



## **Response to Comments**

# **2,000-Gallon Test Bed Initiative Demonstration Draft Research, Development, and Demonstration Permit**

**March 11 – April 25, 2024**

**For the Nuclear Waste Program**

Washington State Department of Ecology

Richland, Washington

June 2024, Publication 24-05-007



## Publication Information

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

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

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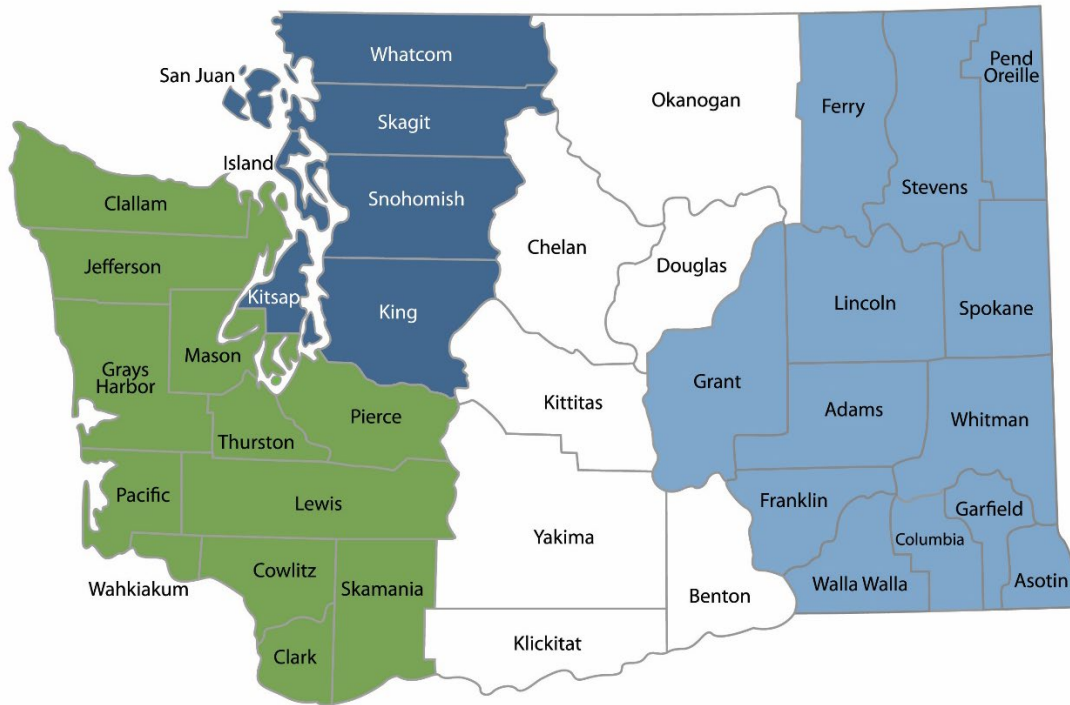
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<sup>1</sup> <https://apps.ecology.wa.gov/publications/summarypages/2405007.html>

<sup>2</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> 206-594-0000	<b>Central Region</b> 509-575-2490	<b>Eastern Region</b> 509-329-3400
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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	PO Box 330316 Shoreline, WA 98133	206-594-0000
<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 2,000-Gallon Test Bed Initiative Demonstration Draft Research, Development, and Demonstration Permit**

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**March 11- April 25, 2024**

Nuclear Waste Program  
Washington State Department of Ecology  
Richland, WA

**June 2024 | Publication 24-05-007**



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

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## Introduction

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

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

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

This Response to Comments is prepared for:

Comment period	<i>2,000-Gallon Test Bed Initiative Demonstration Draft Research, Development, and Demonstration Permit March 11 – April 25, 2024</i>
Permit	<i>2,000-Gallon Test Bed Initiative Demonstration Draft Research, Development, and Demonstration Permit</i>
Permittees	U.S. Department of Energy Washington River Protection Solutions, LLC
Original Issuance date	June 18, 2024
Effective date	July 18, 2024

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

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

## Reasons for Issuing the Permit

Ecology proposed a draft Research, Development and Demonstration (RD&D) Permit for the 2,000-gallon Test Bed Initiative (TBI) Demonstration, in accordance with WAC 173-303-809.

The purpose of the 2,000-gallon TBI Demonstration RD&D Permit is to authorize the proposed 2,000-gallon TBI Demonstration in order to test the feasibility and efficacy of deploying an in-tank pretreatment system (ITPS) to separate and pretreat about 2,000 gallons of low-activity tank waste. The pretreated waste would then be shipped off-site for grouting and disposal at certain Resource Conservation and Recovery Act of 1976 (RCRA) disposal facilities located outside the state of Washington.

The ITPS that will be tested during the proposed 2,000-gallon TBI Demonstration will filter and remove radionuclides from 2,000 gallons of supernatant tank waste. This waste will be removed from Tank SY-101, a double-shell tank in the SY Tank Farm located in the 200 West Area of the Hanford Site. Supernatant is the liquid portion of the tank waste. Once the supernatant is separated and pretreated through ITPS, it will be stored in six U.S. Department of Transportation compliant shipping containers (process totes). Sampling will be conducted to confirm compliance with applicable shipping requirements prior to being shipped offsite for grouting and disposal.

This RD&D permit is anticipated to be effective for one year and limits the overall amount of Tank SY-101 supernatant to be pretreated during the demonstration to up to 2,000 gallons.

## Public Involvement Actions

We encouraged public comment on the draft RD&D permit during a 45-day, public comment period held March 11 – April 25, 2024.

We notified the public by:

- Mailing a public notice announcing the comment period to 931 members of the public.
- Placing a legal classified notice in the Tri-City Herald on March 10, 2024.
- Emailing a notice announcing the start of the comment period to the Hanford-Info email list, which has 1,691 recipients.
- Posting the comment period notice on the Washington Department of Ecology – Hanford’s Facebook and Twitter pages.

We held a hybrid public meeting March 20, 2024, 5:30 p.m. at the Richland Public Library and on Zoom. A total of 45 members of the public attended.

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 draft RD&D permit
- Draft RD&D Permit

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

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

## List of Commenters

The table below lists the names of organizations or individuals who submitted a comment on the draft RD&D Permit. The comments and responses are in [Attachment 1](#).

Commenter	Organization
David Frey	Citizen
Anonymous Anonymous	Citizen
Linda Greene	Citizen
James Millbauer	Citizen
Jamie Shields	Citizen
Oshee Mercer	Citizen
Elena Rumiantseva	Citizen
Tara Horn	Citizen
Carol Hudson	Citizen
Jill McAnally	Citizen
Sharon E Fasnacht	Citizen
Ruchi Stair	Citizen
Mrs. Susan & Mr. Peter Risser	Citizen
Victoria Urias	Citizen
Dorothy Jordan	Citizen



Commenter	Organization
Amy Compestine	Citizen
Susan Crampton	Citizen
Miya Burke	Citizen
Mary Hansen	Citizen
Kevin Gallagher	Citizen
John Geare	Citizen
Howard Brous	Citizen
Coral Shaffer	Citizen
Arlene Spencer	Citizen
Anna Cowen	Citizen
Tricia Trainer	Citizen
Derek Dexheimer	Citizen
Jane Freedman	Citizen
Linda Jo Devlaeminck	Citizen
Marilyn Mayers	Citizen
Raelene Gold	Citizen
Anonymous Anonymous	Citizen
Marion Faulkner Curlin	Citizen
Stravo Lukos	Citizen
Lorrie Sherod	Citizen
Diane Burke	Citizen
Paula Rotondi	Citizen
Carolyn Treadway	Citizen
Thomas Edward Granger	Citizen
Thomas Galioto	Citizen
Shary B	Citizen
Karen Reynolds	Citizen
Kelly Norton	Citizen
Nancy Arbuckle	Citizen

Commenter	Organization
Paul McCormick	Citizen
Kelly Norton	Citizen
Laura Feldman	Citizen
Cheryl Troesper	Citizen
Marjorie Ostle	Citizen
Rosemary Moore	Citizen
Mary Upshaw	Citizen
Amy Mower	Citizen
Nancy Frey	Citizen
Anonymous Anonymous	Citizen
Shelley Cimon	Citizen
Kathleen Allen	Citizen
Ronald Sherman-Peterson	Citizen
Deejah Sherman-Peterson	Citizen
Jean Schwinberg	Citizen
Nancy Morris	Citizen
James Burke	Citizen
Anne Mulherkar	Citizen
Caroline Bryant	Citizen
Hanford Challenge	Organization
Heart of America Northwest	Organization
Columbia Riverkeeper	Organization
Hanford Communities	Organization
Oregon Department of Energy	Organization

# Attachment 1: Comments and Responses

## **Description of comments:**

Ecology accepted comments from March 11 – April 24, 2024. 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: DAVID FREY**

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

Please reference below my response to this topic on January 17, 2022. I still think that the utilization of the existing vaults for grouted waste storage makes more sense than hauling the same material offsite, thank you.

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

*Thank you for your comment.*

*Ecology issued the draft RD&D Permit after reviewing and incorporating the RD&D Permit application from the Permittees to authorize the proposed 2,000-gallon TBI Demonstration. The proposed 2,000-gallon TBI Demonstration would test the feasibility and efficacy of deploying an in-tank pretreatment system (ITPS) to separate and pre-treat approximately 2,000 gallons of low-activity tank waste prior to shipping it off-site for grouting and disposal at certain Resource Conservation and Recovery Act of 1976 (RCRA) disposal facilities located outside the State of Washington. Utilization of the existing vaults for grouted waste storage was not among the scope for the proposed 2,000-gallon TBI Demonstration.*

## **I-2: ANONYMOUS ANONYMOUS**

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

Ecology has stated that a SEPA analysis is needed for stabilization of both ETF brine and Test Bed Initiative waste (if performed at PFNW). As no SEPA has been prepared or issued for public review, use of PFNW is inappropriate for either waste. That the current 2,000 gallons will go elsewhere is a good idea. I continue to be concerned that PFNW is advertising that they will double their facility's capacity (near my home and 10 feet above the water table) in order to accept more liquid DOE waste.

Further, DOE is basing System Plan Rev 10 costs on assuming PFNW to be the location of supplemental tank waste treatment. This is an unverified assumption that PFNW is using to encourage investors, yet it has no basis in the current DW permit or SEIS. System Plan 10 does not include PFNW permitting support costs, so this is an overly optimistic assumption.

DOT totes should not be opened at PFNW, which is 10ft above the City of Richland water table. My concern is that this RD&D permit should not be used to promote further liquid waste treatment at PFNW. DOE should provide onsite grouting for treated liquid waste, far above the water table, and away from homes and businesses.

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

*Thank you for your comment.*

*Ecology issued the draft RD&D Permit after reviewing and incorporating the RD&D Permit application from the Permittees to authorize the proposed 2,000-gallon TBI Demonstration. The RD&D Permit would authorize the on-site waste management activities (separation and pretreatment activities) at the Hanford site for the proposed 2,000-gallon TBI Demonstration that would occur before the pretreated waste is shipped off-site. The off-site treatment and*

*disposal sites currently being considered are in Texas and Utah. PFNW is not among the RCRA permitted facilities selected by the Permittees for the proposed 2,000-gallon TBI Demonstration.*

*Treatment activities (i.e., grouting the TBI pretreated waste at certain RCRA permitted facilities located outside the State of Washington) are not among the scope of the proposed RD&D Permit for the 2,000-gallon TBI Demonstration. The proposed RD&D Permit would only authorize on-site waste management operations at Hanford Site for up to one year per WAC 173-303-809 and would limit the overall amount of Tank SY-101 supernatant to be pretreated at Hanford Site during the 2,000-gallon TBI Demonstration to up to 2,000 gallons. Future liquid waste treatment at PFNW and/or onsite grouting capability at Hanford Site are outside the scope of the proposed RD&D Permit.*

### **I-3: LINDA GREENE**

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

Ensure Toxic Vapor Protections: Ensure that permit conditions require protection for workers from toxic chemical vapor exposure consistent with the terms and conditions of the Vapor Lawsuit Settlement Agreement.

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

*Thank you for your comment.*

*Ecology agrees with this comment that worker health and safety should be a priority for any work done at Hanford. Ecology does not believe Vapors Lawsuit Settlement Agreement directly addresses the work authorized under this permit. As stated in Section 2.9 of the Application, incorporated by reference into the Permit, all structures and equipment utilized in the planned project will incorporate design features that comply with applicable Occupational Health and Safety Administration (OSHA) standards. This includes protection for workers from toxic chemical vapor exposure.*

#### **Comment I-3-2**

Add Detail About Disposition Plan for Bounce-Back Waste: Add detail to the permit about the disposition plan Ecology is requiring USDOE to provide in the event that waste that was shipped to the offsite facilities is sent back to Hanford.

#### **Response to I-3-2**

*See Ecology's response to a similar comment, #O-1-2.*

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

Clarify Sampling Procedure: Clarify the language in the permit about whether it is one discrete sample per tote or two 250 ml samples per tote (and four 250ml samples for the final tote filled).

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

*Section 4.2 in Sampling and Analysis Plan (RPP-PLAN-65394, rev. 1) explains that two "primary" 250 mL samples of pretreated SY-101 supernatant must be collected from each tote. Two samples would be collected from each tote because "HLM I has indicated the suite of analysis required by RPP-RPT-61636 will require approximately 250 mL, and another 250 mL will be required to support sorptive stir bar analytical method development". In additions to the two primary samples, two field duplicate samples would be collected from the final tote filled (See the last row in Table 4-1).*

### **Comment I-3-4**

Improve the Public Process: In the future, please provide a high-level overview of the cleanup work the administrative tool (permit) is planned to facilitate and how that tool protects the environment, workers, and the public, instead of overly focusing on the administrative tool itself. Please set an expectation that USDOE and contractor staff are available to provide answers to questions instead of directing attendees to submit their questions as a comment. Questions are meant to help attendees understand the issue so they can write informed comments. How are attendees supposed to write informed comments to influence the decision-making process if that information is not provided? Please note that answers do not need to be highly technical, but rather provide clarity in plain language about the work being planned, not just the administrative framework in which that work takes place.

### **Response to I-3-4**

*The Proposed RD&D permit is specific to the permitting to support the proposed 2,000-gallon TBI Demonstration under WAC 173-303-809. Ecology will look for ways to better communicate a high-level overview of cleanup work to be performed under our agency's permitting in future public involvement opportunities. However, we also want to be mindful we're not giving the impression that the entire Hanford Site-wide Permit is open for public review, which is why we focus on the proposed changes or new draft permit in our public meetings or hearings.*

*Ecology hosted an informational public meeting on March 20, 2024, for the draft RD&D Permit in coordination with the Permittees to provide overview of the proposed permit for the 2000-gallon TBI Demonstration and answer to questions during the meeting. Our intent for the public meeting was to help the public understand the draft permit to review and provide comments to help Ecology make a final decision after the public comment period. Following the public meeting, Ecology responded to requests from other organizations to answer specific questions that could not be answered at the meeting. At public meetings, Ecology or USDOE staff may not be able to immediately respond to every question asked, particularly questions that reference very specific and nuanced parts of the permit, which the agencies typically do not have on hand at the meeting. However, we're committed to answer as many questions as possible in these meetings, and answer the questions we can't in follow-up communications. Ecology is committed to continue improving the content and format of future public meetings, and we appreciate your recommendations and comments.*

### **Comment I-3-5**

Clarify Consent-Based Process: Require an attachment to the permit that includes information about how consent has been achieved for offsite disposal and transportation routes.

#### ***Response to I-3-5***

*This RD&D Permit would authorize the on-site waste management activities (separation and pretreatment activities) at the Hanford site for the proposed 2,000-gallon TBI Demonstration that would occur before the pretreated waste is shipped off-site. However, neither this RD&D permit nor Ecology has regulatory authority to oversee the transportation of hazardous materials/waste (e.g., mixed waste including TBI pretreated waste) or waste acceptance/consent process at the disposal facility outside the state of Washington. Therefore, Ecology believes there is no need for the RD&D Permit to add information on how consent has been achieved for offsite disposal and transportation route.*

*The Permittees are required to characterize the TBI pretreated waste by sampling from each tote to ensure USDOT shipping requirement and waste acceptance at the offsite treatment and disposal facilities (See Section 3.2.1). DOE has the responsibility to ensure that waste is shipped in accordance with USDOT and other pertinent regulations. Prior to shipment characterization of waste will occur and be verified.*

*The Permittees explained to Ecology that DOE has communicated with the two RCRA-permitted facilities to confirm their ability to receive the TBI pretreated waste, pending final pre-shipment confirmation that the facility's respective waste acceptance criteria is met. Additionally, the Permittees explained that DOE ensures safe and compliant shipment from Hanford to the off-site commercial treatment facilities through:*

- (1) Compliance with USDOT requirements and standard best management practices,*
- (2) meeting the waste acceptance criteria for each of the off-site commercial treatment facilities, and*
- (3) communications with the host states and State compacts in accordance with the approval issued June 8, 2023<sup>1</sup>, by DOE for TBI demonstrating compliance with DOE O 435.1, Radioactive Waste Management when using off-site non-DOE facilities.*

*Transportation of the process totes will follow USDOT regulations and standard best management practices for transportation of hazardous materials. DOE does not publish a written transportation plan for shipments of low-level radioactive waste. The shipment routes developed for TBI will maximize the use of Federal highways for the majority of shipment routes.*

### **Comment I-3-6**

Keep the Focus on Vit: Grout does not meet the "as-good-as-glass" criteria. Please keep the focus on vitrifying tank waste and wait to press go on any alternative tank waste immobilization forms that do not meet the "as-good-as-glass" criteria

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<sup>1</sup> <https://www.hanford.gov/files.cfm/23-TF-001405.pdf>

## **Response to I-3-6**

*Ecology believes that any treatment of Hanford's low activity tank waste for disposal at Hanford must be vitrification. After pretreatment at Tank Side Cesium Removal in the 200 East Area, the pretreated low-activity waste (LAW) will be vitrified via the Direct-Feed Low-Activity Waste (DFLAW) system, currently scheduled to start in 2025. Vitrified LAW will be disposed of in an onsite landfill called the Integrated Disposal Facility, also located in the 200 East Area. The remaining high-activity portion of tank waste will be treated at Hanford's high-level waste vitrification facility, placed in interim storage onsite, and eventually transported offsite to a deep geologic repository for permanent disposal.*

*Even as DFLAW becomes successful, USDOE estimates the site will still have a volume of low-activity waste that DFLAW won't have the capacity to treat (vitrify) in a reasonable timeframe. This additional waste is called supplemental low-activity waste. The volume of this supplemental low-activity waste is still variable and depends on a variety of factors.*

*As explained in Section 1.3, "in the 2013 ROD, DOE did not select a treatment method for all of the tank waste; instead, DOE announced that it would be "beneficial to study further the potential cost, safety, and environmental performance of supplemental treatment technologies" (78 FR 75916). Consistent with the 2013 ROD, the 2,000-gallon TBI Demonstration would demonstrate the feasibility of separation and pretreatment of low activity tank waste on-site at the Hanford Site, followed by off-site treatment (via stabilization/solidification), and disposal at a commercial facility."*

*In the proposed 2,000-gallon TBI Demonstration, the approximately 2,000 gallons of pretreated LAW will be shipped offsite for grouting and eventual disposal at the two specified RCRA-permitted Treatment and Disposal facilities with particularly protective geologic features outside the state of Washington.*

*Large-scale grouting and out-of-state disposal beyond the 2,000-gallon Demonstration is outside the scope of this RD&D Permit. Such large scale grouting and out-of-state disposal, specifically for the disposal of Hanford low-activity waste from 200 West Area single shell tanks in a grouted form, has been discussed within a scope of the Holistic Negotiations settlement currently undergoing public comment.*

## **I-4: JAMES MILLBAUER**

### **Comment I-4-1**

1. "I strongly urge you to ensure that permit conditions include comprehensive protections for workers from toxic chemical vapor exposure. It is crucial that these protections align with the terms and conditions of the Vapor Lawsuit Settlement Agreement. The health and safety of workers should be a top priority."



