



DEPARTMENT OF
ECOLOGY
State of Washington

Response to Comments

**Modification of the *Hanford Facility*
Resource Conservation and Recovery Act
Permit for the Treatment, Storage, and
Disposal of Dangerous Waste, Part III,
**Operating Unit Group 10 (WA7890008967)
Waste Treatment and Immobilization Plant
Effluent Management Facility Secondary
Containment
8C.2017.1D****

May 22, 2017 through July 7, 2017

Summary of a public comment period and responses to comments

September 2017
Publication no. 17-05-006

PUBLICATION AND CONTACT INFORMATION

This publication is available on the Department of Ecology's (Ecology) website at <https://fortress.wa.gov/ecy/publications/SummaryPages/1705006.html>

For more information contact:

Dan McDonald, Tank Waste Treatment Project Manager
Nuclear Waste Program
3100 Port of Benton Boulevard
Richland, WA 99354

Phone: 509-372-7950

Email: Hanford@ecy.wa.gov

Washington State Department of Ecology - 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 Comments

Modification of the *Hanford Facility Resource Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of Dangerous Waste, Part III, Operating Unit Group 10 (WA7890008967) Waste Treatment and Immobilization Plant Effluent Management Facility Secondary Containment 8C.2017.1D*

May 22, 2017 through July 7, 2017

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

This page is purposely left blank.

TABLE OF CONTENTS

Introduction.....	1
Reasons for Issuing the Permit	1
Public Involvement Actions.....	3
List of Commenters.....	4
Attachment 1: Comments and Responses	
Appendix A: Copies of All Public Notices	

This page is purposely left blank.

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, NWP holds a public comment period to allow the public to review the change and provide formal feedback. (See [Washington Administrative Code \[WAC\] 173-303-830](#) for types of permit changes.)

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

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

This Response to Comments is prepared for:

Comment period: Effluent Management Facility Secondary Containment, 8C.2017.1D
May 22, 2017 through July 7, 2017

Permit: *Hanford Facility Resource Conservation and Recovery Act (RCRA)
Permit for the Treatment, Storage, and Disposal of Dangerous Waste,
Part III, Operating Unit Group 10 (WA7890008967), Waste Treatment
and Immobilization Plant*

Permittees U.S. Department of Energy, Office of River Protection (USDOE-ORP)
and Bechtel National Inc. (BNI)

Original issuance date: September 27, 1994

Effective date: October 5, 2017

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

REASONS FOR ISSUING THE PERMIT

The Effluent Management Facility (EMF) is being built to support the Direct Feed Low Activity Waste (DFLAW) configuration. The EMF allows for the processing of effluent waste from the Low Activity Waste Facility and Analytical Laboratory prior to the operation of the High Level Waste and Pretreatment Facilities. This DFLAW configuration feeds waste directly from the Low Activity Waste Pretreatment System Facility to the Low Activity Waste Facility.

When the High Level Waste and Pretreatment facilities become operational, the Waste Treatment Plant will change to the baseline configuration. It is anticipated that when the Waste Treatment Plant is operating in the baseline configuration, EMF will not be operated. However, it will remain in standby until the treatment of the waste has been completed.

DFLAW operations are designed to operate for ten years. This allows time to resolve technical issues with the high level waste and pretreatment processes and finish the construction of those facilities.

This proposed permit modification addresses the design and construction of the secondary containment systems for the permitted tanks, vessels, miscellaneous units, and ancillary equipment in the EMF. There are five permitted secondary containment systems in the EMF located at the (-) 39' and 0' elevations. The secondary containment systems are provided with sloped liners to direct any liquids to secondary containment sumps.

All secondary containment systems meet [WAC 173-303-640\(4\)](#) waste removal criteria. The secondary containment systems are capable of detecting and collecting a release of liquid and include nine permitted secondary containment sumps.

The secondary containment systems satisfy [WAC-173-303-640\(4\)](#) leak detection criteria, and all secondary containment systems are designed and will be operated to contain 100% capacity of the largest dangerous or mixed waste tank or vessel within its boundary.

This modification is applicable to three buildings (listed below) and a stack at EMF.

