferred) via:

<http://nw.ecology.commentinput.com/?id=ifWeC>

By U.S. Mail, or hand-delivery:

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  
509-372-7950  
[Hanford@ecy.wa.gov](mailto:Hanford@ecy.wa.gov)

## Special accommodations

To request an ADA accommodation, contact Ecology by phone at 509-372-7950 or email at [Daina.McFadden@ecy.wa.gov](mailto:Daina.McFadden@ecy.wa.gov), or visit [ecology.wa.gov/accessibility](http://ecology.wa.gov/accessibility).

For Relay Service or TTY call 711 or 877-833-6341.

## Public comment invited

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

The proposed changes affect the Dangerous Waste Portion for the Treatment, Storage, and Disposal of Dangerous Waste. A new operating unit group will be added to this portion of the permit.

The Permittees are:

United States Department of Energy  
Office of River Protection  
P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

Washington River Protection Solutions  
P.O. Box 850, MSIN: H3-21  
Richland Washington, 33952

This proposed draft permit modification would add the Low-Activity Waste Pretreatment System Operating Unit Group 1 (LAWPS OUG 1), to the Sitewide Permit. The proposed modification (8C.2020.3D) provides design and construction details for Phase One of the LAWPS OUG 1.

Ecology invites you to comment on this permit modification June 22 through August 7, 2020.

## Modification overview/background

The LAWPS OUG will be operated in phases, with LAWPS Phase One as a Tank Side Cesium Removal (TSCR) unit that will operate for approximately 5 years.

Phase Two will use either a permanent cesium removal capability or additional TSCR unit(s) to support full operations of the Waste Treatment and Immobilization Plant Low-Activity Waste Facility.

## **The Low-Activity Waste Pretreatment System, Operating Unit Group 1**

The LAWPS OUG 1 will be located in the 200 East Area of the Hanford site. The dangerous waste management units (DWMUs) for the LAWPS Phase One include tank treatment and storage, and container storage. The TSCR unit is a mixed waste treatment and storage unit that will treat double-shell tank (DST) supernatant waste.

The TSCR system is housed in a Process Enclosure and is designed to remove undissolved solids by filtration and remove cesium-137 by ion exchange, and discharge the pretreated low-activity waste (LAW) stream to DST 241-AP-106. The pretreated LAW will be stored in DST 241-AP-106 until it is transferred to the Waste Treatment and Immobilization Plant Low-Activity Waste Facility for vitrification.

The container storage areas consist of two outdoor concrete pads for the storage of spent Ion Exchange Columns (IXC) generated from the TSCR process. These include the IXC staging area and the IXC storage pad. All LAWPS OUG DWMUs are located immediately adjacent to the southeast corner of the 241-AP Tank Farm.

The current permit modification provides the design and construction details to support the LAWPS OUG 1, Phase One.

### **Proposed Changes**

This proposed draft permit modification will add LAWPS OUG 1 to Part III of the Sitewide Permit. The modification includes design and construction details to support the LAWPS OUG 1, Phase One. The modification includes:

- Unit Specific draft permit conditions
- Draft Interim Compliance Schedule
- Addendum A, Part A Form
- Addendum B, Waste Analysis Plan
- Addendum C, Process Information
- Addendum E, Security Requirements
- Addendum F, Preparedness and Prevention
- Addendum G, Personnel Training
- Addendum H, Closure Plan
- Addendum I, Inspection Plan
- Addendum J, Contingency Plan
- Appendices that include the necessary supporting design media (specifications, calculations, reports, and engineering drawings)

### **Permit Conditions**

Ecology collaborated with the Permittees to discuss permit conditions in support of the LAWPS Project. The results are proposed unit-specific permit conditions that address the construction, operation, and maintenance of the LAWPS dangerous waste management units and ancillary equipment.

## Interim Compliance Schedule

Two specific actions were added to an Interim Compliance Schedule. These items are necessary to support the long term disposal of the Ion Exchange Columns and receipt of the technical details necessary to support operations of the LAWPS OUG.