### **Response to I-4-1**

*Thank you for your comment. This comment provided is similar to Comment # I-3-1. Please see Ecology's response to Comment I-3-1.*

### **Comment I-4-2**

2. "I request that you add more detailed information about the disposition plan for BounceBack waste in the permit. Ecology's requirement for the USDOE to provide this plan is essential in case waste shipped to offsite facilities needs to be returned to Hanford. Transparency and accountability are key in waste management."

### **Response to I-4-2**

*This comment provided is similar to Comment # O-1-2. Please see Ecology's response to Comment O-1-2.*

### **Comment I-4-3**

3. "Please clarify the language in the permit regarding the sampling procedure. Specifically, it would be helpful to know whether it should be one discrete sample per tote or two 250 ml samples per tote (and four 250ml samples for the final tote filled). Clarity in this matter will ensure accurate sampling and testing."

### **Response to I-4-3**

*This comment provided is similar to Comment # I-3-3. Please see Ecology's response to Comment I-3-3.*

### **Comment I-4-4**

4. "I would like to see improvements in the public process for future clean-up work. Instead of focusing solely on the administrative tool (permit), please provide a high-level overview of how the tool will facilitate the cleanup work and protect the environment, workers, and the public. Additionally, it would be beneficial to have USDOE and contractor staff available to answer questions during the process, rather than directing attendees to submit their questions as comments. This will help attendees write informed comments that can influence the decision-making process."

### **Response to I-4-4**

*This comment provided is similar to Comment # I-3-4. Please see Ecology's response to Comment I-3-4.*

### **Comment I-4-5**

5. "I recommend that a clear attachment be included in the permit, outlining how consent has been achieved for offsite disposal and transportation routes. Transparency and accountability in this matter are essential to ensure that the disposal and transportation processes are conducted with the proper consent of all involved parties."

### **Response to I-4-5**

*This comment provided is similar to Comment # I-3-5. Please see Ecology's response to Comment I-3-5.*

### **Comment I-4-6**

6. "Please prioritize the focus on vitrifying tank waste. It is important to note that grout does not meet the 'as-good-as-glass' criteria. I urge you to wait before proceeding with any alternative tank waste immobilization forms that do not meet this criteria. Let's keep the focus on vitrifying tank waste, which is a more reliable and effective method.

### **Response to I-4-6**

*This comment provided is similar to Comment # I-3-6. Please see Ecology's response to Comment I-3-6.*

## **I-5: JAMIE SHIELDS**

### **Comment I-5-1**

Ecology should not permit the US Department of Energy (USDOE) to truck untreated liquid wastes from Hanford's High Level Nuclear Waste tanks through Spokane or across Oregon and the Umatilla Indian Reservation. I strongly support moving forward with the test to remove and treat 2,000 gallons from Hanford's tanks for disposal offsite in licensed facilities where the waste does not create any risk to groundwater, Ecology has a duty to consider and take "mitigation" action to prevent the risk from a truck accident in Spokane or anywhere on the 900-1,900 mile truck routes. This is an environmental justice issue as well as a risk to the Spokane River.

I agree with the Umatilla Tribe whose Chair wrote to USDOE:

"The current plan to transport waste in liquid form poses for us an unacceptable risk of spills and harm to the environment, First Foods, and our citizens. The current proposal is especially disappointing given that shipping waste in a grouted, immobile, solid form is a viable and much safer option.

"To be clear, the CTUIR requests the following:

1. Do NOT ship liquid Hanford tank waste across the Columbia Basin. Only ship this waste in GROUTED/SOLID form.
2. Move forward with large-scale grouting and out-of-state disposal as soon as reasonably allowable to decrease the risk of leaking Hanford tanks on the CTUIR's treaty-protected resources."

USDOE agreed not to truck the waste through Oregon and the Umatilla Reservation. Unselfishly, the Umatilla Tribe has continued to advocate that liquid wastes should not be trucked at all when there is a licensed facility that can solidify and treat the waste next door to Hanford and avoid trucking wastes through Spokane on I-90 for 900 miles to Utah or 1,900 miles to Texas for disposal.

I want the test for 2,000 gallons of waste to proceed. But if it succeeds there will be thousands of shipments. Ecology has a duty under SEPA and the HEAL Act to consider and mitigate the risks from truck shipments through low income "overburdened" communities in Spokane or on Indian Reservations by requiring that the waste is solidified and treated at the licensed facility adjacent to Hanford instead of trucking untreated liquid waste.

Any spill of liquids from Hanford will be an international news incident as well as putting residents and the environment at risk.

USDOE did not even consider risks from the chemicals in the liquid wastes and acknowledges that there is a risk of one "accidental crash" for a truck with these wastes every 884 shipments from Hanford to Texas. That is too high a risk to go without Washington requiring that the waste be solidified before being trucked through Spokane or Oregon and the Umatilla Reservation.

### **Response to I-5-1**

*Thank you for your comment.*

*Ecology issued the draft RD&D Permit after reviewing and incorporating the RD&D Permit application from the Permittees to authorize the proposed 2,000-gallon TBI Demonstration. The proposed RD&D Permit authorizes the onsite waste management activities in the Hanford Site's 200 West Area before the pretreated waste is shipped offsite for grouting and disposal outside the state of Washington. PFNW is not among the RCRA permitted facilities selected by the Permittees for the proposed 2,000-gallon TBI Demonstration. Additionally, this RD&D permit or Ecology does not have regulatory authority to oversee the transportation of hazardous materials/waste (e.g., mixed waste including TBI pretreated waste). The liquid waste shipping under this RD&D permit is limited to 2,000 gallons after being pretreated for cesium and suspended solids) through ITPS. Large-scale grouting and out-of-state disposal beyond the 2,000-gallon TBI Demonstration is outside the scope of this RD&D Permit.*

*The RD&D Permit is categorically exempt from requirements under the State Environmental Policy Act (SEPA), per WAC-197-11-800(17). DOE prepared a National Environmental Policy Act (NEPA) Environmental Assessment<sup>2</sup> in 2023 to analyze potential environmental impacts associated with shipping prior to issuing a finding of no significant impact.*

*Washington's Environmental Justice Law, also known as the HEAL Act, the proposed RD&D Permit is not considered as a significant agency action per RCW 70A.02, thus not requiring an Environmental Justice Assessment.*

*Ecology previously coordinated with the Oregon Department of Energy to confirm that Oregon allows liquid waste for transportation on Oregon highways, and is done so safely on a regular basis. The Permittees later explained to Ecology that DOE is not planning to ship the TBI pretreated waste through Oregon (as of May 2024), but it will maximize the use of Federal highways for the majority of the shipment routes.*

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<sup>2</sup>[https://www.hanford.gov/files.cfm/Final\\_--\\_230315\\_-\\_NEPA\\_EA\\_for\\_TBI.pdf](https://www.hanford.gov/files.cfm/Final_--_230315_-_NEPA_EA_for_TBI.pdf)

*DOE has the responsibility to ensure that waste is shipped in accordance with DOT and other pertinent regulations. Prior to shipment characterization of waste will occur and be verified.*

## **I-6: OSHEE MERCER**

### **Comment I-6-1**

Ecology should not permit the US Department of Energy (USDOE) to truck untreated liquid wastes from Hanford's High Level Nuclear Waste tanks through Spokane or across Oregon and the Umatilla Indian Reservation.

I strongly support moving forward with the test to remove and treat 2,000 gallons from Hanford's tanks for disposal offsite in licensed facilities where the waste does not create any risk to groundwater, Ecology has a duty to consider and take "mitigation" action to prevent the risk from a truck accident in Spokane or anywhere on the 900-1,900 mile truck routes. This is an environmental justice issue as well as a risk to the Spokane River.

I agree with the Umatilla Tribe whose Chair wrote to USDOE: "The current plan to transport waste in liquid form poses for us an unacceptable risk of spills and harm to the environment, First Foods, and our citizens. The current proposal is especially disappointing given that shipping waste in a grouted, immobile, solid form is a viable and much safer option.

"To be clear, the CTUIR requests the following:

1. Do NOT ship liquid Hanford tank waste across the Columbia Basin. Only ship this waste in GROUTED/SOLID form.
2. Move forward with large-scale grouting and out-of-state disposal as soon as reasonably allowable to decrease the risk of leaking Hanford tanks on the CTUIR's treaty-protected resources."

USDOE agreed not to truck the waste through Oregon and the Umatilla Reservation. Unselfishly, the Umatilla Tribe has continued to advocate that liquid wastes should not be trucked at all when there is a licensed facility that can solidify and treat the waste next door to Hanford and avoid trucking wastes through Spokane on I-90 for 900 miles to Utah or 1,900 miles to Texas for disposal.

I want the test for 2,000 gallons of waste to proceed. But if it succeeds there will be thousands of shipments. Ecology has a duty under SEPA and the HEAL Act to consider and mitigate the risks from truck shipments through low income "overburdened" communities in Spokane or on Indian Reservations by requiring that the waste is solidified and treated at the licensed facility adjacent to Hanford instead of trucking untreated liquid waste.

### **Response to I-6-1**

*This comment provided is similar to Comment # I-5-1. See Ecology's response to Comments # I-5-1.*

## **I-7: ELENA RUMIANTSEVA**

### **Comment I-7-1**

This comment provided is identical to Comment # I-5-1. Please see Comment #I-5-1.

### ***Response to I-7-1***

*This comment provided is identical to Comment # I-5-1. See Ecology's response to Comments # I-5-1.*

## **I-8: TARA HORN**

### **Comment I-8-1**

Ecology should not permit the US Department of Energy (USDOE) to truck untreated liquid wastes from Hanford's High Level Nuclear Waste tanks through Spokane or across Oregon and the Umatilla Indian Reservation.

I strongly support moving forward with the test to remove and treat 2,000 gallons from Hanford's tanks for disposal offsite in licensed facilities where the waste does not create any risk to groundwater, Ecology has a duty to consider and take "mitigation" action to prevent the risk from a truck accident in Spokane or anywhere on the 900-1,900 mile truck routes. This is an environmental justice issue as well as a risk to the Spokane River.

I agree with the Umatilla Tribe whose Chair wrote to USDOE:

"The current plan to transport waste in liquid form poses for us an unacceptable risk of spills and harm to the environment, First Foods, and our citizens. The current proposal is especially disappointing given that shipping waste in a grouted, immobile, solid form is a viable and much safer option.

"To be clear, the CTUIR requests the following:

1. Do NOT ship liquid Hanford tank waste across the Columbia Basin. Only ship this waste in GROUTED/SOLID form.
2. Move forward with large-scale grouting and out-of-state disposal as soon as reasonably allowable to decrease the risk of leaking Hanford tanks on the CTUIR's treaty-protected resources."

USDOE agreed not to truck the waste through Oregon and the Umatilla Reservation. Unselfishly, the Umatilla Tribe has continued to advocate that liquid wastes should not be trucked at all when there is a licensed facility that can solidify and treat the waste next door to Hanford and avoid trucking wastes through Spokane on I-90 for 900 miles to Utah or 1,900 miles to Texas for disposal.

I want the test for 2,000 gallons of waste to proceed. But if it succeeds there will be thousands of shipments. Ecology has a duty under SEPA and the HEAL Act to consider and mitigate the risks from truck shipments through low income "overburdened" communities in Spokane or on

Indian Reservations by requiring that the waste is solidified and treated at the licensed facility adjacent to Hanford instead of trucking untreated liquid waste.

Any spill of liquids from Hanford will be an international news incident as well as putting residents and the environment at risk.

USDOE did not even consider risks from the chemicals in the liquid wastes and acknowledges that there is a risk of one "accidental crash" for a truck with these wastes every 884 shipments from Hanford to Texas. That is too high a risk to go without Washington requiring that the waste be solidified before being trucked through Spokane or Oregon and the Umatilla Reservation.

There is no reason to cut corners on safety. There is the capacity to do this properly without extra danger then why wouldn't you? The people and the environment deserve better.

### ***Response to I-8-1***

*This comment provided is similar to Comment # I-5-1. See Ecology's response to Comments # I-5-1.*

## **I-9: CAROL HUDSON**

### **Comment I-9-1**

Ecology should not permit the US Department of Energy (USDOE) to truck untreated liquid wastes from Hanford's High Level Nuclear Waste tanks through Spokane or across Oregon and the Umatilla Indian Reservation.

I strongly support moving forward with the test to remove and treat 2,000 gallons from Hanford's tanks for disposal offsite in licensed facilities where the waste does not create any risk to groundwater, Ecology has a duty to consider and take "mitigation" action to prevent the risk from a truck accident in Spokane or anywhere on the 900-1,900 mile truck routes. This is an environmental justice issue as well as a risk to the Spokane River.

I agree with the Umatilla Tribe whose Chair wrote to USDOE:

"The current plan to transport waste in liquid form poses for us an unacceptable risk of spills and harm to the environment, First Foods, and our citizens. The current proposal is especially disappointing given that shipping waste in a grouted, immobile, solid form is a viable and much safer option.

"To be clear, the CTUIR requests the following:

1. Do NOT ship liquid Hanford tank waste across the Columbia Basin. Only ship this waste in GROUTED/SOLID form.
2. Move forward with large-scale grouting and out-of-state disposal as soon as reasonably allowable to decrease the risk of leaking Hanford tanks on the CTUIR's treaty-protected resources."

USDOE agreed not to truck the waste through Oregon and the Umatilla Reservation. Unselfishly, the Umatilla Tribe has continued to advocate that liquid wastes should not be

trucked at all when there is a licensed facility that can solidify and treat the waste next door to Hanford and avoid trucking wastes through Spokane on I-90 for 900 miles to Utah or 1,900 miles to Texas for disposal.

I want the test for 2,000 gallons of waste to proceed. But if it succeeds there will be thousands of shipments. Ecology has a duty under SEPA and the HEAL Act to consider and mitigate the risks from truck shipments through low income "overburdened" communities in Spokane or on Indian Reservations by requiring that the waste is solidified and treated at the licensed facility adjacent to Hanford instead of trucking untreated liquid waste.

Any spill of liquids from Hanford will be an international news incident as well as putting residents and the environment at risk.

USDOE did not even consider risks from the chemicals in the liquid wastes and acknowledges that there is a risk of one "accidental crash" for a truck with these wastes every 884 shipments from Hanford to Texas. That is too high a risk to go without Washington requiring that the waste be solidified before being trucked through Spokane or Oregon and the Umatilla Reservation.

PLEASE! Do the grouting process of pretreated waste on site BEFORE shipping for disposal at permitted facilities outside the state of Washington. Heed the wise counsel of the Umatilla Reservation leaders in considering the environmental impact of such a plan.

### ***Response to I-9-1***

*This comment provided is similar to Comment # I-5-1. See Ecology's response to Comments # I-5-1.*

### **I-10: JILL MCANALLY**

#### **Comment I-10-1**

USDOE did not even consider risks from the chemicals in the liquid wastes and acknowledges that there is a risk of one "accidental crash" for a truck with these wastes every 884 shipments from Hanford to Texas. That is too high a risk to go without Washington requiring that the waste be solidified before being trucked through Spokane or Oregon and

### ***Response to I-10-1***

*This comment provided is similar to Comment # I-5-1. See Ecology's response to Comments # I-5-1.*

### **I-11: SHARON E FASNACHT**

#### **Comment I-11-1**

My understanding is that the facility to turn Hanford waste into glass (glassification) is ready for operation. I am opposed to transporting liquid wastes on our highways when we have the technology to turn it into glass before shipping. Why would we have spent all that time and money building that facility beside Hanford and then not use it to protect the public?

I do support moving the glassified nuclear waste for storage to places without danger of contaminating ground water, or any bodies of water. If those are in other states, so be it.

### **Response to I-11-1**

*Thank you for your comment.*

*Ecology believes that any treatment of Hanford's low activity tank waste for disposal at Hanford must be vitrification. After pretreatment at Tank Side Cesium Removal in the 200 East Area of Hanford Site, the pretreated low-activity waste (LAW) will be vitrified via the Direct-Feed Low-Activity Waste (DFLAW) program, currently scheduled to start in 2025. Vitrified LAW will be disposed of in an onsite landfill called the Integrated Disposal Facility, also located in the 200 East Area. The remaining high-activity portion of tank waste will be treated at Hanford's high-level waste vitrification facility, placed in interim storage onsite, and eventually transported offsite to a deep geologic repository for permanent disposal.*

*Even as DFLAW becomes successful, USDOE estimates the site will still have a volume of low-activity waste that LAW facility won't have the capacity to treat (vitrify) in a reasonable timeframe. This additional waste is called supplemental low-activity waste. The volume of this supplemental LAW is still variable and depends on a variety of factors.*

*As explained in Section 1.3, "in the 2013 ROD, DOE did not select a treatment method for all of the tank waste; instead, DOE announced that it would be "beneficial to study further the potential cost, safety, and environmental performance of supplemental treatment technologies" (78 FR 75916). Consistent with the 2013 ROD, the 2,000-gallon TBI Demonstration would demonstrate the feasibility of separation and pretreatment of low activity tank waste on-site at the Hanford Site, followed by off-site treatment (via stabilization/solidification), and disposal at a commercial facility."*

*In the proposed 2,000-gallon TBI Demonstration, the approximately 2,000 gallon pretreated LAW will be shipped offsite for grouting and eventual disposal at the two specified RCRA-permitted Treatment and Disposal facilities with particularly protective geologic features outside the state of Washington.*

### **I-12: RUCHI STAIR**

#### **Comment I-12-1**

I am an environmental activist who has tracked the safety issues surrounding radioactive waste since the 1980s. I welcome the Test Bed Initiative, if it safe transport can be ensured. I strongly support moving forward with the test to remove and treat 2,000 gallons from Hanford's tanks for disposal offsite in licensed facilities where the waste does not create any risk to groundwater. Importantly, Ecology should not permit the US Department of Energy (USDOE) to truck untreated liquid wastes from Hanford's High Level Nuclear Waste tanks through Spokane or across Oregon and the Umatilla Indian Reservation. Prudence requires that the radioactive waste be stabilized at a site adjacent to Hanford prior to transport. This is an environmental justice issue as well as a risk to the Spokane River.



I stand in solidarity with the Umatilla Tribe whose Chair wrote to USDOE: "The current plan to transport waste in liquid form poses for us an unacceptable risk of spills and harm to the environment, First Foods, and our citizens. The current proposal is especially disappointing given that shipping waste in a grouted, immobile, solid form is a viable and much safer option. To be clear, the CTUIR requests the following:

1. Do NOT ship liquid Hanford tank waste across the Columbia Basin. Only ship this waste in GROUTED/SOLID form.
2. Move forward with large-scale grouting and out-of-state disposal as soon as reasonably allowable to decrease the risk of leaking Hanford tanks on the CTUIR's treaty-protected resources."

I ask that radioactive waste be stabilized via grouting--prior to transport via ANY route or via any mode of transportation--and that the waste is solidified and treated at the licensed facility adjacent to Hanford instead.

### ***Response to I-12-1***

*This comment provided is similar to Comment # I-5-1. See Ecology's response to Comments # I-5-1.*

### **I-13: MRS. SUSAN & MR. PETER RISSER**

#### **Comment I-13-1**

It has been way too well demonstrated that we cannot manage this deadly nuclear waste! We have got to stop generating it and not keep polluting ou planet with even more.