- Process (Building 25)
- Low Point Drain (Building 25A)
- Utility (Building 26)

This proposed permit modification consisted of:

- Revised Part A
- Revised and new permit chapters
- Revised and new appendices, which include:
 - Process Flow Diagrams
 - Piping and Instrument Diagrams
 - General Arrangement Drawings
 - Civil, Structural and Architectural Criteria and Typical Details
 - Engineering Specifications
 - Material Selection Specifications
 - Independent, Qualified, Registered, Professional Engineer (IQRPE) report
 - Instrument Control Logic
 - Operating Documents

PUBLIC INVOLVEMENT ACTIONS

Ecology and the Permittees encouraged public comment on the proposed EMF Secondary Containment Class 3 Modification (8C.2017.1D) during a 45-day public comment period held May 22, 2017, through July 7, 2017.

The following actions were taken to notify the public:

- Mailed a public notice announcing the comment period to 1,465 interested members of the public.
- Distributed copies of the public notice to members of the public at Hanford Advisory Board meetings.
- Placed a public announcement legal classified advertisement in the *Tri-City Herald* on May 21, 2017.
- Sent a notice announcing the start of the comment period to the [Hanford-Info email list](#), which has 1,450 recipients.

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
- Statement of Basis for the proposed 8C.2017.1D Permit Modification
- Draft Permit Modification 8C.2017.1D

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

1. Statement of Basis
2. Focus Sheet
3. Classified advertisement in the *Tri-City Herald*
4. Notice sent to the Hanford-Info email list

LIST OF COMMENTERS

Commenter Identification:

The table below lists the names of organizations or individuals who submitted a comment on the EMF Secondary Containment Permit modification (8C.2017.1D). The comments and responses are in Attachment 1.

Commenter	Organization
Anonymous	Citizen
Mike Conlan	Citizen
Scott Kiffer	Citizen
Confederated Tribes and Bands of the Yakama Nation	Tribal

ATTACHMENT 1: COMMENTS AND RESPONSES

Description of Comments:

Ecology accepted comments from May 22, 2017 through July 7, 2017. This section contains the 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.

Comment from: Anonymous Citizen

I-1-1

DESIGN THAT AFFECTS SECONDARY CONTAINMENT IS INCOMPLETE.

In order to have a defensible design for the effluent management facility secondary containment, it is important to understand the composition of the fluids that might leak to it. The means understanding the processes that occur in the Process Building. In the current permit change proposal (Statement of Basis, page 15), DOE/Bechtel submitted to Ecology for inclusion in the administrative record documents

24590-BOF-M3-V17T-00001001 and 24590-BOF-M3-V17T-00001002, Effluent Management Facility Process Flow Diagrams Process Stream Tables, Rev 0, (Systems DEP and DVP). In addition, DOE/Bechtel submitted, to be part of the Permit, four Process Flow Diagram Drawings, 24590-BOF-M5-V17T-00011, 12, 13, and 14.

Ecology should note that the process stream data tables in 24590-BOF-M3-V17T-00001001 and 24590-BOF-M3-V17T-00001002 contain "TBD" as an entry 957 times. And "TBD" is entered at least once for stream properties for 60 of the 63 streams identified. This many "TBD" entries indicate the design cannot be complete because ORP/Bechtel do not understand the process conditions or chemistry. How were the drawings identified as Rev 0, ready for construction? Should they be Rev A, Preliminary?

In the Statement of Basis File, DOE/Bechtel provided a document to the administrative record, CCN-293458, that is identified as Overview of the Effluent Management Facility Process Design (Mass Balance). This is not the actual title. The actual title is "Overview of the Effluent Management Facility Process Design Update (Supersedes CCN 290401)." This document is only a list of assumptions and procedures. It takes the approach of "trust us, we combined a lot of spreadsheets." It does not provide adequate mass balance information. This report in no way allows evaluation of the DFLAW/EMF flow sheet. The feed tanks in the tank farms are not even identified. As a result, the quality of the data is indeterminate. Further, this document notes that "TBD" was deliberately used in the process flow diagrams to indicate where vendor information is MISSING and will be added later, during the design process. So by definition, the design is incomplete, and evaluation of chemistry against the materials selected for secondary containment is indeterminate. The process corrosion "data" must be questioned in light of the incomplete understanding of the process. CCN-293458 notes that corrosion control chemicals are to be added - and the identity of the chemicals and the amounts are not specified.

