



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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January 10, 2014

14-NWP-008

Mr. Kevin W. Smith, Program Manager  
Office of River Protection  
United States Department of Energy  
PO Box 450, MSIN: H6-60  
Richland, Washington 99352

Mr. L. David Olson, President  
& Project Manager  
Washington River Protection Solutions  
PO Box 850, MSIN: H6-63  
Richland, Washington 99352

Re: Approval, with Changes, for the Proposed Class 2 Modification to the *Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste* (Hanford Facility RCRA Permit), Operating Unit Group 4, 242-A Evaporator

Reference: See page 2

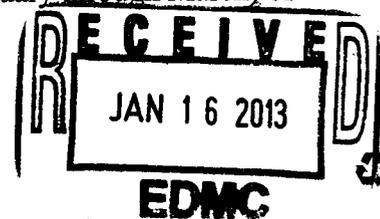
Dear Mr. Smith and Mr. Olson:

The Department of Ecology (Ecology) is approving, with changes (see enclosure), your request for a Class 2 Modification to the 242-A Evaporator (Reference) in accordance with Washington Administrative Code (WAC) 173-303-830(4)(b)(vi)(B)(I). This permit modification approval applies to the Hanford Facility RCRA Permit, Revision 8C. It does not modify the draft Revision 9 permit.

Comments were received during the public comment period for the permit modification. The Response to Comments document is enclosed and is available at the Ecology Nuclear Waste Program Office. No additional changes to the 242-A Evaporator modification resulted from responses to the public comments.

Please provide Ecology with two clean copies of the affected addenda, with changes incorporated, by letter, within 30 days. These copies will be used to update the hard copy Hanford Facility RCRA Permit. We also request an electronic copy of the same addenda be submitted within 30 days to Andrea Prignano, Site-Wide Dangerous Waste Permit Coordinator.

Ecology requires the United States Department of Energy – Office of River Protection and Washington River Protection Solutions to address the enclosed changes and submit these to us as Class 1 Permit Modifications in accordance with WAC 173-303-830, Appendix I, A.I. Administrative and Informational Changes, during the first quarter (January through March) of calendar year 2014.



T-24

Mr. Smith and Mr. Olson  
January 10, 2014  
Page 2

14-NWP-008

If there are any questions, please contact Kristi Wold, 242-A Evaporator Permit Lead, at [Kristi.Wold@ecy.wa.gov](mailto:Kristi.Wold@ecy.wa.gov) or (509) 372-7985, or Andrea Prignano, Site-Wide Dangerous Waste Permit Coordinator, at [Andrea.Prignano@ecy.wa.gov](mailto:Andrea.Prignano@ecy.wa.gov) or (509) 372-7911.

Sincerely,



Suzanne Dahl  
Tank Waste Treatment Section Manager  
Nuclear Waste Program

kw/tkb  
Enclosures (2)

Reference: Letter 13-ECD-0073, dated September 11, 2013, from K. W. Smith, USDOE-ORP and L. D. Olson, WRPS, to J. A. Hedges, Ecology, "Transmittal of Class 2 Modification to the Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit Operating Unit Group 4, 242-A Evaporator (Treatment, Storage, and Disposal Unit: T-2-6) and Request for Temporary Authorization"

cc electronic w/enc:

Dave Bartus EPA  
Dennis Faulk, EPA  
Mary Beth Burandt, USDOE  
Lori Huffman, USDOE  
Ron Koll, USDOE  
James Hamilton, WRPS  
Steve Killooy, WRPS  
Tony Miskho, WRPS  
Brian Von Bargaen, WRPS  
Robert Wilkinson, WRPS  
Ken Niles, ODOE  
Andrea Prignano, Ecology  
Kristi Wold, Ecology  
USDOE-ORP Correspondence Control

cc w/enc:

Steve Hudson, HAB  
Administrative Record:  
242-A Evaporator, T-2-6  
Environmental Portal  
WRPS Correspondence Control

cc w/o enc:

Stuart Harris, CTUIR  
Gabriel Bohnee, NPT  
Russell Jim, YN

Item	Page #	Ecology Required Changes to Permit Modification Request
1	Page 4-3.2, line 12	<p><b>Comment:</b> The last sentence states that the description of the waste processed by the 242-A Evaporator is described in Section 3.4. Section 3.4 is "Process Description." It appears the reference should be Section 3.5.</p> <p><b>Justification:</b> Incorrect reference.</p> <p><b>Required change:</b> If appropriate, change the reference to Section 3.5</p>
2	Page 4-3.5, line 28	<p><b>Comment:</b> Appears there is an extra space between F001 –F005.</p> <p><b>Justification:</b> Editorial correction</p> <p><b>Required change:</b> Remove extra space.</p>
3	Page 4-3.6, line 39	<p><b>Comment:</b> Inclusion of comma implies that text is missing between "Ammonia" and "volatile organic?"</p> <p><b>Justification:</b> Editorial</p> <p><b>Required change:</b> Remove comma.</p>
4	Page 4-3.9, Figure 3.2	<p><b>Comment:</b> There is no explanation of why Figure 3.2 is included in the Waste Analysis Plan (WAP) as is provided for other figures. It is unclear why this figure is included and what it is trying to demonstrate.</p> <p><b>Justification:</b> Ecology cannot determine the purpose for this figure.</p> <p><b>Required change:</b> Add call out and explanation for the figure in text.</p>
5	Page 4-3.9, Figure 3.2, block 3	<p><b>Comment:</b> Figure 3.2 includes a step: "Develop a Sampling and Analysis Plan for Candidate Feed Tank(s) to demonstrate compliance with the WAP reside." Explanatory text is necessary to understand the purpose of this step in the figure.</p> <p><b>Justification:</b> Text is not consistent with the figure.</p> <p><b>Required change:</b> Reference reader to location of text associated with this step. If text is not included in this WAP, add it and specify preparation of this plan as indicated in the figure.</p>
6	Page 4-3.17, Table 3.5, Category "other"; Analyte "mixing and compatibility study; Method	<p><b>Comment:</b> Text states: "Solution from each sample are mixed ..." Subject/verb do not agree, therefore it is unclear whether solutions from each sample mixed or a solution for each sample is mixed? It appears there is a mixture of solutions.</p> <p><b>Justification:</b> Clarity. Subject/verb agreement</p> <p><b>Required change:</b> Correct subject/verb agreement. Correct table.</p>



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

## **Response to Comments**

**Proposed Class 2 Permit Updates to the  
242-A Evaporator Portion of the Hanford  
Facility Dangerous Waste Permit**

**September 18, 2013 - November 17, 2013**

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*Summary of a public comment period and responses to comments*

January 2014  
Publication no. 14-05-002

## PUBLICATION AND CONTACT INFORMATION

This publication is available on the Department of Ecology's website at <http://www.ecy.wa.gov/biblio/nwp.html>

For more information contact:

Kristi Wold  
Nuclear Waste Program  
3100 Port of Benton Boulevard  
Richland, WA 99354

Phone: 509-372-7950  
Hanford Cleanup Line: 800-321-2008  
Email: [Hanford@ecy.wa.gov](mailto:Hanford@ecy.wa.gov)

Washington State Department of Ecology - [www.ecy.wa.gov](http://www.ecy.wa.gov)

- Headquarters, Lacey 360-407-6000
- Northwest Regional Office, Bellevue 425-649-7000
- Southwest Regional Office, Lacey 360-407-6300
- Central Regional Office, Yakima 509-575-2490
- Eastern Regional Office, Spokane 509-329-3400

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

*If you need this document in a format for the visually impaired, call the Nuclear Waste Program at 509-372-7950. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.*

# **Response to Public Comments**

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**Proposed Class 2 Updates to the 242-A Evaporator  
Portion of the Hanford Facility Dangerous Waste Permit  
September 18, 2013 - November 17, 2013**

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

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## INTRODUCTION

The Washington State Department of Ecology's Nuclear Waste Program (NWP) 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, dangerous waste regulations require public comment periods to allow the public to review the change(s) and provide formal feedback. (See Washington Administrative Code [WAC] 173-303-830 for types of permit changes.)

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

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

### **This Response to Comments is prepared for:**

*Comment period:* Proposed Class 2 Updates to the 242-A Evaporator Portion of the Hanford Facility Dangerous Waste Permit, September 18, 2013 — November 17, 2013

*Permit:* Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit for the Treatment, Storage, and Disposal of Dangerous Waste, Part III, Operating Unit Group 4 (WA 7980008967), 242-A Evaporator

*Original issuance date:* January 28, 1998

*Draft effective date:* February 10, 2014

To see more information related to the Hanford Site and nuclear waste in Washington, please visit our website: [www.ecy.wa.gov/programs/nwp](http://www.ecy.wa.gov/programs/nwp).

## REASONS FOR ISSUING THE PERMIT

The type of permit change in this request is termed a "Class 2." These modifications are more significant than "Class 1" modifications, and less significant than "Class 3" modifications. A table in WAC 173-303-830 describes changes and what class they are.

This update for Hanford's dangerous waste permit addresses two chapters of the 242-A Evaporator portion of the permit.

The evaporator removes water and volatile organic chemicals from tank waste, to reduce the volume of the tank waste and create more space in Hanford's double-shell tanks. The evaporator is in Hanford's 200 East Area, near the double-shell tank farms. It began operating in 1977, and can treat up to 1 million gallons and free up about 500,000 gallons each time it runs a campaign.

Before processing waste through the 242-A Evaporator, the tank waste is analyzed to meet the waste acceptance criteria. This information determines how the waste will behave during and after the evaporation process. The condensate is captured and sent to the nearby Liquid Effluent Retention Facility for further treatment and disposal.

Key changes in this modification are to update:

- Tank waste sampling approach in the Waste Analysis Plan.
- Preparedness and prevention measures.