#### ***Response to I-13-1***

*Thank you for your comment.*

*Ecology works to ensure that waste will be treated, stored and disposed at an approved facility and in full compliance with dangerous waste regulations and applicable permits in a manner fully protective of human health and the environment. The proposed RD&D Permit does not to allow the generation of new waste, but to better manage the waste already at Hanford.*

### **I-14: VICTORIA URIAS**

#### **Comment I-14-1**

This comment provided is identical to Comment # I-5-1. Please see Comment #I-5-1.

#### ***Response to I-14-1***

*This comment provided is identical to Comment # I-5-1. See Ecology's response to Comments # I-5-1.*

## **I-15: DOROTHY JORDAN**

### **Comment I-15-1**

This comment provided is identical to Comment # I-5-1. Please see Comment #I-5-1.

### ***Response to I-15-1***

*This comment provided is identical to Comment # I-5-1. See Ecology's response to Comments # I-5-1.*

## **I-16: AMY COMPESTINE**

### **Comment I-16-1**

This comment provided is identical to Comment # I-5-1. Please see Comment #I-5-1.

### ***Response to I-16-1***

*This comment provided is identical to Comment # I-5-1. See Ecology's response to Comments # I-5-1.*

## **I-17: SUSAN CRAMPTON**

### **Comment I-17-1**

- ENSURE TOXIC VAPOR PROTECTIONS: Ensure that permit conditions require protection for workers from toxic chemical vapor exposure consistent with the terms and conditions of the Vapor Lawsuit Settlement Agreement.
- ADD DETAIL ABOUT DISPOSITION PLAN FOR BOUNCE-BACK WASTE: Add detail to the permit about the disposition plan Ecology is requiring USDOE to provide in the event that waste that was shipped to the offsite facilities is sent back to Hanford.
- CLARIFY SAMPLING PROCEDURE: Clarify the language in the permit about whether it is one discrete sample per tote or two 250 ml samples per tote (and four 250ml samples for the final tote filled).
- IMPROVE THE PUBLIC PROCESS: In the future, please provide a high-level overview of the cleanup work the administrative tool (permit) is planned to facilitate and how that tool protects the environment, workers, and the public, instead of overly focusing on the administrative tool itself. Please set an expectation that USDOE and contractor staff are available to provide answers to questions instead of directing attendees to submit their questions as a comment. Questions are meant to help attendees understand the issue so they can write informed comments. How are attendees supposed to write informed comments to influence the decision-making process if that information is not provided? Please note that answers do not need to be highly technical, but rather provide clarity in plain language about the work being planned, not just the administrative framework in which that work takes place.

- CLARIFY CONSENT-BASED PROCESS: Require an attachment to the permit that includes information about how consent has been achieved for offsite disposal and transportation routes.

- KEEP THE FOCUS ON VIT: Grout does not meet the “as-good-as-glass” criteria. Please keep the focus on vitrifying tank waste and wait to press go on any alternative tank waste immobilization forms that do not meet the “as-good-as-glass” criteria.

I have serious concerns about Hanford cleanup, but my personal knowledge about the technical details for the 2,000- Gallon Test Bed Initiative Draft RD&D Permit is very limited. I have had confidence in the attention and knowledge from Hanford Challenge and support their comment letter above.

### **Response to I-17-1**

*This comment provided is similar to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and #O-1-2.*

## **I-18: MIYA BURKE**

### **Comment I-18-1**

This comment provided is identical to Comments # I-3-1 through #1-3-6.

### **Response to I-18-1**

*This comment provided is identical to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and #O-1-2.*

## **I-19: MARY HANSEN**

### **Comment I-19-1**

- ENSURE TOXIC VAPOR PROTECTIONS: Ensure that permit conditions require protection for workers from toxic chemical vapor exposure consistent with the terms and conditions of the Vapor Lawsuit Settlement Agreement.

- ADD DETAIL ABOUT DISPOSITION PLAN FOR BOUNCE-BACK WASTE: Add detail to the permit about the disposition plan Ecology is requiring USDOE to provide in the event that waste that was shipped to the offsite facilities is sent back to Hanford.

- CLARIFY SAMPLING PROCEDURE: Clarify the language in the permit about whether it is one discrete sample per tote or two 250 ml samples per tote (and four 250ml samples for the final tote filled).

- IMPROVE THE PUBLIC PROCESS: In the future, please provide a high-level overview of the cleanup work the administrative tool (permit) is planned to facilitate and how that tool protects the environment, workers, and the public, instead of overly focusing on the administrative tool itself. Please set an expectation that USDOE and contractor staff are available to provide answers to questions instead of directing attendees to submit their questions as a comment. Questions are meant to help attendees understand the issue so they can write informed

comments. How are attendees supposed to write informed comments to influence the decision-making process if that information is not provided? Please note that answers do not need to be highly technical, but rather provide clarity in plain language about the work being planned, not just the administrative framework in which that work takes place.

- CLARIFY CONSENT-BASED PROCESS: Require an attachment to the permit that includes information about how consent has been achieved for offsite disposal and transportation routes.

- KEEP THE FOCUS ON VIT: Grout does not meet the “as-good-as-glass” criteria. Please keep the focus on vitrifying tank waste and wait to press go on any alternative tank waste immobilization forms that do not meet the “as-good-asglass” criteria.

Thank you for considering my comment. I have confidence in vitrification, and I have been concerned about the harm that cutting corners at Hanford could pose for communities down river from Hanford for many decades.

### **Response to I-19-1**

*This comment provided is similar to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and #O-1-2.*

## **I-20: KEVIN GALLAGHER**

### **Comment I-20-1**

This comment provided is identical to Comments # I-3-1 through #1-3-6.

### **Response to I-20-1**

*This comment provided is identical to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and #O-1-2.*

## **I-21: JOHN GEARE**

### **Comment I-21-1**

- ENSURE TOXIC VAPOR PROTECTIONS: Ensure that permit conditions require protection for workers from toxic chemical vapor exposure consistent with the terms and conditions of the Vapor Lawsuit Settlement Agreement.

- ADD DETAIL ABOUT DISPOSITION PLAN FOR BOUNCE-BACK WASTE: Add detail to the permit about the disposition plan Ecology is requiring USDOE to provide in the event that waste that was shipped to the offsite facilities is sent back to Hanford.

- CLARIFY SAMPLING PROCEDURE: Clarify the language in the permit about whether it is one discrete sample per tote or two 250 ml samples per tote (and four 250ml samples for the final tote filled).

- IMPROVE THE PUBLIC PROCESS: In the future, please provide a high-level overview of the clean-up work the administrative tool (permit) is planned to facilitate and how that tool protects

the environment, workers, and the public, instead of overly focusing on the administrative tool itself. Please set an expectation that USDOE and contractor staff are available to provide answers to questions instead of directing attendees to submit their questions as a comment. Questions are meant to help attendees understand the issue so they can write informed comments. How are attendees supposed to write informed comments to influence the decision-making process if that information is not provided? Please note that answers do not need to be highly technical, but rather provide clarity in plain language about the work being planned, not just the administrative framework in which that work takes place.

- CLARIFY CONSENT-BASED PROCESS: Require an attachment to the permit that includes information about how consent has been achieved for offsite disposal and transportation routes.

- KEEP THE FOCUS ON VIT: Grout does not meet the “as-good-as-glass” criteria. Please keep the focus on vitrifying tank waste and wait to press go on any alternative tank waste immobilization forms that do not meet the “as-good-as-glass” criteria.

Why aren't the Utah and Texas facilities sending folks to verify the status of the totes/cesium to Hanford prior to shipment? Seems crazy to ship the material all the way to receiving point only to have it rejected when time and money could be saved by verifying first. Also, what safeguards are in place for transportation of this hazardous material? Trucks? Train tankers?

### **Response to I-21-1**

*This comment provided is similar to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and #O-1-2.*

## **I-22: HOWARD BROUS**

### **Comment I-22-1**

This comment provided is identical to Comments # I-3-1 through #1-3-6.

### **Response to I-22-1**

*This comment provided is identical to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and #O-1-2.*

## **I-23: CORAL SHAFFER**

### **Comment I-23-1**

- ENSURE TOXIC VAPOR PROTECTIONS: Ensure that permit conditions require protection for workers from toxic chemical vapor exposure consistent with the terms and conditions of the Vapor Lawsuit Settlement Agreement.

- ADD DETAIL ABOUT DISPOSITION PLAN FOR BOUNCE-BACK WASTE: Add detail to the permit about the disposition plan Ecology is requiring USDOE to provide in the event that waste that was shipped to the offsite facilities is sent back to Hanford.

- CLARIFY SAMPLING PROCEDURE: Clarify the language in the permit about whether it is one discrete sample per tote or two 250 ml samples per tote (and four 250ml samples for the final tote filled).

- IMPROVE THE PUBLIC PROCESS: In the future, please provide a high-level overview of the cleanup work the administrative tool (permit) is planned to facilitate and how that tool protects the environment, workers, and the public, instead of overly focusing on the administrative tool itself. Please set an expectation that USDOE and contractor staff are available to provide answers to questions instead of directing attendees to submit their questions as a comment. Questions are meant to help attendees understand the issue so they can write informed comments. How are attendees supposed to write informed comments to influence the decision-making process if that information is not provided? Please note that answers do not need to be highly technical, but rather provide clarity in plain language about the work being planned, not just the administrative framework in which that work takes place.

- CLARIFY CONSENT-BASED PROCESS: Require an attachment to the permit that includes information about how consent has been achieved for offsite disposal and transportation routes.

- KEEP THE FOCUS ON VIT: Grout does not meet the “as-good-as-glass” criteria. Please keep the focus on vitrifying tank waste and wait to press go on any alternative tank waste immobilization forms that do not meet the “as-good-as-glass” criteria.

Isn't it past time to do something effective to protect us from our nuclear waste? Thank you for considering my comment.

### **Response to I-23-1**

*This comment provided is similar to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and O-1-2.*

## **I-24: ARLENE SPENCER**

### **Comment I-24-1**

This comment provided is identical to Comments # I-3-1 through #1-3-6.

### **Response to I-24-1**

*This comment provided is identical to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and #O-1-2.*

## **I-25: ANNA COWEN**

### **Comment I-25-1**

This comment provided is identical to Comments # I-3-1 through #1-3-6.

### **Response to I-25-1**

*This comment provided is identical to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and #O-1-2.*

## **I-26: TRICIA TRAINER**

### **Comment I-26-1**

I support the TBI Proposal. We must use the liquification process to make the liquid nuclear waste into a solid form in order to travel without mishap to a safe place in Utah or Texas. Please do not ship the liquid waste through Spokane. That is asking for a disaster.

### **Response to I-26-1**

*Please see Ecology's response to a similar comment, Comment #I-5-1.*

## **I-27: DEREK DEXHEIMER**

### **Comment I-27-1**

Ecology should not permit the US Department of Energy (USDOE) to truck untreated liquid wastes from Hanford's High Level Nuclear Waste tanks through Spokane or across Oregon and the Umatilla Indian Reservation.

USDOE agreed not to truck the waste through Oregon and the Umatilla Reservation. Unselfishly, the Umatilla Tribe has continued to advocate that liquid wastes should not be trucked at all when there is a licensed facility that can solidify and treat the waste next door to Hanford and avoid trucking wastes through Spokane on I-90 for 900 miles to Utah or 1,900 miles to Texas for disposal.

I want the test for 2,000 gallons of waste to proceed. But if it succeeds there will be thousands of shipments. Ecology has a duty under SEPA and the HEAL Act to consider and mitigate the risks from truck shipments through low income "overburdened" communities in Spokane or on Indian Reservations by requiring that the waste is solidified and treated at the licensed facility adjacent to Hanford instead of trucking untreated liquid waste.

This waste is extremely dangerous. ANY shipping of liquid or solid wastes presents indefensible risks when there is safe, on-site disposal, or the potential for such. Hanford is already contaminated. Keep the waste there.

### **Response to I-27-1**

*Please see Ecology's response to a similar comment, Comment #I-5-1.*

## **I-28: JANE FREEDMAN**

### **Comment I-28-1**

When I was college student on the 1982-86 we stopped the trains transporting the nuclear waste over and over ...1980's!!! and this is still an issue.. GET IT TOGETHER ! There is no plan B .

### **Response to I-28-1**

*Thank you for your comment.*

*This RD&D Permit would authorize the on-site waste management activities (separation and pretreatment activities) at the Hanford site for the proposed 2,000-gallon TBI Demonstration that would occur before the pretreated waste is shipped off-site. The Permittees are required to characterize the TBI pretreated waste by sampling from each tote to ensure USDOT shipping requirement and waste acceptance at the offsite treatment and disposal facilities (See Section 3.2.1). However, neither this RD&D permit nor Ecology have regulatory authority to oversee the transportation of hazardous materials/waste (e.g., mixed waste including TBI pretreated waste) or waste acceptance/consent process at the disposal facility outside the state of Washington. Train is not the proposed transportation means for the 2,000-gallon TBI Demonstration. Please see Ecology's response to a similar comment on liquid waste transportation concern, Comment I-5-1.*

### **I-29: LINDA JO DEVLAE MINCK**

#### **Comment I-29-1**

This comment provided is identical to Comment # I-5-1. Please see Comment #I-5-1.

#### **Response to I-29-1**

*This comment provided is identical to Comment # I-5-1. See Ecology's response to Comment # I-5-1.*

### **I-30: MARILYN MAYERS**

#### **Comment I-30-1**

I Make frequent trips along I-90. I am appalled by the total failure of the federal government to adequately deal with the toxic pollution and radioactivity at Hanford. USDOE agreed not to truck the waste through Oregon and the Umatilla Reservation. The Umatilla Tribe has continued to advocate that liquid wastes should not be trucked at all when there is a licensed facility that can solidify and treat the waste next door to Hanford and avoid trucking wastes through Spokane on I-90 for 900 miles to Utah or 1,900 miles to Texas for disposal.

#### **Response to I-30-1**

*Thank you for your comment.*

*Ecology issued the draft RD&D Permit after reviewing and incorporating the RD&D Permit application from the Permittees to authorize the proposed 2,000-gallon TBI Demonstration. The RD&D Permit would authorize the on-site waste management activities (separation and pretreatment activities) at the Hanford site for the proposed 2,000-gallon TBI Demonstration that would occur before the pretreated waste is shipped off-site. PFNW is not among the RCRA permitted facilities selected by the Permittees for the proposed 2,000-gallon TBI Demonstration.*



*Please see Ecology's response to a similar comment on liquid waste transportation concern, Comment I-5-1.*

### **Comment I-30-2**

We need to clean up Hanford and STOP further production of nuclear waste. At the very least solidify the waste and bury it where it is or at a final burial site. NO MORE INADEQUATE NUCLEAR WASTE DISPOSAL!!! IF it cannot be dealt with safely, STOP PRODUCING MORE.

### **Response to I-30-2**

*Ecology works to ensure that waste will be treated, stored and disposed at an approved facility and in full compliance with dangerous waste regulations and applicable permits in a manner fully protective of human health and the environment. The proposed RD&D Permit does not allow the generation of new waste, but to better manage the waste already at Hanford.*

### **Comment I-30-3**

I want the test for 2,000 gallons of waste to proceed. But if it succeeds there will be thousands of shipments. Ecology has a duty under SEPA and the HEAL Act to consider and mitigate the risks from truck shipments through low income "overburdened" communities in Spokane or on Indian Reservations by requiring that the waste is solidified and treated at the licensed facility adjacent to Hanford instead of trucking untreated liquid waste.

### **Response to I-30-3**

*The proposed RD&D Permit authorizes the onsite waste management activities in the Hanford Site's 200 West Area before the pretreated waste is shipped offsite for grouting and disposal outside the state of Washington. PFNW was not among the RCRA-permitted facilities selected by the Permittees for the proposed 2,000-gallon TBI Demonstration. A large-scale grouting and out-of-state disposal beyond the 2,000-gallon Demonstration (e.g., SLAW) is outside the scope of this RD&D Permit.*

*For the 2,000-gallon TBI Demonstration, a total of two truck shipments are proposed with one shipment of 3 process totes to be sent to each off-site RCRA-permitted facility.*

*Please see Ecology's response to a similar comment on liquid waste transportation concern, Comment I-5-1.*

## **I-31: RAELENE GOLD**

### **Comment I-31-1**

1. It is too dangerous ship liquid Hanford tank waste across the Columbia Basin. Especially through Spokane, Umatilla Reservation and over waterways where a spill could happen endangering people and the environment.
2. This waste should only be shipped in grouted solid form. You should move forward with large-scale grouting, preferably at a local licensed facility, and out-of-state disposal as soon as possible.

3. I want the test for 2,000 gallons of waste to proceed. But if it succeeds there will be thousands of shipments. Ecology has a duty under SEPA and the HEAL Act to consider and mitigate the risks from truck shipments through low income "overburdened" communities in Spokane or on Indian Reservations by requiring that the waste is solidified and treated at the licensed facility adjacent to Hanford instead of trucking untreated liquid waste.

### **Response to I-31-1**

*This comment provided is similar to Comment # I-5-1. See Ecology's response to Comment # I-5-1.*

## **I-32: ANONYMOUS ANONYMOUS**

### **Comment I-32-1**

Remove leakable liquids from High Level Waste tanks Stop the can do to lower the risks from nuclear weapons production at Hanford.

The Test Bed Initiative (TBI) offers the opportunity to remove leakable liquids from tanks that are leaking today or are likely to start leaking soon. Hanford's groundwater and the Columbia River will be contaminated for thousands of years if all the waste that is currently planned to be removed from Hanford's tanks is disposed in landfills onsite. The "Test Bed Initiative" (TBI) offers the first hope for speeding up removal of leakable liquids from High Level Nuclear waste tanks decades ahead of current plans for vitrification (glassification) and for reducing how much waste is disposed in landfills along our Columbia River at Hanford. TBI will test if 2,000 gallons can be removed from a High Level Waste Tank, solidified and treated to be disposed at sites where there is no drinkable groundwater that can ever be contaminated (the sites are in West Texas or Utah).

The US Department of Energy (USDOE) can solidify and treat the waste at a licensed facility next to Hanford so that there is no risk from spilling liquid waste in a truck accident on I-90.

Instead, USDOE wants to ship the waste as a liquid through Spokane for either 900 or 1,900 miles to be treated in Utah or Texas. The Umatilla Indian Tribe (CTUIR) objects strongly to shipping the liquid wastes through their Reservation or through Spokane:

"The current plan to transport waste in liquid form poses for us an unacceptable risk of spills and harm to the environment, First Foods, and our citizens. The current proposal is especially disappointing given that shipping waste in a grouted, immobile, solid form is a viable and much safer option.

"To be clear, the CTUIR requests the following:

1. Do NOT ship liquid Hanford tank waste across the Columbia Basin. Only ship this waste in GROUTED/SOLID form.
2. Move forward with large-scale grouting and out-of-state disposal as soon as reasonably allowable to decrease the risk of leaking Hanford tanks on the CTUIR's treaty-protected resources."

We agree with the Umatilla Tribe (CTUIR). The Tribe and we need your comments to help make this happen.

Heart of America Northwest has spent decades fighting USDOE's plans to truck more waste to be dumped at Hanford, including successfully stopping shipments through Spokane. The TBI is our first hope to remove waste from Hanford, instead of adding more risk to the Columbia River.

But it has to be done safely by only trucking solid, treated waste with very low radioactivity – not trucking untreated liquids through Spokane and other vulnerable communities and Indian Reservations.

Use our sample comments from the section below to Washington's Department of Ecology, but please add in your words why this is important to you. Perhaps you live near I-90 in Spokane. Or, you have hoped for years that we could remove waste from Hanford.

Ecology comment form: <https://nw.ecology.commentinput.com/?id=tNePGUiA5> Donate on Earth Day!