I-1-2

ALL WTP PROCESS FLOW DIAGRAMS SHOULD HAVE DATA TABLES

As shown above, process flow diagrams cannot be understood without having the chemical and physical properties provided in the data tables. Ecology should consider requiring the PFD data tables to be provided in the permit for the EMF and also/or every single PFD at WTP. Having the data tables associated together with the PFD drawings is a standard industry practice, according to information at the American Institute of Chemical Engineers Center for Chemical Process Safety, which uses the diagrams and data tables in the room during chemical hazards and operability studies. This combination was done previously for the ETF.

I-1-3

THE MATERIALS SELECTION DOCUMENT FOR EMF SECONDARY CONTAINMENT IS VAGUE

The permit modification request includes document 24590-WTP-PER-M-02-001, Rev 4, Material Selections for Building Secondary Containment/Leak Detection. The criteria in this document are inadequate. The word "chloride" is never mentioned, and the secondary containment for the EMF may be exposed to considerably corrosive solutions. The liner materials selected may not be robust enough. ORP/Bechtel commit to "flushing" liners if a spill is detected. This is an after the fact response (administrative control), not a safe by design liner. And there is no guarantee that a slow drip of corrosive solution will not occur - a drip that is never detected at a sump. The liner material may be inadequate. How does the liner material compare to the materials selected for the process equipment? How can the process equipment or the secondary equipment be specified when the flow sheet has 957 TBD entries?

I-1-4

RELIANCE ON ORP/BECHTEL CORRECTIVE ACTIONS IS IMPROPER

Ecology described in the Response to Comments document (Ecology Publication 17-05-003) that Ecology intends to continue to "engage" with the permittees to ensure that vulnerabilities and other issues are being addressed appropriately and corrective actions are being implemented. Ecology further referred to "improvements" in the WTP Quality Assurance and Corrective Action Management Plan. The plans and promises are ineffective, based on considerable past experience. As a result, safety problems and expensive rework have occurred over and over. Please see enclosed a sampling of the history of OIG, enforcement, and GAO reviews, which indicate that the improvement plans, which were cited frequently, did not and do not result in better work products. The design is incomplete, and Ecology should not accept "plans" as a means to approve this permit.

I-1-5

ECOLOGYS CONCLUSION THAT THERE IS NO FRAUD IS INCORRECT

Ecology stated in the Response to Comments (Publication 17-05-003) that "simply put, there is no fraud ... " This statement has no basis. Only a Court/Jury can make the legal determination that no fraud occurred or continues to occur at WTP. DOE and Bechtel avoided having the determination of whether there is fraud at WTP, by settling the

Fraudulent Claims Act Case (2:13-cv-05013-EFS) for a payment of \$125,000,000, before there could be a trial and judgment. As stated by the GAO2: "As part of the settlement agreement, the contractors admitted no wrongdoing, and the United States did not concede that its claims were not well founded ." The vulnerability and reality of fraud continue to exist for the EMF and its equipment. The taint remains.

On May 26, 2017 the ORP Chief of Staff emailed ORP staff to pass along the ORP Manager's advice regarding the value of professional legal liability insurance. This email noted that DOE would pay up to half the cost of the insurance for managers and supervisors.

2 See GAO-17-235, Department of Energy- Use of Leading Practices Could Help Manage the Risk of Fraud and Other Improper Payments, March 2017.

I-1-6

IMPACTS TO TANK FARM CORROSION ARE IGNORED

In order to have a defensible design for the effluent management facility, it is important to understand whether operation of the EMF will adversely impact other portions of the permitted facilities. Document RPP-RPT-59257 , Evaluation of EMF Evaporator Down Time Returns to Tank Farms shows that, when the EMF is offline, the EMF Evaporator Feed may be pumped to the tank farms, in order to keep the LAW melter running. This document advises that that Tank Farms reserve a minimum of 250,000 gallons of space to receive "corrosion controlled" EMF feed, and that planning should assume frequent periods when this will occur However, CCN-295275, from a March 27, 2017 meeting, shows that the corrosion impacts to the tank farms are not known. The impacts on the tank farms and the RPP System Planning, including the amounts and types of corrosion control chemicals needed are not known. The volume of waste returned to the tank farms could actually be greater, especially if the unknown corrosion chemical additions are included.