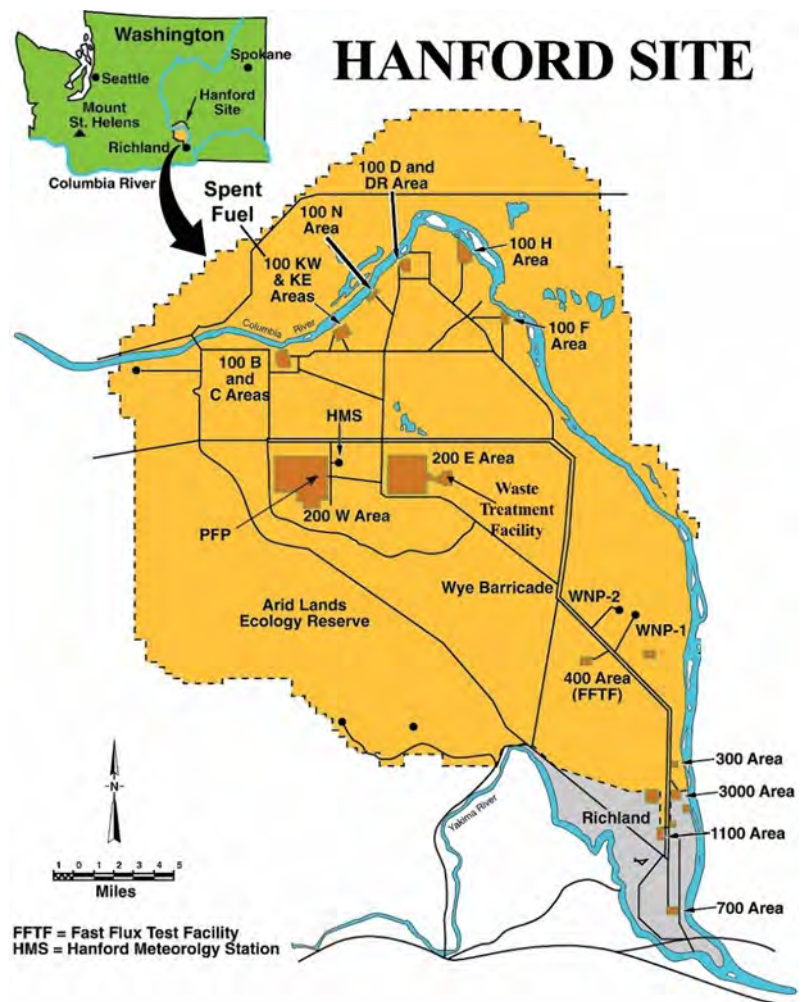
## Reviewing the proposed changes

Ecology invites to you to review and comment on this proposed LAWPS OUG 1 draft permit modification (8C.2020.3D). See Page 1 for comment period dates and information on how to submit comments.

Copies of the application for the proposed permit and supporting documentation will be available during the public comment period online at Ecology’s website at [Ecology.wa.gov/Waste-Toxics/Nuclear-waste/Public-comment-periods](http://Ecology.wa.gov/Waste-Toxics/Nuclear-waste/Public-comment-periods). The documents will also be available at the Hanford Public Information Repositories listed on the last 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.





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

### **Hanford's Information Repositories and Document Review Locations**

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  
509-375-7443

University of Washington  
Suzzallo Library  
P.O. 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

## Low Activity Waste Pretreatment System public comment period - Reopening

The Washington State Department of Ecology has issued a State Environmental Policy Act (SEPA) Determination of Significance and Notice of Adoption to support the Low Activity Waste Pretreatment System (LAWPS). The proponent is U.S. Department of Energy (DOE) – Office of River Protection. Ecology is reopening the LAWPS public comment period for an additional 45-days starting in late September, so that members of the public can review the draft permit with the supporting SEPA documentation.

The new public comment period dates are **September 28 – November 12, 2020**.

The reopening of the LAWPS Public Comment period includes all of the same information as previously provided during the public comment period that ran from June 22 to August 7, 2020. The proposed modification provides design and construction details for Phase One of the LAWPS Operating Unit Group (OUG) and the associated SEPA documentation.

The LAWPS OUG will be operated in phases, with LAWPS Phase One as a Tank Side Cesium Removal (TSCR) unit that will operate for approximately 5 years. The first phase of the LAWPS OUG will include three dangerous waste management units: the TSCR, the Ion Exchange Column (IXC) storage pad and the IXC staging area.

Ecology invites you to review this Determination of Significance and Notice of Adoption online at the Department of Ecology SEPA register at <https://apps.ecology.wa.gov/separ/Main/SEPA/Record.aspx?SEPANumber=202004362>

For more information, please go to our public comment period page at <https://ecology.wa.gov/Waste-Toxics/Nuclear-waste/Public-comment-periods>.