Click now

Use these sample comments - adding a few words on why removing waste from Hanford or not shipping liquid waste through Spokane are important to you (comment period closes Thursday)

To Washington Ecology and Governor Inslee:

Ecology should not permit the US Department of Energy (USDOE) to truck untreated liquid wastes from Hanford's High Level Nuclear Waste tanks through Spokane or across Oregon and the Umatilla Indian Reservation.

I strongly support moving forward with the test to remove and treat 2,000 gallons from Hanford's tanks for disposal offsite in licensed facilities where the waste does not create any risk to groundwater, Ecology has a duty to consider and take "mitigation" action to prevent the risk from a truck accident in Spokane or anywhere on the 900-1,900 mile truck routes. This is an environmental justice issue as well as a risk to the Spokane River.

I agree with the Umatilla Tribe whose Chair wrote to USDOE:

"The current plan to transport waste in liquid form poses for us an unacceptable risk of spills and harm to the environment, First Foods, and our citizens. The current proposal is especially disappointing given that shipping waste in a grouted, immobile, solid form is a viable and much safer option. "To be clear, the CTUIR requests the following:

1. Do NOT ship liquid Hanford tank waste across the Columbia Basin. Only ship this waste in GROUTED/SOLID form.
2. Move forward with large-scale grouting and out-of-state disposal as soon as reasonably allowable to decrease the risk of leaking Hanford tanks on the CTUIR's treaty-protected resources."

USDOE agreed not to truck the waste through Oregon and the Umatilla Reservation. Unselfishly, the Umatilla Tribe has continued to advocate that liquid wastes should not be

trucked at all when there is a licensed facility that can solidify and treat the waste next door to Hanford and avoid trucking wastes through Spokane on I-90 for 900 miles to Utah or 1,900 miles to Texas for disposal.

I want the test for 2,000 gallons of waste to proceed. But if it succeeds there will be thousands of shipments. Ecology has a duty under SEPA and the HEAL Act to consider and mitigate the risks from truck shipments through low income "overburdened" communities in Spokane or on Indian Reservations by requiring that the waste is solidified and treated at the licensed facility adjacent to Hanford instead of trucking untreated liquid waste.

Any spill of liquids from Hanford will be an international news incident as well as putting residents and the environment at risk.

USDOE did not even consider risks from the chemicals in the liquid wastes and acknowledges that there is a risk of one "accidental crash" for a truck with these wastes every 884 shipments from Hanford to Texas. That is too high a risk to go without Washington requiring that the waste be solidified before being trucked through Spokane or Oregon and the Umatilla Reservation.

### **Response to I-32-1**

*This comment provided is similar to Comment # I-5-1. See Ecology's response to Comment # I-5-1.*

## **I-33: MARION FAULKNER CURLIN**

### **Comment I-33-1**

I strongly support moving forward with the test to remove and treat 2,000 gallons from Hanford's tanks for disposal offsite in licensed facilities where the waste does not create any risk to groundwater, Ecology has a duty to consider and take "mitigation" action to prevent the risk from a truck accident in Spokane or anywhere on the 900-1,900 mile truck routes. This is an environmental justice issue as well as a risk to the Spokane River.

### **Response to I-33-1**

*This comment provided is similar to Comment # I-5-1. See Ecology's response to Comment # I-5-1.*

## **I-34: STRAVO LUKOS**

### **Comment I-34-1**

Please, i am not trying to be a know it all, but common sense tells us that accidents can & do happen regularly, & an accidental spillage of this content would be a catastrophe to Spokane, the second largest city in WA state. PLEASE reconsider. Thank you.

### **Response to I-34-1**

*This comment provided is similar to Comment # I-5-1. See Ecology's response to Comment # I-5-1.*

## **I-35: LORRIE SHEROD**

### **Comment I-35-1**

Hanford Radioactive Waste needs to stay in Hanford Reservation not be transported anywhere . Especially through a densely populated area such as Spokane.

### **Response to I-35-1**

*Thank you for your comment.*

*The proposed RD&D Permit authorizes the onsite waste management activities in the Hanford Site's 200 West Area before the pretreated waste is shipped offsite for grouting and disposal outside the state of Washington. This RD&D permit or Ecology does not have regulatory authority to oversee the transportation of hazardous materials/waste (e.g., mixed waste including TBI pretreated waste). Please see Ecology's response to a similar comment on liquid waste transportation concern, Comment I-5-1.*

*Under Hazardous Waste Management Act and Dangerous Waste Regulations, Dangerous waste must be treated to meet all applicable treatment standards prior to land disposal. Ecology believes that any treatment of Hanford's low activity tank waste for disposal at Hanford must be vitrified.*

*The 2,000 gallon of TBI pretreated waste will satisfy the LDR standards if treated and disposed at two specified RCRA-permitted disposal sites outside the state of Washington in accordance with EPA's treatability variance, issued May 1, 2024. This variance would authorize USDOE to perform the following series of activities in lieu of requiring the waste to be vitrified: on-site separation, pre-treatment, and confirmation sampling; off-site solidification and confirmation sampling, and disposal of the grouted waste at two specified RCRA-permitted disposal sites that have particularly protective geologic features. Therefore, this particular TBI pretreated waste does not satisfy LDR standards for on-site disposition at Hanford under the proposed demonstration.*

## **I-36: DIANE BURKE**

### **Comment I-36-1**

I urge Ecology to pursue the science rather than political pressure in projects to sequester Hanford tank waste. Vitrification has proven successful in long-term immobilization of the radioactive, corrosive waste material. Grouting has failed past tests. It diverts funds which should be directed toward advancing vitrification and wastes time better spent. Grouting is not 'better than glass.'

Further, the 'faster cheaper' argument is not fact-based. Further to the permitting, please require clarification of: protection of workers from toxic chemical vapors; the plan for bounce-back waste disposition; sampling of the totes.

Please improve the public information process if grouting testing goes forward. Many thanks for considering these proposals.

### **Response to I-36-1**

*This comment provided is similar to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and #O-1-2.*

### **I-37: PAULA ROTONDI**

#### **Comment I-37-1**

Please do not ship Hanford tank waste in liquid form across the Columbia Basin.

The proposal to truck untreated liquid wastes from Hanford's High Level Nuclear Waste tanks through Spokane or across Oregon and the Umatilla Indian Reservation is reckless - a truck accident in Spokane, or in the Umatilla Indian Reservation, or anywhere on the 900-1,900 mile truck routes would release toxins capable of harming all life forms in the area for decades. The trucking of Hanford liquid waste through the Umatilla Reservation would add to the shameful history of federal and state government deliberately disregarding the lives, health, well-being and rights of Native Americans. The proposal to truck Hanford liquid waste is folly especially since there is a much safer alternative - shipping Hanford waste in a grouted, immobile solid form.

Please proceed with the test to remove and treat 2,000 gallons from Hanford's tanks for disposal offsite in licensed facilities where the waste does not create any risk to groundwater. Move forward with large-scale grouting and out-of-state disposal as soon as reasonably allowable to decrease the risk of leaking Hanford tanks on the CTUIR's treaty-protected resources."

#### **Response to I-37-1**

*Please see Ecology's response to a similar comment on liquid waste transportation concern, Comment I-5-1.*

### **I-38: CAROLYN TREADWAY**

#### **Comment I-38-1**

This comment provided is identical to Comments # I-3-1 through #1-3-6.

#### **Response to I-38-1**

*This comment provided is identical to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and #O-1-2.*

### **I-39: THOMAS EDWARD GRANGER**

#### **Comment I-39-1**

- ENSURE TOXIC VAPOR PROTECTIONS: Ensure that permit conditions require protection for workers from toxic chemical vapor exposure consistent with the terms and conditions of the Vapor Lawsuit Settlement Agreement.

- ADD DETAIL ABOUT DISPOSITION PLAN FOR BOUNCE-BACK WASTE: Add detail to the permit about the disposition plan Ecology is requiring USDOE to provide in the event that waste that was shipped to the offsite facilities is sent back to Hanford.
- CLARIFY SAMPLING PROCEDURE: Clarify the language in the permit about whether it is one discrete sample per tote or two 250 ml samples per tote (and four 250ml samples for the final tote filled).
- IMPROVE THE PUBLIC PROCESS: In the future, please provide a high-level overview of the cleanup work the administrative tool (permit) is planned to facilitate and how that tool protects the environment, workers, and the public, instead of overly focusing on the administrative tool itself. Please set an expectation that USDOE and contractor staff are available to provide answers to questions instead of directing attendees to submit their questions as a comment. Questions are meant to help attendees understand the issue so they can write informed comments. How are attendees supposed to write informed comments to influence the decision-making process if that information is not provided? Please note that answers do not need to be highly technical, but rather provide clarity in plain language about the work being planned, not just the administrative framework in which that work takes place.
- CLARIFY CONSENT-BASED PROCESS: Require an attachment to the permit that includes information about how consent has been achieved for offsite disposal and transportation routes.
- KEEP THE FOCUS ON VIT: Grout does not meet the “as-good-as-glass” criteria. Please keep the focus on vitrifying tank waste and wait to press go on any alternative tank waste immobilization forms that do not meet the “as-good-as-glass” criteria.

Thank you for considering my comment. As a person with zero experience in nuclear matters, but with a background in engineering and construction, I am particularly uneasy about the idea of grout as a medium for containing radioactive material over the long duration of the time when it will be stored. Witness the deterioration of the existing concrete tanks. Unless someone has discovered a form of grout which is actually waterproof and has tensile strength it will be no substitute for glass. Even glass is lacking in tensile strength, but it is waterproof and can be reinforced with rustproof tensile material. Do it right folks. It's forever.

### ***Response to I-39-1***

*This comment provided is similar to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and #O-1-2.*

## **I-40: THOMAS GALIOTO**

### **Comment I-40-1**

1/3. Is this Test Bed Initiative activity negatively impacted by recent court decisions affecting the privately run waste disposal sites in TX and NM that the NRC cannot license commercial radioactive waste sites?

### **Response to I-40-1**

*Thank you for your comment.*

*The recent decision from the Fifth Circuit Court of Appeals in State of Texas v. NRC, No. 21-60743, addresses permits for temporary, "away-from-reactor" storage sites for commercial spent nuclear fuel. The decision does not affect the treatment and disposal of TBI waste, which is a low-level radioactive mixed waste from defense activities.*

### **Comment I-40-2**

2/3. Will the grouted waste from these off-site facilities be encapsulated in an outer container (eg, stainless steel or other material) prior to final disposal?

### **Response to I-40-2**

*The Permittees explained to Ecology that there is no requirement to provide an outer container for the treated waste prior to disposal. However, if the off-site commercial treatment facilities decide to containerize the treated waste, they may do so based on the operational needs of the facility.*

### **Comment I-40-3**

3/3. Will the grouted waste from this Test Bed Initiative be returned to Hanford for permanent disposal, and if so is this addressed specifically by this permit?

### **Response to I-40-3**

*Under the Hazardous Waste Management Act and Dangerous Waste Regulations, Dangerous waste must be treated to meet all applicable treatment standards prior to land disposal. Ecology believes that any treatment of Hanford's low activity tank waste for disposal at Hanford must be vitrification. The 2,000 gallon of TBI pretreated waste will satisfy the LDR standards if treated and disposed at two specified RCRA-permitted disposal sites outside the state of Washington in accordance with EPA's treatability variance, issued May 1, 2024. This variance would authorize USDOE to perform the following series of activities in lieu of requiring the waste to be vitrified: on-site separation, pre-treatment, and confirmation sampling; off-site solidification and confirmation sampling, and disposal of the grouted waste at two specified RCRA-permitted disposal sites that have particularly protective geologic features. Therefore, this particular TBI waste does not satisfy LDR standards for on-site disposition at Hanford under the proposed demonstration.*

*The Permittees are required to characterize the TBI pretreated waste to verify that the waste will meet the waste acceptance criteria of the off-site permitted treatment facility as described in Section 3.2.1.*

*Additionally, Ecology added a series of conditions under II.K to ensure that Permittees comply with LDR standards prior to the land disposal of TBI pretreated waste.*

*Draft Condition II.K.5 (Or Final Permit Condition II.K.4) reads, "This Permit does not authorize onsite disposal of the pretreated waste removed from SY-101. If for any reason the pretreated waste is not accepted for disposal outside the State of Washington, the Permittees shall notify Ecology prior to waste being returned to Hanford and*



*will provide Ecology the disposition plan before allowing the waste to be returned to Hanford. The waste will remain subject to all applicable LDR standards based on the waste codes set forth in Condition II.K.1."*

*Ecology added this condition as a contingency measure to prevent the TBI pre-treated waste from becoming an orphan waste in the unlikely scenario if something goes wrong once the waste is shipped off site (e.g., waste is rejected for disposal at the out-of-state locations and it comes back to Hanford Site). Please also see Ecology's response to a similar comment with concerns for bounce-back waste, Comment #O-1-2.*

#### **I-41: SHARY B**

##### **Comment I-41-1**

This comment provided is identical to Comment # I-5-1. Please see Comment #I-5-1.

##### ***Response to I-41-1***

*This comment provided is identical to Comment # I-5-1. See Ecology's response to Comments # I-5-1.*

#### **I-42: KAREN REYNOLDS**

##### **Comment I-42-1**

My concern is with Permit condition II.K.5, which prevents DOE from burying the grout at Hanford if the waste does not meet the disposal site's waste acceptance criteria. 2000 gallons of treated waste would be a trivial amount of waste in ERDF compared to the current inventory. Why would you potentially create and interstate transit crises for such a trivial impact?

Please remove this permit condition.

##### ***Response to I-42-1***

*Thank you for your comment.*

*Under the Hazardous Waste Management Act and Dangerous Waste Regulations, Dangerous waste must be treated to meet all applicable treatment standards prior to land disposal. Ecology believes that any treatment of Hanford's low activity tank waste for disposal at Hanford must be vitrification. The 2,000 gallon of TBI pretreated waste will satisfy the LDR standards if treated and disposed at two specified RCRA-permitted disposal sites outside the state of Washington in accordance with EPA's treatability variance, issued May 1, 2024. This variance would authorize USDOE to perform the following series of activities in lieu of requiring the waste to be vitrified: on-site separation, pre-treatment, and confirmation sampling; off-site solidification and confirmation sampling, and disposal of the grouted waste at two specified RCRA-permitted disposal sites that have particularly protective geologic features. Therefore, this particular TBI waste does not satisfy LDR standards for on-site disposition at Hanford under the proposed demonstration.*

*Ecology wrote Draft Condition II.K.5 (Final Permit Condition II.K.4) as a contingency measure to prevent the TBI pre-treated waste from becoming an orphan waste in the unlikely scenario if something goes wrong once the waste is shipped off site (e.g., waste is rejected for disposal at the out-of-state locations and it comes back to Hanford Site).*

#### **I-43: KELLY NORTON**

##### **Comment I-43-1**

I grew up in Richland, WA; my mother still lives there in my childhood home. I'm worried about both accidental and cumulative exposure to dangerous and toxic elements in the air she breaths and water she drinks. People live in the area surrounding Hanford and its sundry satellite facilities. It's freaky to me that their health and safety is not paramount in these deliberations.

##### **Response to I-43-1**

*Thank you for your comment.*

*Ecology works to ensure that waste will be treated, stored and disposed at an approved facility and in full compliance with dangerous waste regulations and applicable permits in a manner fully protective of human health and the environment. The proposed RD&D Permit does not allow the generation of new waste, but to better manage the waste already at Hanford.*

##### **Comment I-43-2**

Please stop focusing on grout; we all know that it's ultimately a waste of time because only glass encapsulation is safe enough.

##### **Response to I-43-2**

*This comment provided is similar to Comment # I-3-6. Please see Ecology's response to Comment I-3-6.*

#### **I-44: NANCY ARBUCKLE**

##### **Comment I-44-1**

This comment provided is identical to Comments # I-3-1 through #1-3-6.

##### **Response to I-44-1**

*This comment provided is identical to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and O-1-2.*

#### **I-45: PAUL MCCORMICK**

##### **Comment I-45-1**

This comment provided is identical to Comments # I-3-1 through #1-3-6.

### **Response to I-45-1**

*This comment provided is identical to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and #O-1-2.*

### **I-46: KELLY NORTON**

#### **Comment I-46-1**

This comment provided is identical to Comments # I-3-1 through #1-3-6 and #O-1-2.

#### **Response to I-46-1**

*This comment provided is identical to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and O-1-2.*

#### **Comment I-46-2**

I grew up in Richland, WA; my mother still lives there in my childhood home. I'm worried about accidental and cumulative exposure to dangerous and toxic elements in the air she breaths and water she drinks. It's freaky.

Please stop focusing on grout; we all now that it's an ultimate waste of time because only glass encapsulation is safe

enough.

#### **Response to I-46-2**

*This comment provided is identical to Comments # I-43-1 and # I-43-2. See Ecology's responses to Comments # I-43-1 and # I-43-2.*

### **I-47: LAURA FELDMAN**

#### **Comment I-47-1**

This comment provided is identical to Comments # I-3-1 through #1-3-6.

#### **Response to I-47-1**

*This comment provided is identical to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and #O-1-2.*

#### **Comment I-47-2**

Groutng potentially high level wastes after the cesium is removed to be sent to Texas or Utah, hoping they will take it.....doesn't seem prudent. If it comes back to us what then? Too many gaps in this journey to feel safe to me.

I'd like to know what happens if the wastes fails to meet receiver criteria. And for that matter I'd like to know more about the conditions these wastes are to be deposited. I care about how nuclear waste is handled no matter where it ends up because ultimately it impacts all of us.

Too many gaps here. Too much handling and moving around wastes that could potentially become homeless and hopefully not dumped by the side of the road.

### **Response to I-47-2**

*The Permittees are required to characterize the TBI pretreated waste to verify that the waste will meet the waste acceptance criteria of the off-site permitted treatment facility as described in Section 3.2.1.*

*Additionally, Ecology added a series of conditions under II.K to ensure that Permittees comply with LDR standards prior to the land disposal of TBI pretreated waste. Draft Condition II.K.5 (or Final Permit Condition II.K.4) reads, "This Permit does not authorize onsite disposal of the pretreated waste removed from SY-101. If for any reason the pretreated waste is not accepted for disposal outside the State of Washington, the Permittees shall notify Ecology prior to waste being returned to Hanford and will provide Ecology the disposition plan before allowing the waste to be returned to Hanford. The waste will remain subject to all applicable LDR standards based on the waste codes set forth in Condition II.K.1."*

*Ecology added this condition as a contingency measure to prevent the TBI pre-treated waste from becoming an orphan waste in the unlikely scenario if something goes wrong once the waste is shipped off site (e.g., waste is rejected for disposal at the out-of-state locations and it comes back to Hanford Site). Please also see Ecology's response to a similar comment with concerns for bounce-back waste, Comment #O-1-2.*

### **I-48: CHERYL TROSPER**

#### **Comment I-48-1**

I am currently living in Portland, but as a young child lived for several years in the Yakima area. In 1993 I had thyroid cancer and learned that there was a high incidence of thyroid cancers and others in the region near Yakima. I think we must be vigilant in cleaning up Hanford, but incredibly careful in the steps we take to clean up the region. Ecology should not permit the US Department of Energy (USDOE) to truck untreated liquid wastes from Hanford's High Level Nuclear Waste tanks through Spokane or across Oregon and the Umatilla Indian Reservation. I strongly support moving forward with the test to remove and treat 2,000 gallons from Hanford's tanks for disposal offsite in licensed facilities where the waste does not create any risk to groundwater, Ecology has a duty to consider and take "mitigation" action to prevent the risk from a truck accident in Spokane or anywhere on the 900-1,900 mile truck routes. This is an environmental justice issue as well as a risk to the Spokane River. I agree with the Umatilla Tribe whose Chair wrote to USDOE: "The current plan to transport waste in liquid form poses for us an unacceptable risk of spills and harm to the environment, First Foods, and our citizens. The current proposal is especially disappointing given that shipping waste in a grouted, immobile, solid form is a viable and much safer option. "To be clear, the CTUIR requests the following: 1. Do NOT ship liquid Hanford tank waste across the Columbia Basin. Only ship this waste in GROUTED/SOLID form. 2. Move forward with large-scale grouting and out-of-state disposal as soon as reasonably allowable to decrease the risk of leaking Hanford tanks on the CTUIR's treaty-protected resources." USDOE agreed not to truck the waste through Oregon and

the Umatilla Reservation. Unselfishly, the Umatilla Tribe has continued to advocate that liquid wastes should not be trucked at all when there is a licensed facility that can solidify and treat the waste next door to Hanford and avoid trucking wastes through Spokane on I-90 for 900 miles to Utah or 1,900 miles to Texas for disposal. I want the test for 2,000 gallons of waste to proceed. But if it succeeds there will be thousands of shipments. Ecology has a duty under SEPA and the HEAL Act to consider and mitigate the risks from truck shipments through low income "overburdened" communities in Spokane or on Indian Reservations by requiring that the waste is solidified and treated at the licensed facility adjacent to Hanford instead of trucking untreated liquid waste.