### **PUBLIC INVOLVEMENT ACTIONS**

Ecology's NWP encouraged public comment on the Class 2 permit modification for the 242-A Evaporator during a 60-day public comment period held September 18 through November 17, 2013.

It is the permittee's responsibility [WAC 173-303-830 (4)(b)] to hold a comment period and public meeting for Class 2 permit changes. The permittee is the U.S. Department of Energy (USDOE). USDOE mailed a notice announcing the comment period to the 2,031 interested members of the public on the postal list. The permittee featured the comment period on its website, and NWP provided a clean version and a redline-strikeout version on the NWP comment period website.

The permittee placed an advertisement in the *Tri-City Herald* on September 18, 2013. A notice announcing the start of the comment period was sent to the Hanford-Info email list, which then had 1,196 recipients.

The permittee held a public meeting on October 23, 2013. Three members of the public attended, but did not submit any comments.

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

- Public notice.
- Transmittal letter.
- USDOE request for a temporary authorization.
- 242-A Evaporator permit change form.
- Draft 242-A Evaporator Permit Modifications.
  - Waste Analysis Plan
  - Procedures to Prevent Hazards

The following public notices for this comment period are in Appendix A of this document:

1. Public notice (focus sheet).
2. Advertisement in the *Tri-City Herald*.
3. Notices sent to the Hanford-Info email list.

NWP's letter to USDOE documenting the final permit modification decision is in Appendix C.

## RESPONSE TO COMMENTS

Ecology accepted comments from September 18 until November 17, 2013. We received three sets of comments, all via email. This section shows all the comments that we received during the public comment period and our responses in accordance with RCW 34.05.325(6)(a)(iii). The comments are shown in their original format in Appendix B.

### Comment 1- Ed Boettcher

Comment to chapter 6, procedures to prevent hazards.

Section 6.2.2.4 alternative leak detection during electrical/ventilation outages.

If use of a camera is used instead of the designed leak detection have all the considerations been given to the camera installed to be explosion proof in case of hydrogen gas release and meeting all the requirements of the NFPA electrical standards for hazard classification?

And if so what documents have been presented and all USQ questions have not been over looked with engineering change notice to the fact of hydrogen gasses.

*Response: Leak detection for the Condenser Room is normally performed via a visual inspection as part of the rounds performed by 242-A Operations personnel and not via designed leak detection, see Section 6.2.2, and Table 6.1 for "Visual Inspection Schedule for Tanks, Piping, and Rooms." Section 6.2.2.4 is meant to address periods when personnel access into the Condenser Room is limited for electrical and/or ventilation outages or other external events.*

*While hydrogen gas generation can be a concern with the chemistry of the Double Shell Tank (DST) waste, DST waste is not processed in the Condenser Room and therefore the camera is not exposed to an environment in which hydrogen gas is a concern. In addition, Section 6.2.2.4 states that using the camera for the visual inspection in lieu of Operations personnel is only when access is limited because of electrical or ventilation shutdowns. Outages are only planned when DST waste is not being processed within the 242-A Evaporator.*

*The Unreviewed Safety Question (USQ) is part of a program that is administered by the U.S. Department of Energy's contractor to comply with safe operations of nuclear facilities managed under the guidance of USDOE. It is not subject to the authority of the Washington State Department of Ecology. It should be noted that the DOE along with its contractor have taken additional steps to ensure continued safe operations of the 242-A Evaporator with the installation of a safety instrumented system to support recent changes to the 242-A Evaporator Documented Safety Analysis (DSA).*

### Comment 2 - Ed Boettcher

Waste transfer in pipe systems that have secondary containment with leak detection being tested from the probes inside the containment system back to the monitoring system after being taken out and reinstalled from first installation like presses testing lines? And if so what data support this.

*Response: The requirements for testing the leak detection probes are based on manufacturer's recommendations for the system and/or engineering judgment.*

*Washington Administrative Code (WAC) 173-303-640(3) contains requirements for new tank systems and components, including piping. All new tanks and components must be tested for tightness (pressure tested) before being placed into use. WAC 173-303-640(4) contains the requirements for containment and detection of releases.*

*Installation and maintenance of the probes is carried out by the skilled workers who maintain the systems at the 242-A Evaporator.*

*Information related to the TraceTek® mini probes can be found at the following web address:*

*[http://www.tycothermalcontrols.com/assets/Americas/English/Document/Datasheets/5565/H80585\\_MiniProbe\\_DSh\\_0411.pdf](http://www.tycothermalcontrols.com/assets/Americas/English/Document/Datasheets/5565/H80585_MiniProbe_DSh_0411.pdf)*

*Information on the TraceTek® TTDM-128 control module that the probes are connected to can be found at the following web address:*

*[http://www.tycothermalcontrols.com/assets/Americas/English/Document/Installation%20Operation%20and%20Maintenance%20Manuals/1729/H56853\\_TTDM-128\\_OM\\_0810.pdf](http://www.tycothermalcontrols.com/assets/Americas/English/Document/Installation%20Operation%20and%20Maintenance%20Manuals/1729/H56853_TTDM-128_OM_0810.pdf)*

*TraceTek®, the manufacturer of the probes that are installed, states, "... system reliability and integrity are ensured because the TT-MINI-PROBE is designed to be an integral part of the leak detection sensor circuit. Any damage to the TT-MINI-PROBE will be immediately detected by the alarm module," (i.e., the TTDM-128). (NOTE: Tyco and TraceTek are registered trademarks of Tyco Thermal Controls, 7433 Harwin Drive, Houston, Texas 77036)*

### **Comment 3 - Ed Boettcher**

The use of camera with the human factor not mechanical factor?