RPP-RPT-59257 and CCN-295275 show that DOE has no actual and complete provision for processing the feed to the EMF when the EMF is not operable . DOE is planning to dump the EMF evaporator feed to the tank farms when the EMF is out of service. The Tank Farms have not received this type of waste before. The EMF feed includes vitrification off-gas scrubber waste. If the EMF evaporator feed is not dumped to the tank farms during down times, the WTP will not be able to meet its contractual obligation to operate at least 70% of the time. The problems of cobbling together new processes such as LAWPS and EMF are fundamental and serious.

CCN-293458 further includes an alternate route to dispose of EMF evaporator concentrate to the tank farms, without identifying the impact to tank farms corrosion rates and risk. The concentrate contains even higher concentrations of chloride than the evaporator feed. DOE has not figured out the consequences to the DSTs or to DFLAW or to Pretreatment or HLW due to the return of these corrosive streams to the tank farms. Why construct something for which the process development work is so

woefully incomplete? How much more sodium will be added to the waste to control corrosion? How much more volume in total? What is the impact to the length and risk of operations?

There are several documents in the attached list that point out the risk of pursuing construction when there is inadequate process development. There is no pilot plant for the EMF. No evaporator test data are available to show successful evaporation of submerged bed scrubber bottoms and other off-gas streams. No corrosion tests have been conducted on the yet to be defined EMF process streams.

I-1-7

LIFE CYCLE FLOW SHEET IMPACTS ARE UNKNOWN

In order to have a defensible design for the effluent management facility secondary containment, it is important to have a complete understanding of the flow sheet for the life of the WTP, not just the next 10 years. What happens when the DFLAW removes millions of gallons of supernatant from the DSTs, such that the solution that was planned to transfer the HLW solids to PT is removed and its chemistry altered? The HLW was supposed to be a 10wt% slurry, with 90% being LAW feed. What are the consequences? To corrosion when the nitrates are selectively removed? To operations? To safety? What are the consequences of leaving void spaces for longer than intended in the old SSTs and DSTs? What is the increasing risk of subsidence? What are the consequences to the bases being used now to redesign HLW and PT? Will the re-designs need to be re-designed yet again to meet QA for the post-DFLAW chemistry impacts? Based on past experience - there will be unplanned and expensive rework to come.

I-1-8

A SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT IS NEEDED

The DFLAW Baseline Change, which de-couples Pretreatment and HLW from DFLAW is not in any form evaluated in the Tank Closure and Waste Management EIS. This is NOT among the alternatives analyzed. Therefore the unintended consequences and risks are NOT ANALYZED in the EIS. There is no system plan that shows the inexorable change in the chemistry of the WTP feed due to the early removal of LAW without the transfer of HLW. Ecology has said no update to the EIS is needed, but Ecology has not at all demonstrated which scenarios in the EIS provide coverage for this fundamental change or for the unnecessary exposure of workers. The TC&WM EIS does not evaluate the risk to workers as the tank farms processes cesium over and over and dumps it back to the tank farms to keep it out of DFLAW.

The TC& WM EIS does not evaluate the risks of the proposed packaging and potential offsite shipment of solidified EMF bottoms (a novel waste), or the impacts of this novel material when transferred to the tank farms. The risks and costs of implementing DFLAW are not in the EIS. The TC&WM EIS alternatives address only an integrated and simultaneous processing of HLW and LAW via Pretreatment.