***Response to I-48-1***

*This comment provided is similar to Comment # I-5-1. See Ecology's response to Comments # I-5-1.*

**I-49: MARJORIE OSTLE**

**Comment I-49-1**

I agree with the Umatilla Nation that nuclear wastes from Hanford should not be shipped in liquid form through Spokane or any land, tribal or otherwise. If the wastes can be treated at a facility close to the Hanford site so that it is solid when shipped offsite, then that is the course I support. I have relatives and friends living in and near Spokane whose lives could be threatened by any exposure, accidental or otherwise, to these wastes.

***Response to I-49-1***

*Please see Ecology's response to a similar comment on liquid waste transportation concern, Comment I-5-1.*

**I-50: ROSEMARY MOORE**

**Comment I-50-1**

This comment provided is identical to Comment # I-5-1. Please see Comment #I-5-1.

***Response to I-50-1***

*This comment provided is identical to Comment # I-5-1. See Ecology's response to Comments # I-5-1.*

**I-51: MARY UPSHAW**

**Comment I-51-1**

We all know that there is no easy or absolutely safe way to handle the Hanford waste but some solutions are better than others. As a concerned citizen I'm pleased to read of the proposed TBI. As a resident who uses I-90 as my main route for travel and a supporter of Native American rights I believe the TBI should only go forward if the waste is shipped in a solid form. Liquid transport of waste is highly risky and therefore unethical. Thank you.

**Response to I-51-1**

*Please see Ecology's response to a similar comment on liquid waste transportation concern, Comment I-5-1.*

**I-52: AMY MOWER****Comment I-52-1**

This comment provided is identical to Comment # I-5-1. Please see Comment #I-5-1.

**Response to I-52-1**

*This comment provided is identical to Comment # I-5-1. See Ecology's response to Comments # I-5-1.*

**I-53: NANCY FREY****Comment I-53-1**

1. Do NOT ship liquid Hanford tank waste across the Columbia Basin. Only ship this waste in GROUTED/SOLID form.
2. Move forward with large-scale grouting and out-of-state disposal as soon as reasonably allowable to decrease the risk of leaking Hanford tanks on the CTUIR's treaty-protected resources."

**Response to I-53-1**

*Please see Ecology's response to a similar comment on liquid waste transportation concern, Comment I-5-1.*

**I-54: ANONYMOUS ANONYMOUS****Comment I-54-1**

This comment provided is identical to Comment # I-5-1. Please see Comment #I-5-1.

**Response to I-54-1**

*Please see Ecology's response to a similar comment on liquid waste transportation concern, Comment I-5-1.*

**I-55: SHELLEY CIMON****Comment I-55-1**

- a) Do not sign off on this permit unless it includes proven technology that can successfully address stabilization of the contaminants coming to the Utah and Texas sites and additionally, guarantees permanent disposition there. There should be no ambiguity in the permit as it needs to address the disposition.

## **Response to I-55-1**

*Thank you for your comment.*

*This RD&D Permit would authorize the on-site waste management activities (separation and pretreatment activities) for the proposed 2,000-gallon TBI Demonstration that would occur before the pretreated waste is shipped off-site. However, treatment and disposal activities at certain RCRA-permitted facilities located outside the State of Washington are not among the scope of the proposed RD&D Permit for the 2,000-gallon TBI Demonstration.*

*The Permittees explained to Ecology that DOE has communicated with the two RCRA-permitted facilities to confirm their ability to receive the TBI pretreated waste, pending final pre-shipment confirmation that the facility's respective waste acceptance criteria is met. This RD&D Permit requires the Permittees to characterize the TBI pretreated waste to verify that the waste will meet the waste acceptance criteria of the off-site permitted treatment facility as described in Section 3.2.1.*

*The Permittees explained to Ecology that the DOE contractor will work with the off-site commercial treatment facilities during the waste profiling process to:*

- (1) Ensure waste acceptance criteria are met.*
- (2) That the grout formulation will be successful.*
- (3) That no waste will be returned to Hanford.*

*Additionally, Ecology added a series of conditions under II.K to ensure that Permittees comply with Land Disposal Restriction standards prior to the land disposal of TBI pretreated waste.*

*Draft Condition II.K.5 (or Final Permit Condition II.K.4) reads, "This Permit does not authorize onsite disposal of the pretreated waste removed from SY-101. If for any reason the pretreated waste is not accepted for disposal outside the State of Washington, the Permittees shall notify Ecology prior to waste being returned to Hanford and will provide Ecology the disposition plan before allowing the waste to be returned to Hanford. The waste will remain subject to all applicable LDR standards based on the waste codes set forth in Condition II.K.1."*

*Ecology added this condition as a contingency measure to prevent the TBI pre-treated waste from becoming an orphan waste in the unlikely scenario if something goes wrong once the waste is shipped off site (e.g., waste is rejected for disposal at the out-of-state locations and it comes back to Hanford Site).*

*The Permittees explained to Ecology, in the extremely unlikely event that DOE is notified by the off-site commercial treatment facilities that a problem occurred in the treatment and disposal process, DOE would pursue resolving the problem at the off-site facility before considering returning the waste to the Hanford Site.*

## **Comment I-55-2**

b) The permit should address, in writing, that there will be no ability for this waste to come back to Hanford.

### **Response to I-55-2**

*Ecology agrees that TBI pretreated waste should not come back to Hanford site after shipped offsite for grouting and disposal at RCRA-permitted facilities outside the state of Washington.*

*The Permittees are required to characterize the TBI pretreated waste to verify that the waste will meet the waste acceptance criteria of the off-site permitted treatment facility as described in Section 3.2.1.*

*Additionally, Ecology added a series of conditions under II.K to ensure that Permittees comply with LDR standards prior to the land disposal of TBI pretreated waste.*

*Draft Condition II.K.5 (or Final Permit Condition II.K.4) reads, "This Permit does not authorize onsite disposal of the pretreated waste removed from SY-101. If for any reason the pretreated waste is not accepted for disposal outside the State of Washington, the Permittees shall notify Ecology prior to waste being returned to Hanford and will provide Ecology the disposition plan before allowing the waste to be returned to Hanford. The waste will remain subject to all applicable LDR standards based on the waste codes set forth in Condition II.K.1."*

*Ecology added this condition as a contingency measure to prevent the TBI pre-treated waste from becoming an orphan waste in the unlikely scenario if something goes wrong once the waste is shipped off site (e.g., waste is rejected for disposal at the out-of-state locations and it comes back to Hanford Site). Please also see Ecology's response to a similar comment with concerns for bounce-back waste, Comment #O-1-2.*

### **Comment I-55-3**

c) The permit should address, in writing, that once material is bound for another site there is no avenue for denying acceptance of it at the receiving site. We don't want to create an orphan waste.

### **Response to I-55-3**

*Neither this RD&D permit nor Ecology has regulatory authority to oversee the waste acceptance/consent process at the disposal facility outside the state of Washington. However, this RD&D requires the Permittees to characterize the TBI pretreated waste to verify that the waste will meet the waste acceptance criteria of the off-site permitted treatment facility as described in Section 3.2.1. Additionally, Ecology added a permit condition as a contingency measure to prevent the TBI pre-treated waste from becoming an orphan waste (See Draft Condition II.K.5 or Final Permit Condition II.K.4).*

### **Comment I-55-4**

c) The cesium loads are heavier than anticipated at the DFLAW Facility. This resulted in the necessity of multiple runs to further reduce the waste stream load. (More time, more money, more product). Lessons learned from DFLAW should be carried into the TBI initiative that address cost, time and potentially larger volumes of material.



#### **Response to I-55-4**

*After pretreatment through the ITPS, the TBI pretreated waste will be transferred to a delay tote where radiological dose-rate surveys would be performed to verify the successful removal of cesium-137 and other radionuclides. If radiological surveys do not confirm successful removal of cesium-137 and other radionuclides, the waste must return to Tank SY-101. See Section 3.7.5 of the RD&D Permit.*

#### **Comment I-55-5**

d) A bounding articulation of accident risk, in transport, should be addressed in the permit.

#### **Response to I-55-5**

*The proposed RD&D Permit authorizes the onsite waste management activities in the Hanford Site's 200 West Area before the pretreated waste is shipped offsite for grouting and disposal outside the state of Washington. This RD&D permit or Ecology does not have regulatory authority to oversee the transportation of hazardous materials/waste (e.g., mixed waste including TBI pretreated waste). Please see Ecology's response to a similar comment on liquid waste transportation concern, Comment I-5-1.*

#### **Comment I-55-6**

e) The permit should address the potential of processed waste, (grouted), failing to meet the acceptance criteria at Clive or Waste Control Specialists, where will it go?

#### **Response to I-55-6**

*The Permittees are required to characterize the TBI pretreated waste to verify that the waste will meet the waste acceptance criteria of the off-site permitted treatment facility as described in Section 3.2.1.*

*Additionally, Ecology added a series of conditions under II.K to ensure that Permittees comply with LDR standards prior to the land disposal of TBI pretreated waste. Draft Condition II.K.5 (or Final Permit Condition II.K.4) reads, "This Permit does not authorize onsite disposal of the pretreated waste removed from SY-101. If for any reason the pretreated waste is not accepted for disposal outside the State of Washington, the Permittees shall notify Ecology prior to waste being returned to Hanford and will provide Ecology the disposition plan before allowing the waste to be returned to Hanford. The waste will remain subject to all applicable LDR standards based on the waste codes set forth in Condition II.K.1."*

*Ecology added this condition as a contingency measure to prevent the TBI pre-treated waste from becoming an orphan waste in the unlikely scenario if something goes wrong once the waste is shipped off site (e.g., waste is rejected for disposal at the out-of-state locations and it comes back to Hanford Site). Please also see Ecology's response to a similar comment with concerns for bounce-back waste, Comment #O-1-2.*

#### **Comment I-55-7**

f) We have always had, at Hanford, the collective commitment to "as good as glass" – meaning that any other technology and disposition must meet the rigors of material disposition in glass. Keep this mantra on the table.

### **Response to I-55-7**

*This comment provided is similar to Comment # I-3-6. Please see Ecology's response to Comment I-3-6.*

### **Comment I-55-8**

g) Analytics of the totes should be completed on site at Hanford. Each receptor site should have a defensible treatment and disposition plan specific to the contents of each tote, prior to their leaving Hanford.

### **Response to I-55-8**

*This RD&D Permit would authorize the on-site waste management activities (separation and pretreatment activities) for the proposed 2,000-gallon TBI Demonstration that would occur before the pretreated waste is shipped off-site. However, treatment and disposal activities at certain RCRA-permitted facilities located outside the State of Washington are not among the scope of the proposed RD&D Permit for the 2,000-gallon TBI Demonstration.*

*The Permittees explained to Ecology that DOE has communicated with the two RCRA-permitted facilities to confirm their ability to receive the TBI pretreated waste, pending final pre-shipment confirmation that the facility's respective waste acceptance criteria is met. The Permittees are required to characterize the TBI pretreated waste to verify that the waste will meet the waste acceptance criteria of the off-site permitted treatment facility as described in Section 3.2.1.*

*The Permittees explained to Ecology that the DOE contractor will work with the off-site commercial treatment facilities during the waste profiling process to:*

- (1) Ensure waste acceptance criteria are met.*
- (2) That the grout formulation will be successful.*
- (3) That no waste will be returned to Hanford.*

## **I-56: KATHLEEN ALLEN**

### **Comment I-56-1**

The "Test Bed Initiative" (TBI) offers the first hope for speeding up removal of leakable liquids from High Level Nuclear waste tanks decades ahead of current plans for vitrification (glassification) and for reducing how much waste is disposed in landfills along our Columbia River at Hanford.

TBI will test if 2,000 gallons can be removed from a High Level Waste Tank, solidified and treated to be disposed at sites where there is no drinkable groundwater that can ever be contaminated (the sites are in West Texas or Utah).

The Department of Ecology has a duty under SEPA and the HEAL Act to consider and mitigate the risks from truck shipments of liquid waste by requiring that the waste is solidified and treated at the licensed facility adjacent to Hanford instead of trucking untreated liquid waste.

So why does the USDOE want to ship 2000 gallons of untreated radioactive waste as a liquid through Spokane for either 900 or 1,900 miles to be treated in Utah or Texas?

Any spill of liquids from Hanford will be an international news incident as well as putting residents and the environment at risk.

Please take necessary steps to guarantee the waste will be treated and grouted before shipment. Hanford's "Test Bed Initiative" can make a difference in REMOVING waste threatening the Columbia from Hanford for the first time! BUT we have to ensure that the waste is not trucked as a liquid.

### **Response to I-56-1**

*This comment is similar to #Comment I-5-1. Please see Ecology's response to a similar comment on liquid waste transportation concern, Comment I-5-1.*

## **I-57: RONALD SHERMAN-PETERSON**

### **Comment I-57-1**

You must not attempt to transport radioactive waste (and hazardous chemicals) in liquid form. Liquids always leak, and any leakage of radioactive waste along a transportation route is intrinsically catastrophic. Radioactive waste must be converted to solid form before transportation or any form of disposal. Risk is determined by two factors: the percentage that represents the probability of the occurrence of the event times the potential cost of the event. If the potential cost is catastrophic, then any probability, even a low probability, is unacceptable. I would like to add that I understand that the proposed transportation route crosses indigenous territory. I do not want us to treat indigenous peoples this way, in addition to all the trauma already caused to them by us settler colonial peoples.

### **Response to I-57-1**

*This comment is similar to #Comment I-5-1. Please see Ecology's response to a similar comment on liquid waste transportation concern, Comment I-5-1.*

## **I-58: DEEJAH SHERMAN-PETERSON**

### **Comment I-58-1**

Liquids easily leak. This tank waste must be shipped in solid form. The test should be for solid waste only, given that all liquid waste should be solidified before being shipped.

The U.S. Dept. of Energy acknowledges that there is a risk of one "accidental crash" for a truck with these wastes every 884 shipments from Hanford to Texas. The proposal is to ship thousands of shipments of this waste so, statistically, there will probably be many "accidental crashes."

Therefore, perform the test run of 2,000 gallons in the form of solid waste so you are testing the safer method of shipping this waste. Do NOT take even the smallest chance of further polluting the lands and waters along the route to Texas or Utah!

## **Response to I-58-1**

*This comment is similar to #Comment I-5-1. Please see Ecology's response to a similar comment on liquid waste transportation concern, Comment I-5-1.*

## **I-59: JEAN SCHWINBERG**

### **Comment I-59-1**

Ecology should not permit the US Department of Energy(USDOE) to truck untreated liquid wastes from Hanford's High Level Nuclear Waste tanks through Spokane or across Oregon and the Umatilla Indian Reservation.

Instead, it would be better to move forward with the test to remove and treat 2,000 gallons from Hanford's tanks for disposal offsite in licensed facilities where the waste does not create any risk to groundwater. Ecology has a duty to consider and take mitigation action to prevent the risk from a truck accident in Spokane or anywhere on the 900-1,900 mile truck routes. This is an environmental justice issue, as well as. a risk to the Spokane River.

I agree with the Umatilla Tribe whose Chair wrote to USDOE: "The current plan to transport waste in liquid form poses for us an unacceptable risk of spills and harm to the environment, First Foods, and our citizens. The current proposal is especially disappointing given that shipping waste in a grouted, immobile, solid form is a viable and much safer option.

"To be clear, the CTUIR requests the following:

1. Do NOT ship liquid Hanford tank waste across the Columbia Basin. Only ship this waste in GROUTED/SOLID form.
2. Move forward with large-scale grouting and out-of-state disposal as soon as reasonably allowable to decrease the risk of leaking Hanford tanks on the CTUIR's treaty-protected resources."

USDOE agree not to truck the waste through Oregon and the Umatilla Reservation. The Umatilla Tribe has continued to advocate that liquid wastes should be trucked at all when there is a licensed facility that can solidify and treat the waste next door to Hanford, thus avoiding trucking wastes through Spokane on I-90 for 900 miles to Utah or 1,900 miles to Texas for disposal.

It would be best for 2,000 gallons of waste to proceed, but if it succeeds, there will be thousands of shipment. Ecology has an obligation under SEPA and the HEAL Act to consider and mitigate the risks from through low-income communities in Spokane or on Indian Reservations by requiring that the waste is solidified and treated the the licensed facility adjacent to Hanford instead of trucking untreated liquid waste. Any spill of liquids from Hanford would put residents and the environment at risk.

USDOE did not even consider risks from the chemical in the liquid wastes and acknowledges that there is risk of one accidental crash for a truck with wastes ever 884 shipment from

Hanford to Texas. That is too high a risk to go without Washington requiring that the waste be solidified before being trucked through Spokane or Oregon and the Umatilla Reservations.

### **Response to I-59-1**

*This comment is similar to #Comment I-5-1. Please see Ecology's response to a similar comment on liquid waste transportation concern, Comment I-5-1.*

## **I-60: NANCY MORRIS**

### **Comment I-60-1**

The Test Bed Initiative (TBI) offers the opportunity to remove leakable liquids from tanks that are leaking today or are likely to start leaking soon. I have observed these serious issues for over several decades and finally hope for positive action from the Department of Ecology and Governor Inslee before another decade passes and more toxic nuclear waste leaks from these tanks. But it has to be done safely by only trucking solid, treated waste with very low radioactivity – not trucking untreated liquids through Spokane and other vulnerable communities and Indian Reservations.

Hanford's groundwater and the Columbia River will be contaminated for thousands of years if all the waste that is currently planned to be removed from Hanford's tanks is disposed in landfills onsite. So it is imperative that the TBI be done with the highest technical standards and safety so there is a viable way forward to remove toxic nuclear waste.

Therefore Ecology should not permit the US Department of Energy (USDOE) to truck untreated liquid wastes from Hanford's High Level Nuclear Waste tanks through Spokane or across Oregon and the Umatilla Indian Reservation.

I strongly support moving forward with the test to remove and treat 2,000 gallons from Hanford's tanks for disposal offsite in licensed facilities where the waste does not create any risk to groundwater; Ecology has a duty to consider and take "mitigation" action to prevent the risk from a truck accident in Spokane or anywhere on the 900-1,900 mile truck routes. This is an environmental justice issue as well as a risk to the Spokane River.

I agree with the Umatilla Tribe whose Chair wrote to USDOE: "The current plan to transport waste in liquid form poses for us an unacceptable risk of spills and harm to the environment, First Foods, and our citizens. The current proposal is especially disappointing given that shipping waste in a grouted, immobile, solid form is a viable and much safer option.

"To be clear, the CTUIR requests the following:

1. Do NOT ship liquid Hanford tank waste across the Columbia Basin. Only ship this waste in GROUTED/SOLID form.
2. Move forward with large-scale grouting and out-of-state disposal as soon as reasonably allowable to decrease the risk of leaking Hanford tanks on the CTUIR's treaty-protected resources."

