



STATE OF WASHINGTON  
**DEPARTMENT OF ECOLOGY**

Richland Field Office

3100 Port of Benton Blvd., Richland, WA 99354 • 509-372-7950

December 2, 2024

24-NWP-208

Brian T. Vance, Manager  
Hanford Field Office  
United States Department of Energy  
PO Box 550  
Richland, Washington 99352

Wesley H. Bryan, President  
Washington River Protection Solutions  
PO Box 850  
Richland, Washington 99352

Re: Final Dangerous Waste Research, Development, and Demonstration Permit for NUCON Thermal Oxidation System Phase 3, Environmental Protection Agency (EPA) ID Number WA7890008967

Reference: See page 5

Dear Brian T. Vance and Wesley H. Bryan:

This letter issues the Department of Ecology's (Ecology) final permit decision on the draft *Dangerous Waste Research, Development, and Demonstration (RD&D) Permit for NUCON<sup>1</sup> Thermal Oxidation System (TOS) Phase 3* (Reference 1), EPA ID Number WA7890008967, now issued as the final Permit.

In accordance with Washington Administrative Code (WAC) 173-303-840(8)(b), the entire portion of the final Permit is effective December 31, 2024. The final Permit will remain in effect through December 31, 2025, in accordance with the NUCON TOS Phase 3 Permit Condition I.I.1 unless terminated in accordance with Condition I.C.4.

The Permittees are the United States Department of Energy (USDOE) as owner/operator and Washington River Protection Solutions (WRPS) as co-operator. The Permittees initially submitted to Ecology a Dangerous Waste Permit Application for the NUCON Thermal Oxidation System Phase 3 on September 28, 2023 (Reference 2).

The purpose of this RD&D Permit is to authorize the proposed NUCON TOS Demonstration to evaluate the effectiveness and capabilities of an innovative control technology for reducing tank vapor chemicals of potential concerns in air emissions from Hanford waste tanks. The process will capture or destroy tank vapor chemicals using Thermal Oxidation, carbon adsorption, and catalytic conversion of combustion products.

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<sup>1</sup> NUCON® is a registered trademark of NUCON International, Inc., Columbus, Ohio.

As required by WAC 173-303-840(3)(d), Ecology held a 45-day public comment period from August 26 through October 10, 2024. Two public comments were submitted during the public comment period. These comments did not initiate a change to the draft Permit.

Ecology is issuing a Response to Comments document to meet the requirements of WAC 173-303-840(9). This document provides comment responses and describes the public involvement process taken in support of the public comment period.

The *Response to Comments* (Ecology Publication 24-05-012) is available on Ecology's publication website at <https://apps.ecology.wa.gov/publications/summarypages/2405012.html>.

The final Permit is available on Ecology's website at [https://fortress.wa.gov/ecy/nwp/permitting/Final\\_NUCON\\_RDD/](https://fortress.wa.gov/ecy/nwp/permitting/Final_NUCON_RDD/).

Following the effective date, the final Permit will be also available on Ecology's website at <https://fortress.wa.gov/ecy/nwp/permitting/index.html>.

A copy of the final Permit is also available at the Hanford Administrative Record and the Hanford Public Information Repositories in Richland, Spokane, and Seattle, Washington and Portland, Oregon. Members of the public can request a copy of the final Permit or DVD by contacting the Ecology Office as shown below.

A legal copy of the final Permit is at the location listed below:

Department of Ecology  
Nuclear Waste Program  
3100 Port of Benton Boulevard  
Richland, Washington 99354

All permitting and compliance work must be completed under the legal version of the final Permit.

Individuals can request copies on DVD, hard copy, or request to view documents in Ecology's Resource Center. Please contact Ecology at [hanford@ecy.wa.gov](mailto:hanford@ecy.wa.gov), (509) 578-9298, or (509) 380-4555.

### **Your Right to Appeal:**

You have a right to appeal this Permit to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Permit. The appeal process is governed by Chapter 43.21B Revised Code of Washington (RCW) and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this Permit:

- File your appeal and a copy of this Permit with the PCHB (see addresses in this letter). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Permit on Ecology in paper form – by mail or in person (see addresses below). E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

**1. To file your appeal with the Pollution Control Hearings Board:**

**Mail appeal to:**

Pollution Control Hearings Board  
PO Box 40903  
Olympia, Washington 98504-0903

**OR**

**Deliver your appeal in person to:**

Pollution Control Hearings Board  
1111 Israel Road, Southwest, Suite 301  
Tumwater, Washington 98501

**2. To serve your appeal on the Department of Ecology:**

**Mail appeal to:**

Department of Ecology  
Attn: Appeals Processing Desk  
PO Box 47608  
Olympia, Washington 98504-7608

**OR**

**Deliver your appeal in person to:**

Department of Ecology  
Attn: Appeals Processing Desk  
300 Desmond Drive, Southeast  
Lacey, Washington 98503

**3. Send a copy of your appeal to:**


Jeff Lyon  
Department of Ecology  
Nuclear Waste Program  
3100 Port of Benton Boulevard  
Richland, Washington 99354

Brian T. Vance and Wesley H. Bryan  
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If there are any questions, please contact Amie Green, Permit Coordinator, at (509) 316-6873 or [amie.green@ecy.wa.gov](mailto:amie.green@ecy.wa.gov) or Jeff Lyon, Project Manager, at (509) 539-1996 or [jeff.lyon@ecy.wa.gov](mailto:jeff.lyon@ecy.wa.gov).

Sincerely,

 Digitally  
signed by  
Holbrook,  
Edward (ECY)

Edward Holbrook  
Deputy Program Manager  
Nuclear Waste Program

aj/mo

Enclosures (3): Hyperlinks above

1. <https://apps.ecology.wa.gov/publications/summarypages/2405012.html>
2. [https://fortress.wa.gov/ecy/nwp/permitting/Final\\_NUCON\\_RDD/](https://fortress.wa.gov/ecy/nwp/permitting/Final_NUCON_RDD/)
3. <https://fortress.wa.gov/ecy/nwp/permitting/index.html>

cc: See page 5

References:

1. Letter 24-NWP-150, dated August 22, 2024, "Proposed Draft of the Dangerous Waste Research, Development, and Demonstration Permit for NUCON Thermal Oxidation System Phase 3, Environmental Protection Agency (EPA) ID Number WA7890008967"
2. Letter 23-ECD-0070, dated September 27, 2023, "Submittal of the NUCON Thermal Oxidation System Phase 3 Research, Development, and Demonstration Permit Application"

cc electronic w/enc:

Laura Buelow, EPA	Lauren Jenks, WDOH
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Mark Gerboth, WRPS	Portland State University Library,
James Hamilton, WRPS	Government Information
Anthony Miskho, WRPS	University of Washington Suzzallo Library,
Roger Szelmezcza, WRPS	Government Publications
Mason Murphy, CTUIR	USDOE Public Reading Room, OIC
Anthony Smith, NPT	Environmental Portal
Alyssa Buck, Wanapum	Hanford Administrative Record,
Laurene Contreras, YN	Hanford Site-wide Permit
ERWM Staff, YN	Hanford Facility Operating Record
Susan Coleman, HAB	BNI Correspondence Control
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Max Woods, ODOE	HLMI Correspondence Control
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Mike Livingston, WDFW	WRPS Correspondence Control