Questions? Contact Daina McFadden, Ecology, at [Hanford@ecy.wa.gov](mailto:Hanford@ecy.wa.gov) or call 509-372-7950.

## Low Activity Waste Pretreatment System public comment period - Reopening

The Washington State Department of Ecology has issued a State Environmental Policy Act (SEPA) Determination of Significance and Notice of Adoption to support the Low Activity Waste Pretreatment System (LAWPS). The proponent is U.S. Department of Energy (DOE) – Office of River Protection. Ecology is reopening the LAWPS public comment period for an additional 45-days starting in late September, so that members of the public can review the draft permit with the supporting SEPA documentation.

The new public comment period dates are **September 28 – November 12, 2020**.

The reopening of the LAWPS Public Comment period includes all of the same information as previously provided during the public comment period that ran from June 22 to August 7, 2020. The proposed modification provides design and construction details for Phase One of the LAWPS Operating Unit Group (OUG) and the associated SEPA documentation.

The LAWPS OUG will be operated in phases, with LAWPS Phase One as a Tank Side Cesium Removal (TSCR) unit that will operate for approximately 5 years. The first phase of the LAWPS OUG will include three dangerous waste management units: the TSCR, the Ion Exchange Column (IXC) storage pad and the IXC staging area.

Ecology invites you to review this Determination of Significance and Notice of Adoption online at the Department of Ecology SEPA register at <https://apps.ecology.wa.gov/separ/Main/SEPA/Record.aspx?SEPANumber=202004362>

For more information, please go to our public comment period page at <https://ecology.wa.gov/Waste-Toxics/Nuclear-waste/Public-comment-periods>.

Questions? Contact Daina McFadden, Ecology, at [Hanford@ecy.wa.gov](mailto:Hanford@ecy.wa.gov) or call 509-372-7950.



NUCLEAR WASTE PROGRAM  
3100 PORT OF BENTON BLVD  
RICHLAND, WA 99354

Working with you for a better Washington.



NUCLEAR WASTE PROGRAM  
3100 PORT OF BENTON BLVD  
RICHLAND, WA 99354

Working with you for a better Washington.

**From:** [McFadden, Daina \(ECY\)](#)  
**To:** [HANFORD-INFO@LISTSERV.ECOLOGY.WA.GOV](mailto:HANFORD-INFO@LISTSERV.ECOLOGY.WA.GOV)  
**Subject:** 30-day notice of upcoming comment period  
**Date:** Friday, May 22, 2020 10:09:28 AM

---

## Low Activity Waste Pretreatment System permit modification 30-day advance notice

The Washington State Department of Ecology is providing notification of a 45-day public comment period starting mid to late June 2020. This comment period will add the Low-Activity Waste Pretreatment System Operating Unit Group 1 (LAWPS OUG 1), to the Site-wide Permit. The Permittees are the U. S. Department of Energy - Office of River Protection and Washington River Protection Solutions. The LAWPS OUG 1 is located on the Hanford Site in southeastern Washington.

### What Changes are Being Proposed?

The Proposed Class 3 Permit Modification provides design and construction details for the LAWPS OUG 1, and includes all new addenda, appendices, permit conditions and an Interim Compliance Schedule.

### 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  
[Hanford@ecy.wa.gov](mailto:Hanford@ecy.wa.gov)  
509-372-7950

---

Ecology logo



Visit us on the [web](#) and follow our [news and social media](#).

[Subscribe](#) or [Unsubscribe](#)



**From:** [McFadden, Daina \(ECY\)](#)  
**To:** [HANFORD-INFO@LISTSERV.ECOLOGY.WA.GOV](mailto:HANFORD-INFO@LISTSERV.ECOLOGY.WA.GOV)  
**Subject:** SEPA Determination of Significance and Notice of Adoption issued for LAWPS and 30-day notice of comment period reopening  
**Date:** Monday, August 24, 2020 3:53:54 PM

---

## SEPA Determination of Significance and Notice of Adoption for Low Activity Waste Pretreatment System and 30-day notice of reopening the LAWPS permit modification

The Washington State Department of Ecology is providing notification that they have issued a SEPA Determination of Significance and Notice of Adoption to support the Low Activity Waste Pretreatment System (LAWPS). The proponent is U.S. Department of Energy (DOE) – Office of River Protection. The facility is located in the 200 East Area at the Hanford Site, Benton County, in southeastern Washington. In addition, Ecology is reopening the LAWPS public comment period for an additional 45-days starting in late September.