An addendum to the EIS is required. No further construction of the EMF, which is specific to the DFLA W configuration, should occur until this action is evaluated in an EIS. DOE has adopted 40 CFR Parts 1500 to 1508 for the purposes of compliance with the National Environmental Policy Act (NEPA). The Council on Environmental Quality requires that, if an agency has made a substantial change in a proposed action that is relevant to environmental concerns, or if there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts, a supplemental EIS must be prepared for an old EIS so that the agency has the best possible information to make any necessary substantive changes in its decisions regarding the proposal. See 40 CFR Section 1502.9(c).

The TC&WM EIS does not account for the change in risk or for the beyond belief increase in costs. Even now; the Tank Farms LAWPS facility to treat tank waste to feed DFLAW has increased in total project cost from \$470 Million to \$680 - \$740 Million. ORP and Bechtel's considerable underestimate of the total project cost for LAWPS was documented in a letter from DOE HQ on May 22, 2017, based on an annual independent review.

The added LAWPS costs are in addition to the increase of \$4.6 Billion in costs for LAW vitrification. Similarly increased costs to complete PT and HLW are a reality and but are not documented. And they are likely to be the same or greater, billions of dollars more each.

Per 40 CFR 1500.1(b) NEPA procedures must ensure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. No supplemental EIS is available for the impacts of DFLAW to the ORP Life Cycle and mission. EMF and LAWPS construction should stop. ORP overstepped its authority in implementing the DFLAW decision.

I-1-9

ECOLOGY'S COMPLIANCE AGREEMENT WORSENS RISK

Ecology's response to prior comments on this subject indicates that Ecology's primary concerns are for (a) emptying tanks, and (b) vitrifying any part of the waste. Ecology has abandoned any pretense of concern regarding risk, and Ecology has abandoned any pretense of concern over the failure of integration of safety in the design, and the failure to address the indeterminate and shoddy quality of this project, which puts people at risk. A new EIS analysis is needed, and it should include new alternatives that include immediate filling of void spaces in the SSTS, followed by installation of robust barriers, as has been done in a couple of places already. Performance assessments show that these barriers are effective. The whole WTP architecture of the TC&WM EIS is out of date due to the irresponsible pursuit of DFLAW, and it is time to go back to the drawing board. This is supported by the enclosed list of documents. GAO noted in 2002 that it is not clear if the compliance agreements will be used to oppose DOE's latest initiative to focus on accelerating risk reduction (GAO-02-852T).

The SSTs and DSTs should be evaluated for closure under CERCLA as a landfill, without emptying the waste from them. This would be the least risk, the least cost, and the safest for the workers and the environment. Ecology's preference for all-glass exceeds the delegation to implement RCRA regulations. Nowhere in the RCRA regulations does it say that Ecology chooses the waste form for Hanford. Political manipulation of the waste form selection to require a high temperature process has created the "most complex project ever," as is frequently mentioned in requests for funds. Political selection of the waste form also increases the vulnerability to fraud and it has helped in the mismanagement \$19B to date (See GAO-17-306).

I-1-10

DOE OVERSIGHT CONTINUES TO FAIL TO SERVE THE PUBLIC

DOE has cherry picked what reviews will be performed. On May 2, 2017, the DOE Office of Inspector General abruptly cancelled a planned audit of quality records at WTP. Further, the OIG has postponed a review of commercial grade dedication (CGD) for three years, according to their annual planning documents. Failure of commercial grade dedication to provide a sound basis that safety functions will be met was an issue resulting in a \$170,000 fine in 2010, per a 2010 Consent Order, that noted this was a repeat issue from 2007. And the problems have continued, with subsequent ORP QA Findings for inadequate CGD. Yet the OIG is absent, despite noting in 2010, that: if there is a recurrence of nuclear safety deficiencies similar to those identified above, the Office of Enforcement may decide to pursue additional enforcement action. See pages 24-25 of the enclosed list.

Ecology has a firm basis to reject claims that DOE/ORP oversight and Bechtel corrective actions will make the EMF and the EMF secondary containment safe to start up and operate.