USDOE agreed not to truck the waste through Oregon and the Umatilla Reservation. Unselfishly, the Umatilla Tribe has continued to advocate that liquid wastes should not be

trucked at all when there is a licensed facility that can solidify and treat the waste next door to Hanford and avoid trucking wastes through Spokane on I-90 for 900 miles to Utah or 1,900 miles to Texas for disposal.

I want the test for 2,000 gallons of waste to proceed. But if it succeeds there will be thousands of shipments. Ecology has a duty under SEPA and the HEAL Act to consider and mitigate the risks from truck shipments through low income "overburdened" communities in Spokane or on Indian Reservations by requiring that the waste is solidified and treated at the licensed facility adjacent to Hanford instead of trucking untreated liquid waste.

Any spill of liquids from Hanford will be an international news incident as well as putting residents and the environment at risk.

USDOE did not even consider risks from the chemicals in the liquid wastes and acknowledges that there is a risk of one "accidental crash" for a truck with these wastes every 884 shipments from Hanford to Texas. That is too high a risk to go without Washington requiring that the waste be solidified before being trucked through Spokane or Oregon and the Umatilla Reservation. To reiterate the Test Bed Initiative (TBI) offers the opportunity to remove leakable liquids from tanks that are leaking today or are likely to start leaking soon.

### ***Response to I-60-1***

*This comment is similar to #Comment I-5-1. Please see Ecology's response to a similar comment on liquid waste transportation concern, Comment I-5-1.*

### **I-61: JAMES BURKE**

#### **Comment I-61-1**

This comment provided is identical to Comments # I-3-1 through #1-3-6.

#### ***Response to I-61-1***

*This comment provided is identical to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and #O-1-2.*

### **I-62: ANNE MULHERKAR**

#### **Comment I-62-1**

This comment provided is identical to Comments # I-3-1 through #1-3-5.

#### ***Response to I-62-1***

*This comment provided is identical to Comments # I-3-1 through #1-3-5. See Ecology's responses to Comments # I-3-1 through # I-3-5 and #O-1-2.*

#### **Comment I-62-2**

-KEEP THE FOCUS ON VIT: Grout does not meet the "as-good-as-glass" criteria. Please keep the focus on vitrifying tank waste and wait to press go on any alternative tank waste immobilization forms that do not meet the "as-good-as-glass" criteria.

I am particularly concerned about the fact that grout does not meet the "as-good-as-glass" criteria. Please keep the focus on vitrifying tank waste -- and wait to proceed with alternative tank waste immobilization forms that do not meet the "as-good-as-glass" criteria.

### **Response to I-62-2**

*This comment provided is identical to Comments # I-3-1 through #1-3-5. See Ecology's responses to Comments # I-3-1 through # I-3-5 and #O-1-2.*

## **I-63: CAROLINE BRYANT**

### **Comment I-63-1**

This comment provided is identical to Comments # I-3-1 through #1-3-6.

### **Response to I-63-1**

*This comment provided is identical to Comments # I-3-1 through #1-3-6. See Ecology's responses to Comments # I-3-1 through # I-3-6 and #O-1-2.*

## **O-1: HANFORD CHALLENGE**

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

**Ensure Toxic Vapor Protections:** Add permit conditions that require protection for workers from toxic chemical vapor exposure consistent with the terms and conditions of the Vapor Lawsuit Settlement Agreement.

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

*This comment provided is identical to Comment # I-3-1. See Ecology's response to Comments # I-3-1.*

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

**Add Detail About Disposition Plan for Bounce-Back Waste:** Add detail to the permit about the disposition plan that Ecology is requiring USDOE to provide in the event that waste that was shipped to the offsite facilities is sent back to Hanford. In a conversation with Ecology, we learned that the Treatability Variance would prohibit disposal of any grouted waste at the Hanford site. Please include a reference in the permit to how the Treatability Variance addresses concerns about disposal of waste that has already been mixed with grout and does not meet the requirements for shallow burial at the offsite facilities. Is it accurate to say that once the waste has been mixed with grout, it is the responsibility of the offsite facility?

- “This permit does not authorize on-site disposal of the pretreated waste removed from SY-101. If for any reason the pretreated waste is not accepted for disposal outside the State of WA, the Permittees shall notify Ecology prior to waste being returned to Hanford and will provide Ecology the disposition plan before allowing the waste to be returned to Hanford. The waste will remain subject to all applicable LDR standards base on the waste codes set forth in Permit Condition II.K.1” Permit Condition II.K.5 (p.20)

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

*The Permittees are required to characterize the TBI pretreated waste to verify that the waste will meet the waste acceptance criteria of the off-site permitted treatment facility as described in Section 3.2.1. Ecology added a series of conditions under II.K to ensure that Permittees comply with Land Disposal Restriction standards prior to the land disposal of TBI pretreated waste.*

*Draft Condition II.K.5 (or Final Permit Condition II.K.4) reads, "This Permit does not authorize onsite disposal of the pretreated waste removed from SY-101. If for any reason the pretreated waste is not accepted for disposal outside the State of Washington, the Permittees shall notify Ecology prior to waste being returned to Hanford and will provide Ecology the disposition plan before allowing the waste to be returned to Hanford. The waste will remain subject to all applicable LDR standards based on the waste codes set forth in Condition II.K.1."*

*Ecology added this condition as a contingency measure to prevent the TBI pre-treated waste from becoming an orphan waste in the unlikely scenario if something goes wrong once the waste is shipped off site (e.g., waste is rejected for disposal at the out-of-state locations and it comes back to Hanford Site). In such scenarios*

- DOE would need to apply for and obtain permit coverage to dispose of the TBI waste at Hanford, since that is currently not authorized. This would require Ecology's approval and would also be subject to public comment (and appeal).*
- Because this condition provides that the returned waste would remain subject to all applicable LDR standards based on the waste codes in II.K.1, it would once again be subject to HLWIT (no longer covered by EPA's variance) as well as the state-only LDR standard for "extremely hazardous waste." This means that it would need to be processed through the LAW vit plant in order to be disposed of in IDF; or it would require an Ecology-issued variance (from HLWIT and the state-only standard for EHW).*
- In addition, as part of the Holistic Negotiations settlement undergoing public comment, DOE and Ecology have proposed conditions in a Tri-Party Agreement change request that, if finalized, will apply to disposal of all grouted Hanford low-activity waste from 200 West Area SSTs. These conditions include stipulations that all such waste will be disposed of at facilities outside the contiguous borders of the Hanford Nuclear Reservation and that no such waste will be disposed of within the contiguous borders of the Hanford Nuclear Reservation. Although these proposed conditions are subject to public comment and not yet final, the parties have agreed in the interim to "conduct their affairs in a manner consistent with the proposed change requests."*

*Ecology expects that a disposition plan could include returning the waste back to Tank SY-101 if still in liquid state, or resolving at one of the two RCRA-permitted off-site treatment and disposal facilities specified in the Treatability Variance issued by EPA. However, Ecology believes a detailed disposition plan to address uncertainties and path forwards for when and how orphan waste could possibly be returned to Hanford in the unlikely scenario is not necessary at the issuance of RD&D Permit beyond the permit condition. Ecology believes that once the waste has*



been treated at the offsite RCRA-permitted facility, it is still the responsibility of both the off-site facilities and USDOE in accordance with the treatability variance.

For final issuance, Ecology decided to revise three LDR permit conditions (Draft Conditions II.K.2 through II.K.4) to add clarity by referencing the final treatability variance, which became effective upon issuance by EPA on May 1, 2024. Specific changes are as follows;

- In Condition II.K.2, Ecology incorporated the final treatability variance by reference into the permit, to read, "The Permittees may satisfy one or more applicable LDR standard(s) for pretreated waste disposed outside the State of Washington in accordance with an approved variance from the EPA (effective May 1, 2024<sup>3</sup>), incorporated by reference."
- In Condition II.K.3, Ecology deleted the language, "If EPA approves a variance from one or more applicable LDR standard(s) as described in Permit Condition II.K.2 before the effective date of this Permit," as it is not necessary with EPA's final treatability variance already issued on May 1, 2024. After revision, Condition II.K.3 reads, "The Permittees must comply with all conditions and requirements of the approved variance related to on-site waste management activities conducted pursuant to this Permit."
- Draft Condition II.K.4 reads, "If EPA proposes to approve a variance from one or more applicable LDR standard(s) as described in Permit Condition II.K.2 but does not approve such a variance before the effective date of this Permit, the effective date of this Permit will be delayed to the effective date of EPA's approved variance." Ecology deleted this condition as EPA already issued the final treatability variance before issuance of this permit and there is no need to retain this condition.

### **Comment O-1-3**

**Clarify Footnote 7 on p.34 of the Permit Section 4.2.1:** Please update the permit language to explain this footnote. Does this footnote have to do with grout formulas? Please also explain what the difference is between taking a sample from each process tote vs. composite sampling?

- "In the event sampling each process tote does not meet the off-site treatment facility waste profile needs, a composite sampling approach will be developed. Data quality objectives to support the laboratory preparatory method work in Section 4.2.2 may drive additional sampling considerations."

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

Footnote 7 is about characterization of the pretreated TBI waste prior to offsite shipment, and it is not about the grout formulas at the off-site treatment facility. One of the Project Objectives (Objective #5 in Section 1.5) reads, "Demonstrate improvements to laboratory method detection limits for LDR organic constituents through use of a new sample preparatory method" (i.e., Stir Bar Sorptive Extraction).

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<sup>3</sup> <https://www.federalregister.gov/documents/2024/05/01/2024-08937/department-of-energy-hanford-mixed-radioactive-waste-land-disposal-restrictions-variance>

*Footnote 7 was added to note an unknown and unlikely scenario when a larger sample size would be needed to achieve the necessary characterization data.*

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

**Update Permit section 3.7.5 (p.27):** This section of the permit includes a list of reasons waste from process totes might be returned to the tank. Why does this section not include a bullet point about waste from process totes returning to tank SY-101 if sampling results don't comply with requirements? Please update this section to include this potential reason for waste returning to the tank.

#### **Response to O-1-4**

*Waste from process totes will be returned to tank SY-101 if sampling results don't comply with the receiving facilities' waste acceptance requirements. Off-site shipping cannot be accomplished if the pretreated waste doesn't meet the receiving facility's waste acceptance requirements and/or if it doesn't meet the USDOT shipping requirements. Therefore, Ecology believes that this reason for returning the pretreated waste back to Tank SY-101 is already included in the second bullet in Section 3.7.5, which reads, "Off-site shipment cannot be accomplished". Additionally, Ecology will be notified if any situation arises which requires returning the pretreated waste to Tank SY-101 per Permit Condition II.A.1.*

#### **Comment O-1-5**

**Add a Section on Grout Failure:** Please add a section to the permit that clarifies what constitutes failure for grout. This is not clear in the permit as written and it would be extremely helpful to know how this is being defined even if failure is not anticipated.

#### **Response to O-1-5**

*This RD&D Permit would authorize the on-site waste management activities (separation and pretreatment activities) at the Hanford site for the proposed 2,000-gallon TBI Demonstration that would occur before the pretreated waste is shipped off-site. This RD&D permit does not have regulatory authority to oversee the treatment or defining "successful treatment" at the RCRA-permitted facilities outside the state of Washington.*

*However, Ecology expects that any applicable information be included in the final report as required in Condition II.G.3. As discussed in Section 6.3 of the RD&D Permit, the final report should include sufficient information and data to allow evaluation against project objectives, including Objectives 3 and 4 listed in Section 1.5, which reads, "Evaluate and determine that the waste, upon final treatment off-site, can meet land disposal restrictions (LDRs) (40 Code of Federal Regulations [CFR] 268, incorporated by reference by WAC 173-303-140) for mixed waste when disposed at an off-site permitted facility." "Demonstrate that concentrations of LDR organic constituents below LDR universal treatment standards can be successfully treated through stabilization/solidification technology without organic pretreatment.*

*That final report, placed in the operating record, should be available through Hanford AR and can be requested at the Ecology Office.*

## Comment O-1-6

**Clarify Sampling Procedure:** Clarify the language in the permit about whether it is one discrete sample per tote or two 250 ml samples per tote (and four 250ml samples for the final tote filled). The following references from the Data Quality Objectives (DQO) Sampling Plan and the Sampling and Analysis Plan (SAP) Sampling Plan include the contradictory language:

### DQO Sampling Plan

- (p.24) 7.0 STEP 6 – SPECIFY PERFORMANCE OR ACCEPTANCE CRITERIA “However, the project has chosen to implement a judgmental approach to sampling by simply specifying **at least one discrete sample from each tote.**”

### SAP Sampling Plan

- (p.6) 4.2 SAMPLE COLLECTION “Sampling will occur after the last process tote is filled. RPP-RPT-61636 specifies **at least one discrete sample from each process tote**”
- (p.6) 4.2 SAMPLE COLLECTION “HLMI has indicated the suite of analysis required by RPPRPT-61636 will require approximately 250 mL, and another 250 mL will be required to support sorptive stir bar analytical method development, therefore, **two 250 mL samples of pretreated SY-101 supernatant must be collected from each tote.** Suffixes ‘A’ and ‘B’ will be used to distinguish replicate samples for each tote. Process tote samples will be obtained using 250-mL sample bottles that, when approximately 90 percent or more full, will provide sufficient material for all required analyses.”

## Response to O-1-6

*This comment provided is the same as Comment # I-3-3. See Ecology's response to Comments # I-3-3.*

## Comment O-1-7

**Address Potential Fire Risk from Electric Blankets:** At the public meeting about the permit on March 20th, the speaker for USDOE was not aware of the plan to use electric blankets around the totes to prevent freezing and directed us to submit our question about this as a comment. Please address in the permit the potential fire risk from electric blankets, as described in the Independent Qualified Registered Professional Engineer (IQRPE) Design Assessment Report on page 35. We appreciate that Ecology worked with USDOE to track down an answer to our question about the fire risk from electric blankets. The answer we received in an email from Ecology on April 9th would be helpful information to include in the permit.

"The totes themselves are designed to ensure containment and shielding is maintained during transportation and storage for a temperature range of -40 to 158 degrees F in accordance with CFR 173.412. There is no nearby combustible material for the blankets to ignite. The blankets sit directly on top of the non-combustible steel totes and the blankets do not produce enough heat to overheat the pretreated waste. The function of the electric heat blankets are to help reduce precipitate formation in the pretreated waste prior to sampling. The electric heat blankets are ETL/CSA Certified, which means that they have been independently evaluated for

conformance to strict safety standards including fire safety. They have an internal thermostat with redundant thermometers to ensure the temperature is maintained within the desired range. The controller for each blanket is designed to automatically cut power to the blanket if it detects a temperature that exceeds the set point. This style of heat blanket is used throughout the oil and gas and chemical manufacturing industries."

**Response to O-1-7**

*Ecology views the information on the electric blanket as good information. To clarify, however, the totes are designed as described in the IQRPE report and are steel. The electric blankets do not produce enough heat to compromise the totes or to overheat any waste within the totes. Ecology has, however, requested of the Permittees that they add the suggested language into the IQRPE installation assessment report, as it is viewed that the IQRPE report is the more appropriate and applicable location for that supplemental information. The report is required to be submitted to Ecology for approval prior to commencing the 2,000-gallon TBI demonstration operation in accordance with Permit Condition IV.A.2.e. The IQRPE report will be made available in the Hanford Administrative Record.*

**Comment O-1-8**

**Clarify Radiological Dose Rate Survey:** We were directed to include this question in our comments as USDOE presenters were unable to answer it during the public meeting about the permit on March 20th. Can you explain how the delay tote radiological dose rate survey works and what would cause the waste to be sent back to tank SY-101? Is this test done each time the delay tote is filled? Please add language to explain this more clearly in the permit. The process is first mentioned on page 25 section 3.7 and page 26 section 3.7.3 of the permit.

**Response to O-1-8**

*The first sentence in the Second paragraph in Section 3.7 reads, "Once radiation levels are verified, the pretreated waste will be pumped from the delay tote to one of six 375-gallon process totes." Radiological dose rate survey will be conducted each time the delay tote is filled.*

**Comment O-1-9**

**Clarify Consent-Based Process:** Require an attachment to the permit that includes information about how broad-based, full, free, prior, and informed consent has been achieved for offsite disposal and transportation routes.

**Response to O-1-9**

*This comment provided is similar to Comment # I-3-5. Please see Ecology's response to Comment I-3-5.*

**Comment O-1-10**

**Keep the Focus on Vit:** Grout does not meet the "as-good-as-glass" criteria. Please keep the focus on vitrifying tank waste and wait to press go on any alternative tank waste immobilization forms that do not meet the "as-good-as-glass" criteria.

### **Response to O-1-10**

*This comment provided is the same as Comment # I-3-6. Please see Ecology's response to Comment I-3-6.*

### **Comment O-1-11**

**Improve the Public Process:** In the future, please provide a high-level overview of the cleanup work the administrative tool (permit) is planned to facilitate and how that tool protects the environment, workers, and the public, instead of overly focusing on the administrative tool itself. Remember that the general public is unlikely to read the documents and is instead relying on the public meeting for information to formulate their comments. Please set an expectation that USDOE and contractor staff provide answers to questions instead of directing attendees to submit their questions as a comment. Questions are meant to help attendees understand the issue so they can write informed comments. How are attendees supposed to write informed comments to influence the decision-making process if that information is not provided? Please note that answers do not need to be highly technical, but rather provide clarity in plain language about the work being planned, not just the administrative framework in which that work takes place. We appreciate that Ecology worked with USDOE to track down answers to two of our outstanding questions about the TBI budget and fire risk from electric blankets.

### **Response to O-1-11**

*This comment provided is similar to Comment # I-3-4. See Ecology's response to Comments # I-3-4.*

### **Comment O-1-12**

**Require Transparency with the Public:** If the solution to the complex chemistry of Hanford's pretreated tank waste is to increase the grout to waste ratio (more grout, less waste), how does this impact total grouted waste volumes, which are already significantly more compared to a glassified waste form? Please add a permit condition that requires USDOE to share information with the public about the grout to waste ratios as this test is conducted. We are concerned that the test will be touted as a success, even if higher grout to waste ratios are needed at the treatment/disposal facilities. If higher grout to waste ratios are needed, this could dramatically increase the cost of disposal. We urge USDOE and Ecology to be transparent with the public about the specifics of how much grout is needed to successfully solidify the liquid waste from this test and how this impacts cost projections for any future use of grout as a disposal medium.