### What Changes are Being Proposed and Adopted?

DOE proposes to implement an approach called Direct Feed Low Activity Waste Treatment (DFLAW) in order to begin treating tank waste no later than 2023. To accomplish this, DOE proposes the following facilities and functions:

- An effluent management facility (EMF).
- A cesium removal system to remove cesium from the tank supernatant.
- Additional transfer lines.
- A storage pad for spent cesium ion exchange columns (Column Storage Pad).

DOE envisions the cesium removal system (known as the Low Activity Waste Pretreatment System, or LAWPS) project would be deployed in phases. Phase One would employ a single Tank Side Cesium Removal (TSCR) unit. Phase Two of the LAWPS project would follow with either the use of a permanent cesium removal capability or additional TSCR units to provide the necessary throughput to support full operation of the Low Activity Waste Facility. The EMF and cesium removal system facilities would perform some of the same functions that the WTP Pretreatment Facility would perform, thereby allowing DOE to proceed with the DFLAW approach prior to completing construction of the WTP Pretreatment Facility.

Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS) Alternative 2 for tank waste treatment, “Implement the *Tank Waste Remediation System EIS* Record of Decision with Modifications.” Ecology is also adopting TC&WM EIS “Waste Management Alternative 2: Disposal in IDF, 200-East Area Only.” This Determination of Significance and Notice of Adoption supports Ecology’s permit decision on the LAWPS Operating Unit Group.

Ecology invites you to review this Determination of Significance and Notice of Adoption. The relevant documents are online at [the Department of Ecology SEPA register](#). As stated above, the LAWPS draft permit will be reopened for public comment for an additional 45 days to allow public comments as it relates to the Determination of Significance and Notice of Adoption. Ecology invites your comments when that public comment period is reopened in late September.

For more information, contact:

Daina McFadden

[Hanford@ecy.wa.gov](mailto:Hanford@ecy.wa.gov)

509-372-7950

Responsible SEPA Official:

John Price

Tri-Party Agreement Section Manager

[Hanford@ecy.wa.gov](mailto:Hanford@ecy.wa.gov)

509-372-7950

---

Ecology logo



Visit us on the [web](#) and follow our [news and social media](#).

[Subscribe](#) or [Unsubscribe](#)

**From:** [McFadden, Daina \(ECY\)](#)  
**To:** [HANFORD-INFO@LISTSERV.ECOLOGY.WA.GOV](mailto:HANFORD-INFO@LISTSERV.ECOLOGY.WA.GOV)  
**Subject:** LAWPS comment period starts today!  
**Date:** Monday, June 22, 2020 12:24:36 PM

---

## Low-Activity Waste Pretreatment System, OUG 1 permit modification Public Comment Period Notification

The Washington State Department of Ecology is providing notification of a 45-day public comment period starting June 22 to August 7, 2020. This comment period will address proposed modifications to add the Low-Activity Waste Pretreatment System Operating Unit Group 1 (LAWPS OUG 1) to the Part III of the *Hanford Facility Resource Conservation and Recovery Act Permit, Revision 8C* (Sitewide Permit). The Permittees are the US Department of Energy and Washington River Protection Solutions. The LAWPS OUG 1 is located on the Hanford Site in southeastern Washington.

### What Changes are being proposed?

The proposed modification (8C.2020.3D) provides design and construction details for Phase One of the LAWPS OUG 1.

The LAWPS OUG will be operated in phases, with LAWPS Phase One as a Tank Side Cesium Removal (TSCR) unit that will operate for approximately 5 years. The first phase of the LAWPS OUG will include three dangerous waste management units: the TSCR, the Ion Exchange Column (IXC) storage pad and the IXC staging area.

### How to Comment

Ecology invites you to review and comment on this proposed LAWPS OUG 1 Permit Modification. Electronic copies of the proposed modification are located in the [Administrative Record](#) and [Information Repositories](#). In addition, the proposed modification is online at the Nuclear Waste Program's [public comment page](#).

Please submit comments by **August 7, 2020**

[Electronic submission](#) (preferred):

Mail or hand-deliver to:

Daina McFadden

3100 Port of Benton Blvd

Richland WA 99354

Fax 509-372-7971

### 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  
Hanford@ecy.wa.gov  
509-372-7950

---

Ecology logo



Visit us on the [web](#) and follow our [news and social media](#).