Response to: Anonymous Citizen

I-1-1

Ecology believes all of the necessary design and technical information has been provided to support the Effluent Management Facility (EMF) Secondary Containment Modification. As part of the standard permitting process Ecology performs a completeness determination and an extensive technical deficiency evaluation. Ecology's review identified areas where additional design and technical detail were needed. In order to track and document the technical deficiencies, Ecology added Appendix 1.4, Interim Compliance Schedule - WTP Effluent Management Facility (EMF), to the permit. The addition of the EMF Interim Compliance Schedule will ensure the Permittees provide Ecology with the additional design documents and associated technical information on an agreed upon schedule. The Interim Compliance Schedule items detailed in Appendix 1.4 will need to be met prior to operation of the EMF.

I-1-2

The Permittees are not required by the Washington Administrative Code (WAC) regulations to include data tables in their Process Flow Diagrams.

I-1-3

WAC-173-303-640(4) requires that secondary containment vault areas be provided with an impermeable interior coating or lining that is compatible with the stored waste in order to prevent the migration of waste into the concrete. The Effluent Management Facility vault areas are being designed to meet the WAC requirement. Stainless steel cell liners are used in inaccessible areas or in areas where a potential spill of waste would require a higher level of corrosion protection. The vaults will be resistant to caustic solution corrosion consistent with the Materials Selection for Building Secondary Containment/Leak Detection (24590-WTP-PER-M-02-001) in the Dangerous Waste Permit Appendix 7.9.

I-1-4

Issues identified concerning the Office of Inspector General or the General Accounting Office are outside the scope of this modification. Ecology is not involved in the interactions between Department of Energy and these departments. Ecology maintains oversight of WTP activities associated with the Dangerous Waste Permit and will continue to meet with and engage the Permittees regarding the vulnerabilities identified in Condition Reports, the existing Design and Operability Reviews, and outstanding Technical Issues.

I-1-5

Ecology is not involved in the Department of Energy's litigation or interactions with the U.S. General Accounting Office.

I-1-6

Evaluation of corrosion impacts to equipment at the Tank Farms is outside the scope of this modification. The impacts of corrosion on the Tank Farm tanks will be assessed by the Tank Farms, and is part of the Double Shell Tank (DST) Waste Acceptance Criteria.

Each facility operating under the Direct-Feed Low-Activity Waste (DFLAW) configuration will maintain acceptance criteria for waste being received at their facility. Chemical parameters such as corrosivity are considered when a facility is establishing their waste acceptance criteria. Waste generated by WTP will need to meet the waste acceptance criteria of the receiving facility, before it can be shipped.

Over the 10-year estimated operations of DFLAW, WTP is forecasted to treat

approximately 20 million gallons of waste. WTP is projected to return approximately one million gallons of liquid waste to the DSTs. Half of the waste is expected to be generated from LAW offgas effluent and the remainder is estimated to be made up of corrosion conditioning chemicals. The Permittees are continuing to perform studies with the intention of reducing the amount of waste returned to the DSTs.

I-1-7

The evaluation of impacts to the Single Shell Tanks, Double Shell Tanks, and other facilities is outside the scope of the modification.

The Department of Energy and its contractors are assessing the Integrated Flowsheets and waste feed criteria under the DFLAW and baseline configurations. The results of these evaluations will be reflected in the WTP operating permit.

I-1-8

The Department of Energy evaluated the DFLAW concept in the Final Tank Closure and Waste Management EIS and concluded that it was bounded by the analysis in Alternative 2B.

I-1-9

Ecology is working to ensure that long-term storage, treatment and disposal of the waste is protective of human health and the environment. The DFLAW configuration will support the project's ability to vitrify waste as early as 2023. Thereby, reducing the risk associated with liquid waste in the Tank Farms.

The Department of Energy evaluated the DFLAW concept in the Final Tank Closure and Waste Management EIS and concluded that it was bounded by the analysis in Alternative 2B. Any necessary engineering or administrative measures required for the Tank Farms will be documented and evaluated separate from this permit modification.

I-1-10

Ecology is not involved in the Department of Energy's (DOE) interactions with the DOE Office of Inspector General. As stated in previous response to comment documents DOE performed an audit of the Commercial Grade Dedication (CGD) program in 2015 that resulted in a change to the WTP CGD program. At the end of the DOE audit, several actions were identified, resulting in the development of a new program that aligns with the DOE requirements.