### **Response to O-1-12**

*The proposed RD&D Permit authorizes the onsite waste management activities in the Hanford Site's 200 West Area before the pretreated waste is shipped offsite for grouting and disposal outside the state of Washington. This draft permit limits the pretreatment to up to 2,000 gallons onsite, and does not regulate any offsite waste management activities.*

*Grouting of the pretreated TBI waste outside the scope of the proposed RD&D Permit. However, as a nature of research development and demonstration project, Ecology expects to learn about the performance of grouting the pretreated TBI waste in the Final Report as required in Condition II.G.3.*

*"Upon completion of the 2,000-gallon TBI Demonstration, a final report will be prepared to evaluate the performance of the experimental test that was conducted", as explained in Section 6.3 and required per Condition II.G.3.*

*As discussed in Section 6.3, the final report should include sufficient information and data to allow evaluation against project objectives, specifically Objectives 3 and 4 listed in Section 1.5, which read,*

*"Evaluate and determine that the waste, upon final treatment off-site, can meet land disposal restrictions (LDRs) (40 Code of Federal Regulations [CFR] 268, incorporated by reference by WAC 173-303-140) for mixed waste when disposed at an off-site permitted facility."*

*"Demonstrate that concentrations of LDR organic constituents below LDR universal treatment standards can be successfully treated through stabilization/solidification technology without organic pretreatment."*

*That final report, placed in the operating record, should be available through Hanford AR and can be requested at the Ecology Office.*

*Ecology is aware that the grout to waste ratio is an important component for a future grout decision for Hanford low-activity waste from 200 West Area. Ecology expects full transparency concerning all facets of the demonstration process, and that all facets of the demonstration process be made available to the public.*

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

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

Ecology must commit to:

1. requiring mitigation of the potential risk from trucking thousands of shipments of liquid waste by requiring the waste to be solidified and treated at a licensed facility that has demonstrated it can perform the treatment with just 1.2 miles of transport on public roadway rather than thousands of truck shipments going 900 or 1,900 miles on public roads, including through Spokane;
2. issue a Mitigated Determination of Non Significance (MDNS) imposing conditions for the liquid waste to be solidified and treated at the closest licensed available facility, which is just 1.2 miles away from Hanford, rather than trucking liquids through Spokane for 900 or 1,900 miles;
3. analyze the potential impacts and risks from trucking mixed radioactive and chemical wastes through Spokane.
4. consider and avoid increasing the potential harm already imposed on the low income, overburdened and highly impacted communities in Spokane and on Tribal Reservations if liquid wastes are trucked through Spokane or the CTUIR Reservation, as required by the Washington HEAL Act and SEPA

5. consider and mitigate the potential impacts from a truck accident involving the chemical hazardous wastes present in untreated tank waste liquids, which USDOE failed to consider in its Environmental Assessment;

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

*Thank you for your comment.*

*Ecology issued the draft RD&D Permit after reviewing and incorporating the RD&D Permit application submitted from the Permittees to authorize the proposed 2,000-gallon TBI Demonstration. The other RCRA-permitted treatment and storage facility, located 1.2 miles away from Hanford site, was not proposed in the permit application for Ecology to review for the development of draft permit. Please see Ecology's response to a similar comment on liquid waste transportation concern, Comment I-5-1.*

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

Ecology has to revise the permit to allow for the ITPS pump arm to be used to extract liquid waste from Tank SY-101 or to be deployed in another tank rather than requiring it to be removed after only the 2,000 gallon test quantity is removed.

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

*Ecology issued the draft RD&D Permit after reviewing and incorporating the RD&D Permit application from the Permittees to authorize the proposed 2,000-gallon TBI Demonstration. Possible re-use of the ITPS after the 2,000-gallon Demonstration was not among the proposals in the RD&D permit application. In accordance with WAC 173-303-809 (c), the draft permit includes the closure plan (Section 7.0) requiring clean closure of the aboveground system and container storage areas and removal of ITPS as necessary to protect human health and environment.*

## **O-3: COLUMBIA RIVERKEEPER**

### **Comment O-3-1**

The Test Bed Initiative (TBI) continues to raise serious red flags as a potential detour in the effort to vitrify tank waste, and the Waste Incidental to Removal (WIR) does not adequately address questions about WIR approval criteria, including: the removal of key radionuclides, the performance of waste throughout the process and disposition, the consequences if grout does not form in the manner expected or fails to fully immobilize the liquid supernatant waste in a solid form, and the consequences if the grouted waste is not accepted at the offsite disposal facility.

Columbia Riverkeeper continues to support the vitrification of tank waste, both as the legal path for the disposition of high level waste and as the most stable form of long-term disposal of tank waste. In previous comments submitted on February 1, 2022 Columbia Riverkeeper raised serious concerns about the Draft WIR evaluation that was done for the TBI. Those comments also included current concerns about the scale up to the TBI from Phase I (3 gallons) to Phase II (2,000) gallons that are still relevant today. We incorporate those comments by reference. We

also incorporate the comments submitted by Hanford Challenge on April 25, 2024 by reference as well.

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

*Thank you for your comment.*

*Ecology has the authority to regulate dangerous waste and the dangerous waste components of mixed (radioactive and dangerous) waste, under 70.105 Revised Code of Washington (RCW) and WAC 173-303. This RD&D Permit has requirements for on-site waste management activities (separation and pretreatment activities) at the Hanford site for the proposed 2,000-gallon TBI Demonstration that would occur before the pretreated waste is shipped off-site. However, Ecology does not regulate waste that is solely radioactive. USDOE has the exclusive authority to regulate radioactive materials and radioactive waste, including the WIR process and determination.*

*This RD&D Permit include contingency measures to prevent the TBI pre-treated waste from becoming an orphan waste by:*

- *Requiring the Permittees to characterize the TBI pretreated waste to verify that the waste will meet the waste acceptance criteria of the off-site permitted treatment facility as described in Section 3.2.1.*
- *A permit condition as a contingency measure to prevent the TBI pre-treated waste from becoming an orphan waste in the unlikely scenario if something goes wrong once the waste is shipped off site (Draft Permit Condition II.K.5/Final Permit Condition II.K.4). Please see Ecology's comment to Comment O-1-2 for the concern for orphan waste after pretreatment.*

*Ecology does not agree that this RD&D Permit for the 2,000-gallon TBI Demonstration would lead to a potential detour in the current effort to vitrify tank waste through DFLAW. Please see Ecology's comment to Comment I-3-6 related to vitrification.*

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

Comments submitted by Hanford Challenge raised several issues that are supported by a recent DNFSB report. The report

(<https://www.dnfsb.gov/sites/default/files/document/30366/Hanford%20Week%20Ending%20March%2029%202024.pdf>) reads

*“A resident inspector observed an event investigation of a spill that occurred while disconnecting a hose from a waste- water tote. The work evolution involved gravity-draining liquid from a tote through a 2-inch line into Double Shell Tank SY-102. When the operator disconnected the hose from the tote, approximately 2 – 3 ounces of liquid spilled out. The investigation determined that pipe-stands used to support the hose connection to the tote prevented residual liquid from draining, and the work instruction did not specify removal of the pipe-stands prior to disconnecting the drain hose. Additionally, no catch container with absorbent material was used.”*



This report underscores that liquids are prone to leaking and the hose system used to fill the TBI totes may also leak. It is unclear if the liquid spilled in this report was waste or if it was directly spilled onto the ground.

### **Response to O-3-2**

*This Permit requires that on-site waste management activities (separation and pretreatment activities) at the Hanford site for the proposed 2,000-gallon TBI Demonstration comply with the secondary containment and leak detection requirements in accordance with WAC 173-303-630 and WAC 173-303-640. See Section 3.3.1 of the Permit for the discussion on spill prevention and secondary containment applicable to the proposed 2,000-gallon TBI Demonstration.*

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

The future of Hanford depends on the cleanup decisions made today. The Hanford Reach, is an ecologically and environmentally unique and endangered ecosystem in our region, a refuge for rare species, a hub of biodiversity, and the best mainstem spawning for Chinook salmon. It's home to many species, like the White Bluffs Bladderpod, only found in this area. Native people have used this area since time immemorial for living, fishing, hunting, gathering, and ceremony with many sacred sites that are now off-limits because of the pollution at Hanford. Thousands of people get their drinking water from the Columbia River downstream of Hanford and thousands more rely on this lifeblood of our region. Hanford's tank waste poses one of the most complex problems to clean up and plumes of groundwater emanating from the tanks, moving towards and in some instances reaching the Columbia River. Pursuing cost-cutting, least effective cleanup routes in an effort to make interim progress is not appropriate cleanup that is protective of future uses. Columbia Riverkeeper continues to advocate for a clean up of Hanford that is thorough and just.

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

*Risk assessments in DOE's 2012 Tank Closure and Waste Management Environmental Impact Statement<sup>4</sup> showed there will be an unacceptable impact to groundwater at Hanford if grouted low-activity tank waste is disposed of onsite. For this reason, Ecology believes that any treatment of Hanford's low activity tank waste for disposal at Hanford must be vitrification.*

*Ecology supports this proposed 2,000-gallon TBI Demonstration, which could be the demonstration of a valid path to final appropriate disposal of grouted low-activity tank waste at off-site facilities with particularly protective geologic features and without the groundwater contamination concerns we have here at Hanford and in Washington State. Successful deployment of ITPS for separation and pretreatment at Hanford and off-site disposition of low-activity tank waste could support critical needs for the tank waste mission, such as mitigation of DST space limitations in the SY Tank Farm, and accelerated timelines for retrieval of waste from tanks in the 200 West Area.*

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<sup>4</sup> <https://www.hanford.gov/page.cfm/FinalTCWMEIS>

## **O-4: HANFORD COMMUNITIES**

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

#### **REQUESTED CLARIFICATIONS**

To effectively address questions we have heard from the public, Hanford Communities urges clarity and expansion on the matters listed below. If any of these questions are outside the scope of this permit, at a minimum we suggest stating what the process will be for making those determinations, and sharing where additional information can be found.

1. Comprehensive description of the “totes” that are planned for transporting the SLAW, including physical size and weight, along with any relevant testing/certifications of the containers.

#### **Response to O-4-1**

*Thank you for your comment.*

*The proposed RD&D Permit authorizes the onsite waste management activities in the Hanford Site's 200 West Area before the pretreated waste is shipped offsite for grouting and disposal outside the state of Washington. A large-scale grouting and out-of-state disposal beyond the 2,000-gallon Demonstration (e.g., SLAW) is outside the scope of this RD&D Permit.*

*The RD&D Permit is categorically exempt from requirements under the State Environmental Policy Act (SEPA), per WAC-197-11-800(17). USDOE prepared a National Environmental Policy Act (NEPA) Environmental Assessment in 2023 to analyze potential environmental impacts associated with shipping.*

*Should large scale grouting and out-of-state disposal beyond this RD&D Permit coverage be proposed, Ecology is committed to consider any comments in the appropriate time for the future agency action. At a minimum, for any future large-scale project beyond this current proposal, Ecology expects DOE to prepare EIS Addendum with public participation/involvement. Ecology is also required to evaluate the impact through SEPA. For the 2,000-gallon TBI Demonstration, the Permittees explained to Ecology that "the process totes are commercially available USDOT compliant Type A packages from the Container Products Corporation® (LQ-375<sup>5</sup>).*

#### **Comment O-4-2**

2. Consider using a term other than “tote” to describe the container that the SLAW would be shipped in. While it may be technically accurate, the term is often associated with grocery bags, etc., which diminishes the credibility of the container.

#### **Response to O-4-2**

*Please see Ecology's response to Comment #O-4-1 on a large-scale grouting and out-of-state disposal beyond the RD&D Permit coverage.*

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<sup>5</sup> <https://c-p-c.net/products/containers/liquid-containers/>

### **Comment O-4-3**

3. Description of how the totes will be packaged, including how many would be loaded on a truck, how many shipments are planned, and what the transportation routes will be.

#### **Response to O-4-3**

*Please see Ecology's response to Comment #O-4-1 on a large-scale grouting and out-of-state disposal beyond the RD&D Permit coverage.*

*For the 2,000-gallon TBI Demonstration, the Permittees explained to Ecology that "when ready to be shipped, the process totes will be loaded on a truck for transport to the off-site commercial treatment facilities. Transport will be done in compliance with USDOT requirements and standard best management practices. One shipment of 3 process totes will be sent to each off-site commercial treatment facility."*

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

4. Analysis of any potential increased or decreased risks to worker safety and public health associated with grouting compared to vitrification.

#### **Response to O-4-4**

*Please see Ecology's response to Comment #O-4-1 on a large-scale grouting and out-of-state disposal beyond the RD&D Permit coverage.*

### **Comment O-4-5**

5. Comparison of how Hanford's SLAW compares to other materials that are transported on public roadways, particularly as it relates to risk and worst-case scenario impacts to public health and the environment.

#### **Response to O-4-5**

*Please see Ecology's response to Comment #O-4-1 on a large-scale grouting and out-of-state disposal beyond the RD&D Permit coverage.*

### **Comment O-4-6**

6. Analysis of the potential for higher radioactivity levels "settling" to the bottom of totes during transport, thus leading to dose rate measurements on the lower portion of the package exceeding 49 CFR 173 dose limits.

#### **Response to O-4-6**

*Please see Ecology's response to Comment #O-4-1 on a large-scale grouting and out-of-state disposal beyond the RD&D Permit coverage.*

*For the 2,000-gallon TBI Demonstration, the Permittees explained to Ecology that transportation will be done in compliance with USDOT requirements and standard best management practices.*

## **Comment O-4-7**

7. Description of the actions that would be taken if a package does not meet the Waste Acceptance Criteria of a receiving facility.

### **Response to O-4-7**

*Prior to shipping offsite, the Permittees are required to characterize the TBI pretreated waste to verify that the waste will meet the waste acceptance criteria of the RCRA-permitted facilities outside the state of Washington as described in Section 3.2.1.*

*The second bullet in Section 3.7.5 reads, "Off-site shipment cannot be accomplished" as a reason for the pretreated waste returning back to Tank SY-101. Waste from process totes will be returned to tank SY-101 if sampling results don't comply with the receiving facilities' waste acceptance requirements. Off-site shipping cannot be accomplished if the pretreated waste doesn't meet the receiving facility's waste acceptance requirements and/or if it doesn't meet the USDOT shipping requirements.*

*Additionally, Ecology added a series of conditions under II.K to ensure that Permittees comply with Land Disposal Restriction standards prior to the land disposal of TBI pretreated waste.*

*Draft Condition II.K.5 (or Final Permit Condition II.K.4) reads, "This Permit does not authorize onsite disposal of the pretreated waste removed from SY-101. If for any reason the pretreated waste is not accepted for disposal outside the State of Washington, the Permittees shall notify Ecology prior to waste being returned to Hanford and will provide Ecology the disposition plan before allowing the waste to be returned to Hanford. The waste will remain subject to all applicable LDR standards based on the waste codes set forth in Condition II.K.1."*

*Ecology added this condition as a contingency measure to prevent the TBI pre-treated waste from becoming an orphan waste in the unlikely scenario if something goes wrong once the waste is shipped off site (e.g., waste is rejected for disposal at the out-of-state locations and it comes back to Hanford Site). Please also see Ecology's response to a similar comment with concerns for bounce-back waste, Comment #O-1-2.*

## **A-1: OREGON DEPARTMENT OF ENERGY**

### **Comment A-1-1**

As noted in section 4.2, Sample Collection, of the Sampling and Analysis Plan page 14<sup>6</sup>, sampling will occur after the last tote is filled. The sampling consists of 2-250mL samples taken from each process tote, using a peristaltic pump. As documented in permit section 3.7.3 processing<sup>7</sup> a delay tote is expected to be filled over the course of a 1-day shift at a flow rate of 1 gallon per minute (gpm) This is followed by another 1-day shift to fill the process tote. If all works perfectly, the temporal gap between filling the first process tote and sampling will be 10 working days.

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<sup>6</sup> [https://fortress.wa.gov/ecy/ezshare/NWP/TBIRDD/RPP-PLAN-65394\\_Rev\\_1.pdf](https://fortress.wa.gov/ecy/ezshare/NWP/TBIRDD/RPP-PLAN-65394_Rev_1.pdf)

<sup>7</sup> <https://fortress.wa.gov/ecy/ezshare/NWP/TBIRDD/Permit.pdf>

With limited sampling and the time lag, the statement in the Data Qualities Objective: “Tote sampling under this DQO will occur as soon as possible after the last process tote is filled. Consequently, the pretreated waste within the sampled tote will remain well mixed to the extent practical”<sup>8</sup>, should only be considered for this limited and well-defined phase of TBI.

Future iterations of TBI, if any, should consider alternative means of obtaining timely representative samples and increase sampling to ensure acceptance criterion are met. Expansion of the Sampling and Analysis Plan will be critical should tanks with less defined supernatant and more complex chemical and isotopic composition be considered in the next phases of TBI.

Applicable to the permit is that while the In-Tank Pre-Treatment System (ITPS) is directed at removing Cs-137 and may also capture other alkali or alkali-earth radionuclides like Sr-90, it does not practically remove other fission products. Of particular concern are those highly soluble radionuclides that drive long term risk and are critical to classifying waste streams for transportation, technetium-99 and iodine-129.<sup>9</sup>

The ITPS is expected to pump from the upper tank supernatant which is less dense at 1.13g/mL reflecting a composition of lighter compounds like water. The estimated radionuclide concentration in tank SY-101<sup>10</sup> shows these hydrophilic nuclides to be generally Class A waste assuming SY-101 is at equilibrium. We are very interested in the sampling results from the process totes showing the true distribution of radionuclides and organics in the aqueous supernatant phases. As appendix H of the January 2023 Savannah River National Labs report<sup>11</sup> shows the primary route for grouted Class A material would run through several Oregon communities and vital rivers like the Columbia or the Deschutes.

### **Response to A-1-1**

*Thank you for your comment.*

*Ecology agrees with this comment that this RD&D Permit, including SAP, is only applicable to the proposed 2,000-gallon TBI Demonstration. Sampling results from the process totes will be included in the final report as required in Condition II.G.3, and should be available through Hanford AR and can be requested at the Ecology Office.*

### **Comment A-1-2**

In December 2023, Oregon submitted comments in support of the EPA variance for TBI<sup>12</sup>. This variance helped alleviate concerns that this waste stream would become orphaned if receiving States had alternative Land Disposal Restrictions (LDR) and later decided to refuse acceptance of Hanford waste. The TBI variance documentation is narrowly focused and applies only to the current proposed action. Oregon appreciates WA Ecology’s work on this issue and their cooperation with both EPA and DOE. Further, we encourage continued interaction with receiving state regulatory authorities. It is important that the state regulatory agencies be

<sup>8</sup> [https://fortress.wa.gov/ecy/ezshare/NWP/TBIRDD/RPP-RPT-61636\\_Rev\\_3.pdf](https://fortress.wa.gov/ecy/ezshare/NWP/TBIRDD/RPP-RPT-61636_Rev_3.pdf)

<sup>9</sup> eCFR :: 10 CFR 61.55 -- Waste classification.

<sup>10</sup> <https://pdw.hanford.gov/document/AR-24494>

<sup>11</sup> [DB760207C1E4245E165FB35070A0676193DF3E673310 \(nationalacademies.org\)](https://doi.org/10.1126/science.1254444)

<sup>12</sup> [2023-12-18-Oregon-EPA-Response-Letter-reTBI.pdf](https://www.ecy.wa.gov/Programs/Response/2023-12-18-Oregon-EPA-Response-Letter-reTBI.pdf)

included in the decision-making process and support any granted variance, as they have the working history and knowledge to determine whether a waste form is appropriate for disposal at a specific site. Nuclear Regulatory Commission Agreement States must maintain the right of refusal of a waste form based on that State's interpretation of its regulated landfill acceptance criteria.

***Response to A-1-2***

*Ecology agrees with this comment and is committed to continued interaction and coordination with other state regulatory authorities including those receiving states and others affected by Ecology's agency action.*

**Comment A-1-3**

A proposal to implement large-scale transportation of liquid tank waste still containing long-lived mobile key radionuclides introduces potentially additional and unnecessary risk of contaminant spread along the entire transportation corridor, increased cost and complexity of accident cleanup, and additional concern to communities along transportation routes. If the TBI is adapted into a full-fledged tank waste management project at Hanford, then DOE should invest in local waste solidification capacity and should also conduct extensive public education along the transit corridor. Oregon Department of Energy and partners are ready to support a public education initiative in our state along a transportation corridor.

***Response to A-1-3***

*The Proposed RD&D permit is specific to the permitting to support the proposed 2,000-gallon TBI Demonstration under WAC 173-303-809. Ecology is committed to consider any comments on a proposed large-scale grouting and off-site disposal process beyond the current proposal in the appropriate time in the future.*

## Appendix A. Copies of All Public Notices

Public notices for this comment period:

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

# 2,000-Gallon Test Bed Initiative Demonstration

Draft Research, Development, and Demonstration Permit



Figure 1. Columbia River looking at the Hanford Site

- Public comment period March 11 – April 25, 2024
- Hybrid public meeting 5:30 p.m. March 20, at the Richland Public Library
- This is a Research, Development and Demonstration (RD&D) Permit

## Public comment invited

The Washington State Department of Ecology (Ecology) is proposing a draft RD&D permit for the 2,000-gallon Test Bed Initiative (TBI) Demonstration located in the 200 West Area of the Hanford Site.