[Subscribe](#) or [Unsubscribe](#)

**From:** [McFadden, Daina \(ECY\)](#)  
**To:** ["hanford-info@listserv.ecology.wa.gov"](mailto:hanford-info@listserv.ecology.wa.gov)  
**Subject:** LAWPS comment period reopening today!  
**Date:** Monday, September 28, 2020 10:50:28 AM

---

## Low-Activity Waste Pretreatment System, OUG 1 permit modification Public Comment Period Notification

The Washington State Department of Ecology has issued a State Environmental Policy Act (SEPA) Determination of Significance and Notice of Adoption to support the Low Activity Waste Pretreatment System (LAWPS). The proponent is U.S. Department of Energy (DOE) – Office of River Protection. Ecology is reopening the LAWPS public comment period for an additional 45-days, so that members of the public can review the draft permit with the supporting SEPA documentation.

The public comment period dates are **September 28 – November 12, 2020**.

### What Changes are being proposed?

The reopening of the LAWPS Public Comment period includes all of the same information as previously provided during the public comment period that ran from June 22 to August 7, 2020. The proposed modification provides design and construction details for Phase One of the LAWPS Operating Unit Group (OUG) and the associated SEPA documentation.

The LAWPS OUG will be operated in phases, with LAWPS Phase One as a Tank Side Cesium Removal (TSCR) unit that will operate for approximately 5 years. The first phase of the LAWPS OUG will include three dangerous waste management units: the TSCR, the Ion Exchange Column (IXC) storage pad and the IXC staging area.

Ecology invites you to review this Determination of Significance and Notice of Adoption online at the [Department of Ecology SEPA register](#).

### How to Comment

Ecology invites you to review and comment on this proposed LAWPS OUG 1 Permit Modification as it relates to the associated SEPA documentation and the draft permit. Electronic copies of the proposed modification are located on our [public comment page](#). Additionally copies are available on the [Administrative Record](#) and at the Information Repositories.

Please submit comments [electronically](#) (preferred) by **November 12, 2020**.

Mail or hand-deliver by **November 12, 2020** to:

Daina McFadden  
3100 Port of Benton Blvd  
Richland WA 99354  
Fax 509-372-7971

## 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

[Hanford@ecy.wa.gov](mailto:Hanford@ecy.wa.gov)

509-372-7950









**Washington Department of Ecology - Hanford**  
 Published by Ryan Ecology Miller [?] · 3 hrs · 🌐

A new public comment period held by our agency began today! It involves the Low-Activity Waste Pretreatment System at Hanford. Check out the details & get your comments in by Aug. 7: <https://ecology.wa.gov/.../Nuclear-was.../Public-comment-periods>



**YOUR VOICE MATTERS**

*Public comment period now open!*



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

**Ecology - Hanford** @ecyHanford · 3h

A new public comment period held by our agency began today! It involves the Low-Activity Waste Pretreatment System at #Hanford. Check out the details & get your comments in: [ecology.wa.gov/Waste-Toxics/N...](https://ecology.wa.gov/Waste-Toxics/N...) @EcologyWA @EPAnorthwest @HanfordSite @RiverProtection @EPA @ENERGY



**YOUR VOICE MATTERS**

*Public comment period now open!*



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

0:01 26 views

👍 2    ❤️ 3    📌    🗑️



Washington Department of Ecology - Hanford

4d · 🌐



Have some free time this afternoon? Mosey on over to our #Hanford public comment periods webpage and give us your feedback on four current comment periods!

Check them all out here: <https://ecology.wa.gov/.../Nuclear.../Public-comment-periods>



Reach More People With This Post



You could reach up to 659 people daily by boosting your post for \$10.

27

People Reached

2

Engagements

Boost Post



1

Like

Comment

Share



Comment as Washington Department of E...



Ecology - Hanford @ecyHanford · 1m

We've reopened a public comment period on the #Hanford Low-Activity Waste Pretreatment System, running now through Nov. 12. Check out the details and get your comments in here: [ecology.wa.gov/Waste-Toxics/N...](https://ecology.wa.gov/Waste-Toxics/N...)

@EcologyWA @EPAnorthwest @HanfordSite @RiverProtection @EPA

@ENERGY