*Response: The inspection for the Condenser Room has always been a visual whether performed by Operations personnel during the performance of rounds or using the camera. There are no electro-mechanical leak detectors installed in the Condenser Room.*

### **Comment 4 - Ed Boettcher**

Catholic [*sic*] protection testing for piping system that feed the evaporator and is in contact with the ground had the proper paper work turned into the state that meet the EPA standards? Like qualified people testing the system with the right certification over the years? If so what document prove this.

*Response: The feed piping to the 242-A Evaporator is part of the DST waste transfer system and is not part of this public comment and review period. The 242-A Evaporator Permit chapter, Section 6.2.2.5 Cathodic Protection, states that cathodic protection is not required for the equipment within the 242-A Evaporator facility boundaries. This is because the piping and associated systems are not in contact with soil and therefore do not require the use of a Cathodic Protection system to provide corrosion protection [see WAC 173-303-640(3)(a)(iii)]. The PC-5000 line, which leaves the 242-A facility to connect with the Liquid Effluent Retention Facility*

*(LERF) basins, is made of fiberglass, and therefore does not require cathodic protection. See WAC 173-303-640(3)(a)(B)(I).*

*Information on the general boundaries between the double-shell tank (DSTs) system and 242-A Evaporator can be found in the Part A forms for the 242-A Evaporator and the DST system on the NWP permitting website. Information on the 242-A Evaporator Integrity Assessments (see accession numbers DA02818716 and DA0805290319) and the DST System Integrity Assessments (see accession numbers DA02818716, DA02192907, and DA02193212) can be found in the Administrative Record or the Hanford Facility Operating Record, 242-A Evaporator Unit-Specific Portion.*

**Comment 5: Carl Holder**

Please expedite approval of this modification to the waste permit. Evaporation of liquids in tank waste is useful and has proven very effective. And it is safe.

*Response: Thank you for your comment. Ecology agrees that evaporation of liquids in tank waste is useful and effective.*

**Comment 6: Barbara Harper**

A presentation by Cascade regarding the gas pipeline included a statement that a major user of the gas will be the 242A evaporator, but that a gas-to-steam plant would have to be built.

Can you verify whether this is accurate?

Who is a POC at Ecology to ask about natural gas use in the Central Plateau?

*Response: Thank you for your interest in the 242-A Evaporator permit changes. USDOE published a notice of intent to prepare the Natural Gas pipeline Environmental Impact Statement on January 23, 2012. There has been no decision on the natural gas pipeline. If a Record of Decision is issued on the Natural Gas pipeline then any changes that are required would go through appropriate permitting process. At this time, there is no Ecology point of contact.*

**LIST OF COMMENTERS**

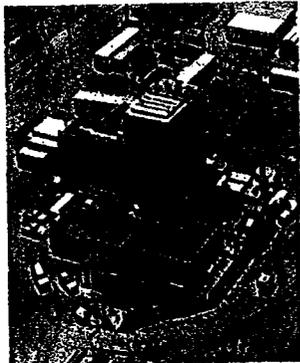
The table below lists the names of organizations or individuals who submitted a comment on the 242-A Evaporator Permit modification and where you can find Ecology’s response to the comment(s).

Commenter	Organization	Comment Number	Page Number
Boettcher, Ed	Member of the public	1 through 4	10-11
Holder, Carl	Member of the public	5	11
Harper, Barbara	Confederated Tribes of the Umatilla Indian Reservation	6	11

## **APPENDIX A: COPIES OF ALL PUBLIC NOTICES**

Public notices for this comment period:

1. Public notice (fact sheet).
2. Advertisement in the *Tri-City Herald*.
3. Advance notice sent to the Hanford-Info email list.
4. Notice sent to the Hanford-Info email list.