The permittees are:

United States Department of Energy  
P.O. Box 550, MSIN H5-30  
Richland, WA 99352

Washington River Protection Solutions, LLC  
P.O. Box 850, MSIN: H3-21  
Richland, WA 99352

## Public meeting

We are holding an informational meeting for this public comment period 5:30 p.m. on March 20, 2024. We will have presentations from Ecology and Energy, followed by a question-and-answer session. The meeting will be held at the Richland

Public Library, 955 Northgate Drive, Richland Washington.

To attend online or listen via phone:

- <http://tinyurl.com/TBI-Public-Meeting>
- Audio only: 1-253-205-0468

Meeting ID: 838 5404 8034

Passcode: 105942

## Background

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

Today, waste management and environmental cleanup are the primary missions at Hanford.

## Overview

This draft RD&D permit would authorize the proposed 2,000-gallon TBI Demonstration in order to test the feasibility and efficacy of deploying an in-tank pretreatment system (ITPS) to separate and pre-treat about 2,000 gallons of low-activity tank waste. The pretreated waste would then be shipped offsite for grouting and disposal at Resource Conservation and Recovery Act (RCRA)



permitted facilities outside the state of Washington.

The ITPS that will be tested during the proposed 2,000-gallon TBI Demonstration will filter and remove radionuclides from 2,000 gallons of supernatant tank waste. This waste will be removed from Tank SY-101, a double-shell tank in the SY Tank Farm located in the 200 West Area of the Hanford Site. Supernatant is the liquid portion of the tank waste. Once the supernatant is separated and pre-treated through ITPS, it will be stored in six U.S. Department of Transportation compliant shipping containers (process totes). Sampling will be conducted to confirm compliance with applicable shipping requirements prior to being shipped offsite for grouting and disposal.

An initial 3-gallon TBI Demonstration was performed in 2017 as a proof-of-concept demonstration with a small quantity of Hanford tank waste under a RCRA Treatability Study. This initial demonstration included:

- Pretreatment of 3 gallons of supernatant at the 222-S Laboratory and certification that the pretreated waste could be shipped offsite.
- Treatment (immobilization: stabilization/solidification) of the pretreated waste using a grouting process at an offsite RCRA-permitted facility in Richland, Washington.
- Transport and permanent disposal of the immobilized waste at an offsite RCRA-permitted disposal site in Andrews, Texas.

Under this draft RD&D permit, the permittees will demonstrate the feasibility and efficacy of using an alternative pre-treatment process that uses an ITPS to filter and remove radionuclides from the supernatant. This approach uses advances in waste treatment technology (such as improved ion exchange media), and leverages experience gained during other mixed waste management operations. The 2,000-gallon TBI Demonstration will also provide information and data to inform future projects.

Successful deployment of such an approach for onsite pre-treatment and offsite disposition of low-activity waste from tanks located in the 200 West Area of the Hanford Site could support critical needs for the tank waste mission. These needs include mitigation of DST space limitations in the SY Tank Farm and accelerated timelines for retrieval of waste from tanks in the 200 West Area.

This draft RD&D permit is anticipated to be effective for one year and limits the overall amount of Tank SY-101 supernatant to be pretreated during the demonstration to up to 2,000 gallons.

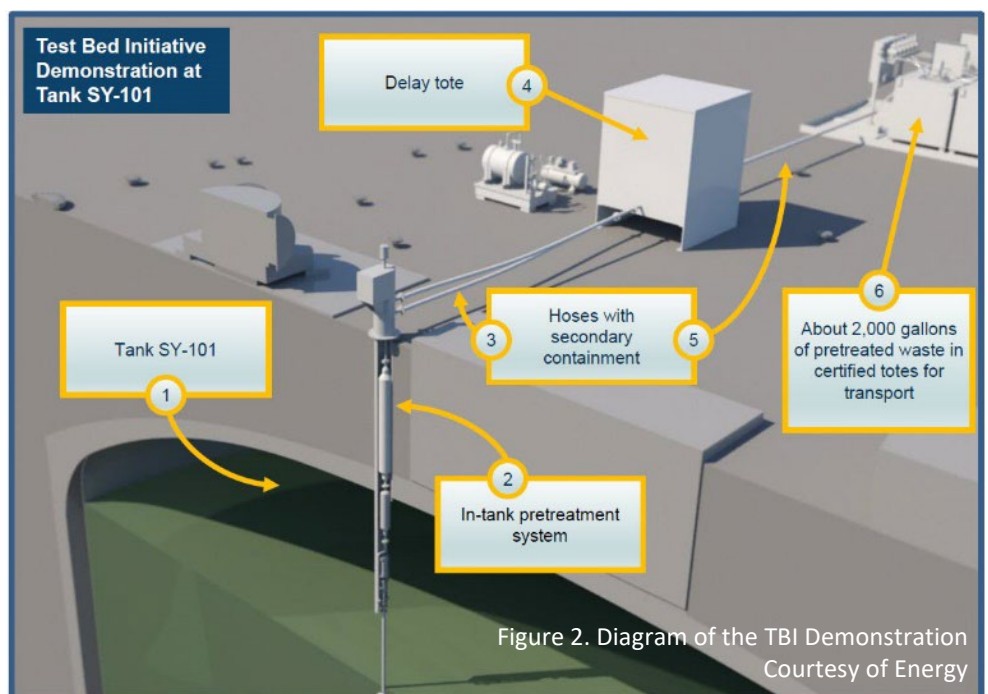


Figure 2. Diagram of the TBI Demonstration  
Courtesy of Energy

## Reviewing the proposed permit

Ecology invites you to review and comment on this draft RD&D permit. See the last page for comment period dates and information on how to submit comments.

Copies of the draft permit, fact sheet, and supporting documentation will be available during the public comment period online at Ecology’s website<sup>1</sup>. The documents will also be available electronically at the Hanford Public Information Repositories listed on the next page.

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

## Hanford’s Information Repositories

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

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

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

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

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

For information on other comment periods or ways to get involved, go to [ecology.wa.gov/Hanford](https://ecology.wa.gov/Hanford) and click “Public comment periods” on the left bar or visit [Hanford.gov](https://hanford.gov) “public involvement opportunities”.

You can also follow us on social media.



@EcologyWAHanford



@ecyHanford

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



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

## 2,000-Gallon TBI Demonstration

March 11 – April 25, 2024



Electronic submission (preferred):

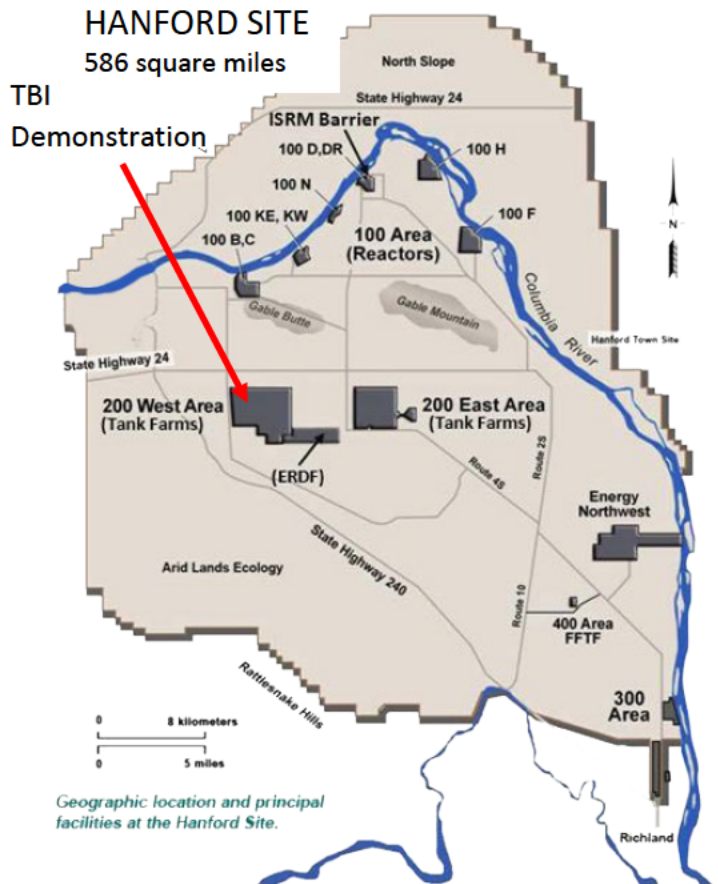
<https://nw.ecology.commentinput.com/?id=tNePGUIA5>

An informational hybrid public meeting is scheduled at the Richland Public Library 5:30 p.m. March 20.

A public hearing is not scheduled, but if there is enough interest, we will consider holding one.

To request a hearing, mail or hand-deliver comments, or for more information, contact:

Daina McFadden  
 509-372-7950  
 3100 Port of Benton Blvd  
 Richland, WA 99354  
[Hanford@ecy.wa.gov](mailto:Hanford@ecy.wa.gov)



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.

# Test Bed Initiative at Hanford



The Washington State Department of Ecology is seeking public comment on a draft permit for the U.S. Department of Energy's (Energy) proposed 2,000-gallon Test Bed Initiative (TBI). TBI will demonstrate the feasibility of an alternative option for the retrieval, treatment, and disposal of a portion of the Hanford Site's low-activity tank waste.

During the proposed TBI Demonstration, Energy will deploy an in-tank pretreatment system (ITPS) in a double-shell tank. This system will separate and pretreat about 2,000 gallons of low-activity tank waste.

The pretreated waste would be stored in six U.S. Department of Transportation compliant shipping containers. Sampling will be conducted to confirm compliance with shipping requirements.

Then, the waste will be shipped offsite for grouting and disposal at Resource Conservation and Recovery Act (RCRA) permitted facilities outside Washington.

## ECOLOGY'S ROLE

The proposed TBI Demonstration requires a Research, Development, and Demonstration (RD&D) permit from Ecology for the retrieval and pretreatment activities that will occur onsite at Hanford.

This draft RD&D permit is anticipated to be effective for one year and limits the demonstration to 2,000 gallons. The public comment period for this draft permit begins March 11, 2024.

The proposed demonstration also requires a treatability variance from EPA. This variance, pending issuance, would satisfy certain land disposal requirements in our agency's RD&D permit.

To request an ADA accommodation, contact Ecology by phone at 509-372-7950 or email at [Hanford@ecy.wa.gov](mailto:Hanford@ecy.wa.gov), or visit <https://ecology.wa.gov/accessibility>. For Relay Service or TTY call 711 or 877-833-6341.

## BACKGROUND

Energy performed an initial three-gallon TBI Demonstration under a RCRA treatability study in 2017 as a proof-of-concept. The study included:

- Pretreatment and shipment certification for three gallons of tank waste.
- Treatment of the pretreated waste using a grouting process at an offsite RCRA-permitted facility in Richland, Washington.
- Transport and permanent disposal of the grouted waste at an offsite RCRA-permitted disposal facility in Texas.

## WHY IT MATTERS

- This demonstration could prove a valid path to final appropriate offsite disposal of grouted low-activity tank waste.
- Successful deployment of ITPS could also mitigate space limitations in the double-shell tanks, and accelerate timelines for single-shell tank waste retrieval.

## PUBLIC COMMENT PERIOD

**March 11 - April 25, 2024**

Nuclear Waste Program's public comment page  
[Ecology.wa.gov/NWP-comment-periods](https://ecology.wa.gov/NWP-comment-periods)

March 20 informational meeting  
<http://tinyurl.com/TBI-Public-Meeting>



**From:** [Washington Department of Ecology](#)  
**To:** [McFadden, Daina \(ECY\)](#)  
**Subject:** 30-Day Advance Notice - Draft 2,000-Gallon Test Bed Initiative Demonstration RD&D permit  
**Date:** Friday, February 9, 2024 9:31:47 AM



## Draft 2,000-Gallon Test Bed Initiative Demonstration RD&D permit

### 30-Day Advance Notice

Ecology will be holding a 45-day public comment period addressing a proposed 2,000-gallon Test Bed Initiative (TBI) Research, Development, and Demonstration (RD&D) permit starting in mid-March and ending late April 2024. The permittees are United States Department of Energy (Energy) and Washington River Protection Solutions. The TBI Demonstration will take place on the Hanford Site in southeastern Washington.

### What is being proposed?

This draft permit would authorize the proposed TBI Demonstration to test the feasibility and efficacy of deploying an in-tank pretreatment system in Tank SY-101. This system would separate and pre-treat approximately 2,000 gallons of low-activity tank waste prior to shipping it offsite for grouting and disposal at an approved out-of-state facility.

### Public meeting

We will be holding a hybrid public informational meeting on the draft TBI RD&D permit in late March. This meeting will have short presentations by both Ecology and Energy followed by a question-and-answer session.

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

**Daina McFadden**

*Permit Communication Specialist*

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

☎ 509-372-7950

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Follow Us:



**From:** [Washington Department of Ecology](#)  
**To:** [McFadden, Daina \(ECY\)](#)  
**Subject:** Starting today! Public comment period for the draft 2,000-Gallon TBI Demonstration RD&D permit  
**Date:** Monday, March 11, 2024 10:01:29 AM



## Draft 2,000-Gallon Test Bed Initiative Demonstration RD&D permit

### Public comment period

The Washington State Department of Ecology (Ecology) is proposing a draft research, development, and demonstration (RD&D) permit for the 2,000-gallon Test Bed Initiative (TBI) Demonstration. The permittees are the U.S. Department of Energy (Energy) and Washington River Protection Solutions, LLC.

The draft permit is available for public review from **March 11 through April 25, 2024.**

### Proposed permit

This draft RD&D permit would authorize the proposed 2,000-gallon TBI Demonstration to test the feasibility and efficacy of deploying an in-tank pretreatment system (ITPS) in Tank SY-101 in the 200 West Area of the Hanford Site. The system would separate and pretreat about 2,000 gallons of low-activity tank waste. The pretreated waste would then be shipped offsite for grouting and disposal at permitted facilities outside the state of Washington.

### Public meeting



We are holding an informational meeting for this public comment period **5:30 p.m. PT on March 20, 2024**. We will have presentations from Ecology and Energy, followed by a question-and-answer session.

The meeting will be held at the Richland Public Library, 955 Northgate Drive, Richland, Washington 99352.

To attend online via Zoom or listen via phone:

- [TBI Public Meeting](#)
- Audio only: 1-253-205-0468

Meeting ID: 838 5404 8034

Passcode: 105942

## How to comment

The draft RD&D permit is available for review online at the Nuclear Waste Program's [public comment page](#). Electronic copies of the proposed draft RD&D permit are also located at the [Administrative Record](#) and [Information Repositories](#).

Please submit comments by **April 25, 2024**. [Electronically](#) (preferred) or send to:

Daina McFadden

3100 Port of Benton Blvd

Richland WA 99354

[Comment](#)

[Draft permit](#)

## Daina McFadden

*Permit Communication Specialist*

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

☎ 509-372-7950

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Washington Department of Ecology · 300 Desmond Drive SE · Lacey, WA 98503

**GOVDELIVERY** 



**Washington Department of Ecology - Hanford**

Published by Ann Eco · 1h ·

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Our Test Bed Initiative Research, Development, and Demonstration Permit comment period starts today.

Check it out and get your comments in by April 25: [Ecology.wa.gov/NWP-comment-periods](https://ecology.wa.gov/NWP-comment-periods)

Ecology will host a public meeting at Richland Public Library 955 Northgate Dr, Richland at 5:30, March 20.



**Ecology - Hanford** @ecyHanford · 31m

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Our Test Bed Initiative Research, Development, and Demonstration Permit comment period starts today.

Check it out and get your comments in by April 25: [Ecology.wa.gov/NWP-comment-pe...](https://ecology.wa.gov/NWP-comment-pe...)

Ecology will host a public meeting at Richland Public Library 955 Northgate Dr, at 5:30, March 20.



## 2,000-Gallon Test Bed Initiative Demonstration Draft Research, Development, and Demonstration Permit

March 11 - April 25, 2024

We are proposing a draft research, development, and demonstration (RD&D) permit for the 2,000-gallon Test Bed Initiative (TBI) Demonstration located in the 200 West Area of the Hanford Site. The permittees are the U.S. Department of Energy (Energy) and Washington River Protection Solutions, LLC.

### Overview

This draft RD&D permit would authorize the proposed 2,000-gallon TBI Demonstration in order to test the feasibility and efficacy of deploying an in-tank pretreatment system (ITPS) to separate and pre-treat about 2,000 gallons of low-activity tank waste. The pretreated waste would then be shipped offsite for grouting and disposal at permitted facilities outside the state of Washington.

For more information on the TBI Demonstration see the focus sheet below or our [one page summary](#).

### Public meeting

We are holding an informational meeting for this public comment period **5:30 p.m. on March 20, 2024**. We will have presentations from Ecology and Energy, followed by a question-and-answer session. The meeting will be held at the Richland Public Library, 955 Northgate Drive, Richland Washington.

To attend online via Zoom, or listen via phone:

- [TBI-Public-Meeting](#)
- Audio only: 1-253-205-0468

Meeting ID: 838 5404 8034

Passcode: 105942

### Review and comment

The draft permit is available for review below. Electronic copies of the draft permit are also located at the [Administrative Record](#) and Information Repositories listed at the bottom of this page.

Please submit comments by **April 25, 2024**, [electronically](#) (preferred) or deliver to:

Daina McFadden  
3100 Port of Benton Blvd  
Richland WA 99354

### Documents

[Transmittal letter](#)  
[Focus sheet](#)  
[Fact sheet](#)

#### Permit files

[Change Control Log](#)  
[Permit Conditions](#)  
[RD&D Permit](#)  
[Data Quality Objectives \(DQO\) for Grab Sampling and Analysis of Pre-treated 241-SY-101 Liquid Waste in Process Totes](#)  
[Sampling and Analysis Plan for Pre-Treated 241-SY-101 Liquid Waste in Process Totes](#)

#### Appendix A

[IORPE Design Assessment Report for Test Bed Initiative](#)

#### Appendix B

[Process Control Plan for the Test Bed Initiative \(TBI\) System](#)

#### Appendix C

<a href="#">Appendix C Change Control Log</a>	<a href="#">TBI SY-101 Site Plan</a>
<a href="#">TBI SY-101 P&amp;ID</a>	<a href="#">TBI SY-101 Process Flow Diagram</a>
<a href="#">DOE TBI SY-101 Riser Adapter Assembly</a>	<a href="#">Riser Adapter Assembly Supplement</a>
<a href="#">DOE TBI SY-101 Pump Column Assembly</a>	<a href="#">Pump Column Assembly Supplement</a>
<a href="#">TBI Hose Assemblies Modified</a>	<a href="#">DOE TBI SY-101 Pipe Stands</a>
<a href="#">Distribution Valve Manifold</a>	<a href="#">DOE TBI SY-101 Delay Tote Assembly</a>
<a href="#">Delay Tote Assembly Supplement</a>	<a href="#">Backflush Skid Assembly</a>
<a href="#">TBI SY-101 IX Column Vessel</a>	<a href="#">DOE TBI SY-101 Filter Assembly</a>
<a href="#">DOE TBI SY-101 Process Tote Assembly</a>	<a href="#">TBI SY-101 42 Inch Riser Adapter Assembly &amp; Shield Plug</a>
<a href="#">DOE TBI SY-101 Pipe in Pipe</a>	<a href="#">Pipe in Pipe Supplement</a>