**Public Comment Period on Proposed Updates to Hanford Facility Dangerous Waste Permit for the**

## **242-A Evaporator**

*Class 2 modifications are periodic updates to the Hanford Facility Dangerous Waste Permit, such as response to new regulations, process improvements, and variations in waste types or quantities. All Class 2 changes require Ecology approval.*

*The U.S. Department of Energy-Office of River Protection (DOE-ORP) is holding a 60-day comment period (beginning September 19, 2013) on proposed Class 2 modifications to the Hanford Facility Dangerous Waste Permit. These changes involve the 242-A Evaporator. In addition, the DOE-ORP is requesting that the Washington State Department of Ecology (Ecology) grant a Temporary Authorization prior to close of the comment period. We want your input!*

### **Background**

Proposed Class 2 modifications involve Treatment, Storage, and Disposal units in Part III (Unit-Specific Conditions for Operating Units) of the Hanford Facility Dangerous Waste Permit. The proposed modifications include updates to two chapters of the 242-A Evaporator portion of the permit. Key changes include updating:

- The tank waste sampling approach in the Waste Analysis Plan
- Preparedness and prevention measures

Prior to processing waste through the 242-A Evaporator, located in the 200-East Area of the Hanford Site, the tank waste is analyzed to meet the waste acceptance criteria. This information is used to determine how the waste will behave both during and after the evaporation process. The condensate is captured and sent to the nearby Liquid Effluent Retention Facility for further treatment and disposal. This process reduces the volume of liquid waste stored in Hanford's 28 underground double-shell tanks.

The permittee's compliance history during the life of the permit being modified is available from the Department of Ecology contact person Kristi Wold ((509) 372-7985 or [Hanford@ecy.wa.gov](mailto:Hanford@ecy.wa.gov)). Copies of the proposed permit modification, supporting documentation, and temporary authorization request are available at:

U.S. DOE  
Public Access Room  
2440 Stevens Center, Room 1101  
Richland, WA 99352  
(509) 376-2530  
<http://www5.hanford.gov/arpir/>

Washington State Department of Ecology  
Nuclear Waste Program  
Resource Center  
3100 Port of Benton Blvd  
Richland, WA 99354  
(509) 372-7950



washingtonriver  
protectionsolutions

*See reverse for additional contact info*

Figure 1 Public notice (page 1 of 2).

*continued from reverse*

University of Washington  
Suzzallo Library  
Government Publications Division  
Box 352900  
Seattle, WA 98195  
(206) 543-5597  
[www.lib.washington.edu/govpubs/](http://www.lib.washington.edu/govpubs/)

Portland State University  
Branford Price Millar Library  
Science and Engineering Floor  
1875 SW park Avenue, P.O. Box 1151  
Portland, OR 97207  
(503) 725-4542  
<http://library.pdx.edu>

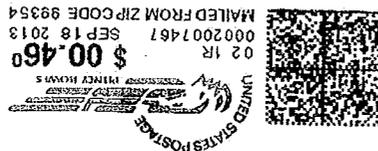
Gonzaga University  
Foley Center  
502 E. Boone Ave.  
Spokane, WA 99258  
(509) 313-6110  
[www.gonzaga.edu/Academics/Libraries/Foley-Library/](http://www.gonzaga.edu/Academics/Libraries/Foley-Library/)

DOE Public Reading Room  
Washington State University, Tri-Cities  
Consolidated Information Center, Room 101-L  
2770 University Drive  
Richland, WA 99352  
509-375-3308  
<http://reading-room.pnnl.gov/>

**How you can become involved**

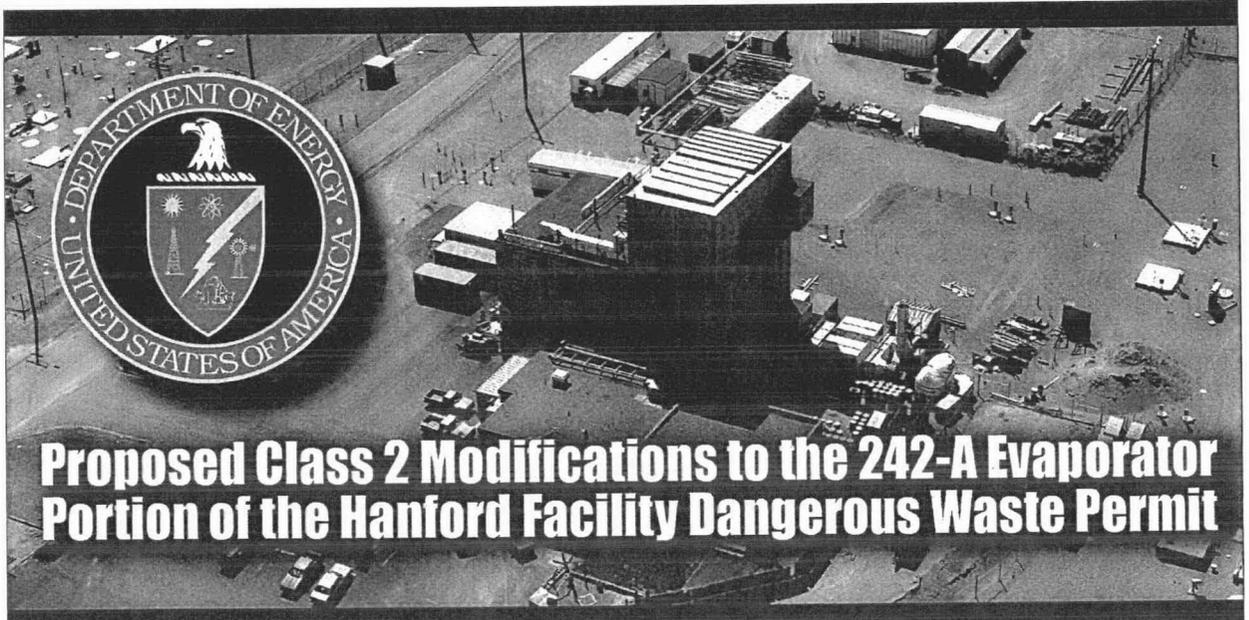
A 60-day public comment period on *proposed Class 2 modifications to the Hanford Facility Dangerous Waste Permit* will run from September 19 through November 17, 2013. A public meeting will be held October 23, 2013 at 6 p.m. at the Richland Public Library, 955 Northgate Drive, Richland, WA. Please submit comments by November 17, 2013 to:

Kristi Wold, Washington State Department of Ecology Nuclear Waste Program  
3100 Port of Benton Blvd  
Richland, WA 99354  
Email: [Hanford@ecy.wa.gov](mailto:Hanford@ecy.wa.gov)



242-A Evaporator Proposed Class 2 Modifications  
U.S. Department of Energy  
Office of River Protection  
P.O. Box 450, H6-60  
Richland, WA 99352

Figure one Public notice (page 2 of 2).



**Proposed Class 2 Modifications to the 242-A Evaporator  
Portion of the Hanford Facility Dangerous Waste Permit**

The U.S. Dept. of Energy, Office of River Protection, is holding a 60-day public comment period beginning Sept. 19, 2013, on proposed modifications to two chapters of the 242-A Evaporator portion of the permit. These chapters address tank waste sampling approach in the Waste Analysis Plan and preparedness and prevention measures.

To view the proposed modifications and/or submit comments, contact:  
Kristi Wold: Washington State Dept. of Ecology;  
3100 Port of Benton Blvd.; Richland, WA 99354.  
by Nov. 17, 2013

You may also provide comments at a public meeting at 6 p.m. on Oct. 23, 2013,  
at the Richland Public Library, 955 Northgate Dr., Richland, WA.

For more information, email [Hanford@ecy.wa.gov](mailto:Hanford@ecy.wa.gov) or call 1-800-321-2008.

Figure 2 Display Advertisement in the Tri-City Herald.

**From:** ^TPA  
**To:** [HANFORD-INFO@LISTSERV.WA.GOV](mailto:HANFORD-INFO@LISTSERV.WA.GOV)  
**Subject:** This is a message from the U.S. Department of Energy  
**Date:** Tuesday, August 06, 2013 4:15:34 PM

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**Upcoming Public Comment Period on Proposed Class 2 Permit  
Modifications  
for the 242-A Evaporator**

The U.S. Department of Energy plans to hold a 60-day public comment period on proposed modifications to the Hanford Facility Dangerous Waste Permit.

These Class 2 modifications update several chapters of the 242-A Evaporator portion of the permit. Key changes include updating:

- The tank waste sampling approach in the Waste Analysis Plan
- Process information describing the 242-A Evaporator
- Preparedness and prevention measures
- Emergency planning.

These permit modifications are necessary to prepare for 242-A Evaporator campaigns beginning in fall 2013 to reduce the volume of Hanford's tank waste and make more double-shell tank space available for waste retrieval from other tanks.

Class 2 modifications apply to updates to the permit. All Class 2 Hanford Dangerous Waste Permit changes require public review and Washington State Department of Ecology approval.

The comment period for these modifications is expected to begin in late August 2013. For more information, email [Hanford@ecy.wa.gov](mailto:Hanford@ecy.wa.gov) or call 1-800-321-2008.

Figure 3 Advance notice sent to the Hanford-Info email list.

**From:** ^TPA  
**To:** HANFORD-INFO@LISTSERV.WA.GOV  
**Subject:** This is a message from the US Department of Energy about an upcoming public comment period  
**Date:** Thursday, September 19, 2013 4:26:55 PM

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### **Public Comment Period on Proposed Class 2 Modifications to the 242-A Evaporator Portion of the Hanford Facility Dangerous Waste Permit**

The U.S. Department of Energy –Office of River Protection (DOE-ORP) is holding a 60-day public comment period (beginning September 19, 2013) on proposed Class 2 modifications to the 242-A Evaporator portion of Hanford Facility Dangerous Waste Permit. In addition, the DOE-ORP is requesting that the Washington State Department of Ecology (Ecology) grant a Temporary Authorization prior to close of the comment period.

These proposed Class 2 modifications update two chapters of the 242-A Evaporator portion of the permit. Key changes include updating:

- The tank waste sampling approach in the Waste Analysis Plan
- Preparedness and prevention measures

Prior to processing waste through the 242-A Evaporator, the tank waste is analyzed to meet the waste acceptance criteria. This information is used to determine how the waste will behave both during and after the evaporation process. The evaporation process reduces the volume of liquid waste stored in Hanford's 28 underground double-shell tanks.

The permittee's compliance history during the life of the permit being modified is available from the Department of Ecology contact person. The name and telephone number of the permittee are:

Lori Huffman, Department of Energy, Office of River Protection  
(509) 376-0104

#### **How you can become involved:**

A 60-day public comment period on proposed Class 2 modifications to the Hanford Facility Dangerous Waste Permit will run from September 19, 2013 through

Figure 4 Notice sent to the Hanford-Info email list (page 1 of 2).

November 17, 2013. A public meeting will be held on October 23, 2013 at 6:00 p.m. at the Richland Public Library, 955 Northgate Drive, Richland, WA.

Additionally, the proposed Class 2 modifications are available for review at the Public Information Repositories (PIRs). A list of PIRs can be found at: <http://www2.hanford.gov/arpir/>.

Please send your comments by November 17, 2013 to:

Kristi Wold

Washington State Department of Ecology, Nuclear Waste Program

3100 Port of Benton Blvd.

Richland, WA 99354

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

For more information, email [Hanford@ecy.wa.gov](mailto:Hanford@ecy.wa.gov) or call 1-800-321-2008.

Figure 4 Notice sent to the Hanford-Info email list (page 2 of 2).

## APPENDIX B: COPIES OF ALL WRITTEN COMMENTS

### Comments from Ed Boettcher

From: Ed Boettcher  
Sent: Thursday, October 31, 2013 6:06:43 AM (UTC-08:00) Pacific Time (US & Canada)  
To: Hanford (ECY)  
Subject: 242-A Evaporator preparedness and prevention measures comments on permit changes.

Comment to chapter 6, procedures to prevent hazards.

1. Section 6.2.2.4 alternative leak detection during electrical/ventilation outages.

If use of a camera is used instead of the designed leak detection have all the considerations been given to the camera installed to be explosion proof in case of hydrogen gas release and meeting all the requirements of the NFPA electrical standards for hazard classification ?

And if so what documents have been presented and all USQ questions have not been over looked with engineering change notice to the fact of hydrogen gasses.

2. Waste transfer in pipe systems that have secondary containment with leak detection being tested from the probes inside the containment system back to the monitoring system after being taken out and reinstalled from first installation like presses testing lines ? And if so what data support this.

3. The use of camera with the human factor not mechanical factor ?

4. Cathodic protection testing for piping system that feed the evaporator and is in contact with the ground had the proper paper work turned into the state that meet the EPA standards ? Like qualified people testing the system with the right certification over the years?

If so what document prove this.

I would like to see all document that have answers to my questions because this effects the public interests.

**Comment from Carl Holder**

**From:** Carl Holder

**Sent:** Sunday, September 22, 2013 8:57:01 AM (UTC-08:00) Pacific Time (US & Canada)

**To:** Hanford (ECY)

**Subject:** 242-A Public Comment

Please expedite approval of this modification to the waste permit. Evaporation of liquids in tank waste is useful and has proven very effective.

And it is safe.

Carl Holder

PO Box 1316

Pasco, WA 99301

## Comment from Barbara Harper

**From:** Barbara Harper

**Sent:** Wednesday, October 23, 2013 2:46:15 PM (UTC-08:00) Pacific Time (US & Canada)

**To:** Hanford (ECY)

**Subject:** Question about the 242-A evaporator and natural gas

A presentation by Cascade regarding the gas pipeline included a statement that a major user of the gas will be the 242A evaporator, but that a gas-to-steam plant would have to be built.

Can you verify whether this is accurate?

Who is a POC at Ecology to ask about natural gas use in the Central Plateau?

Thanks

Barbara Harper

CTUIR

The opinions expressed by the author are his or her own and are not necessarily those of the Confederated Tribes of the Umatilla Indian Reservation. The information, contents and attachments in this email are Confidential and Private.



## APPENDIX C: ECOLOGY LETTER DOCUMENTING FINAL PERMIT DECISION



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

3100 Port of Benton Blvd • Richland, WA 99354 • (509) 372-7950  
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

January 10, 2014

14-NWP-008

Mr. Kevin W. Smith, Program Manager  
Office of River Protection  
United States Department of Energy  
PO Box 450, MSIN: H6-60  
Richland, Washington 99352

Mr. L. David Olson, President  
& Project Manager  
Washington River Protection Solutions  
PO Box 850, MSIN: H6-63  
Richland, Washington 99352

Re: Approval, with Changes, for the Proposed Class 2 Modification to the *Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste* (Hanford Facility RCRA Permit), Operating Unit Group 4, 242-A Evaporator

Reference: See page 2

Dear Mr. Smith and Mr. Olson:

The Department of Ecology (Ecology) is approving, with changes (see enclosure), your request for a Class 2 Modification to the 242-A Evaporator (Reference) in accordance with Washington Administrative Code (WAC) 173-303-830(4)(b)(vi)(B)(I). This permit modification approval applies to the Hanford Facility RCRA Permit, Revision 8C. It does not modify the draft Revision 9 permit.

Comments were received during the public comment period for the permit modification. The Response to Comments document is enclosed and is available at the Ecology Nuclear Waste Program Office. No additional changes to the 242-A Evaporator modification resulted from responses to the public comments.

Please provide Ecology with two clean copies of the affected addenda, with changes incorporated, by letter, within 30 days. These copies will be used to update the hard copy Hanford Facility RCRA Permit. We also request an electronic copy of the same addenda be submitted within 30 days to Andrea Prignano, Site-Wide Dangerous Waste Permit Coordinator.

Ecology requires the United States Department of Energy – Office of River Protection and Washington River Protection Solutions to address the enclosed changes and submit these to us as Class 1 Permit Modifications in accordance with WAC 173-303-830, Appendix I, A. I. Administrative and Informational Changes, during the first quarter (January through March) of calendar year 2014.

Mr. Smith and Mr. Olson  
January 10, 2014  
Page 2

14-NWP-008

If there are any questions, please contact Kristi Wold, 242-A Evaporator Permit Lead, at [Kristi.Wold@ecy.wa.gov](mailto:Kristi.Wold@ecy.wa.gov) or (509) 372-7985, or Andrea Prignano, Site-Wide Dangerous Waste Permit Coordinator, at [Andrea.Prignano@ecy.wa.gov](mailto:Andrea.Prignano@ecy.wa.gov) or (509) 372-7911.

Sincerely,



Suzanne Dahl  
Tank Waste Treatment Section Manager  
Nuclear Waste Program

kw/tkb  
Enclosures (2)

Reference: Letter 13-ECD-0073, dated September 11, 2013, from K. W. Smith, USDOE-ORP and L. D. Olson, WRPS, to J. A. Hedges, Ecology, "Transmittal of Class 2 Modification to the Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit Operating Unit Group 4, 242-A Evaporator (Treatment, Storage, and Disposal Unit: T-2-6) and Request for Temporary Authorization"

cc electronic w/enc:

Dave Bartus EPA  
Dennis Faulk, EPA  
Mary Beth Burandt, USDOE  
Lori Huffman, USDOE  
Ron Koll, USDOE  
James Hamilton, WRPS  
Steve Killoy, WRPS  
Tony Miskho, WRPS  
Brian Von Bargaen, WRPS  
Robert Wilkinson, WRPS  
Ken Niles, ODOE  
Andrea Prignano, Ecology  
Kristi Wold, Ecology  
USDOE-ORP Correspondence Control

cc w/enc:

Steve Hudson, HAB  
Administrative Record:  
242-A Evaporator, T-2-6  
Environmental Portal  
WRPS Correspondence Control

cc w/o enc:

Stuart Harris, CTUIR  
Gabriel Bohnee, NPT  
Russell Jim, YN

Item	Page #	Ecology Required Changes to Permit Modification Request
1	Page 4-3.2, line 12	<p><b>Comment:</b> The last sentence states that the description of the waste processed by the 242-A Evaporator is described in Section 3.4. Section 3.4 is "Process Description." It appears the reference should be Section 3.5.</p> <p><b>Justification:</b> Incorrect reference.</p> <p><b>Required change:</b> If appropriate, change the reference to Section 3.5</p>
2	Page 4-3.5, line 28	<p><b>Comment:</b> Appears there is an extra space between F001 –F005.</p> <p><b>Justification:</b> Editorial correction</p> <p><b>Required change:</b> Remove extra space.</p>
3	Page 4-3.6, line 39	<p><b>Comment:</b> Inclusion of comma implies that text is missing between "Ammonia" and "volatile organic?"</p> <p><b>Justification:</b> Editorial .</p> <p><b>Required change:</b> Remove comma.</p>
4	Page 4-3.9, Figure 3.2	<p><b>Comment:</b> There is no explanation of why Figure 3.2 is included in the Waste Analysis Plan (WAP) as is provided for other figures. It is unclear why this figure is included and what it is trying to demonstrate.</p> <p><b>Justification:</b> Ecology cannot determine the purpose for this figure.</p> <p><b>Required change:</b> Add call out and explanation for the figure in text.</p>
5	Page 4-3.9, Figure 3.2, block 3	<p><b>Comment:</b> Figure 3.2 includes a step: "Develop a Sampling and Analysis Plan for Candidate Feed Tank(s) to demonstrate compliance with the WAP reside." Explanatory text is necessary to understand the purpose of this step in the figure.</p> <p><b>Justification:</b> Text is not consistent with the figure.</p> <p><b>Required change:</b> Reference reader to location of text associated with this step. If text is not included in this WAP, add it and specify preparation of this plan as indicated in the figure.</p>
6	Page 4-3.17, Table 3.5, Category "other"; Analyte "mixing and compatibility study; Method	<p><b>Comment:</b> Text states: "Solution from each sample are mixed ..." Subject/verb do not agree, therefore it is unclear whether solutions from each sample mixed or a solution for each sample is mixed? It appears there is a mixture of solutions.</p> <p><b>Justification:</b> Clarity. Subject/verb agreement</p> <p><b>Required change:</b> Correct subject/verb agreement. Correct table.</p>