Compensatory measures were put in place until Subject Matter Experts were identified, vendor documentation was resubmitted, and required procedures were revised. This is a

DOE requirement and the DOE has determined that the revised CGD program has been successfully implemented. WTP Project is continuing to implement the Commercial Grade Dedication Program developed by BNI, and approved by DOE.

Oversight of Bechtel is a requirement of the Department of Energy under Federal Acquisition Requirements.

Documentation that is provided to Ecology to support the permitting of the EMF Facility is independently reviewed and evaluated by Ecology to determine if the necessary regulatory requirements are met prior to issuance of a permit.

Comment from: Mike Conlan

I-2-1

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

Response to: Mike Conlan

I-2-1

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

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

Single-shell tanks are not in the scope of this comment period. Ecology does agree the tanks pose a threat. We believe a better approach to addressing it is to remove the waste from the single-shell tanks and put it in the compliant double-shell tanks to prepare for eventual treatment in the Waste Treatment Plant now being built. The construction and operation of the Effluent Management Facility is a positive step to eventual treatment of tank waste currently stored at Hanford. Stopping any potential nuclear waste from impacting the Columbia River is not within the scope of the WTP Permit. Prevention of groundwater and surface water impacts are addressed in operations associated with other units.

Comment from: Scott Kiffer

I-3-1

Ecology and the WTP Permittees are violating The False Claims Act (FCA), 31USC §3729(a)(1)(C); ORP and its Contractors are violating Federal Acquisition Regulations (FAR), 48 CFR 52.236-25; ORP Contractors and their Subcontractors are violating Washington State

Engineering Statutes, RCW 18.43.105; and the Director of Ecology is violating RCW 18.43.120.

As a result, the Washington State Hazardous Waste Management Program cannot provide adequate enforcement of compliance to environmental regulations in the design of new hazardous waste facilities at the DOE Hanford site for the WTP, as required by the applicable sections of RCRA and CERCLA.

Response to: Scott Kiffer

I-3-1

Ecology permitting reviews all application material to ensure that the application meets Washington State Regulations and the requirements of the Hanford Dangerous Waste Permit to protect our air, land and water.

WTP is meeting Permit Condition II.L.2.e by providing design specification documents with their permit modifications. These specifications are included as appendices to the WTP Dangerous Waste Permit.

Consistent with Permit Condition III.10.E.9.b.i, IQRPE Reports provide the technical information on which the certification is based.

As stated in the Fact Sheet, Ecology is continuing with the phased permitting approach as originally intended for WTP. Modifications to the existing WTP Permit will be made, as appropriate, to accommodate the DFLAW process.

Comment from: Confederated Tribes and Bands of the Yakama Nation

I-4-1

YN ERWM appreciates the clarifications to our prior comments as provided in the Responsiveness Summary. However, we are somewhat disappointed. Acknowledgement of the apparent value of the comment but non-incorporation of these responses within the documents per our requests seemingly indicates an unwillingness to take the time to present a best effort Permit (e.g. multiple responses: Thank you for your comment. It will be kept under consideration for a future revision and incorporated if applicable.) We also noted there were many technically astute comments provided by others, especially those related to design, risk or safety concerns that we felt were not robustly addressed. In the future, we hope these types of concerns will be responded to with more depth.

We remain in objection with the inclusion of any language within any of the WTP supporting documents stating Ecology's agreement with the permitting and approval for long-term storage of TRU waste on the Hanford site.

I-4-2

- Edit III.10.M.5.g to include required compliance with WAC 173-303-640(4)(b)(ii) & 173-303-640(4)(b)(iii & iv) Condition III.10.M.5.j is appropriate, but nothing compels the Permittee to design to meet these WACs as they proceed with design. The Compliance Schedule does require submittals for these, but to comply with the Permit it must be within the Conditions of the Permit, not just the Compliance Schedule.

- Edit III.10.M.5.g to state required compliance with WAC 173-303-640(4)(d).

- Edit III.10.M.5.g to include required compliance with WAC 173-303-640(4)(e). YN does not support the use of 'special coatings' for those areas containing Miscellaneous Unit equipment. The Permittee cannot just jump to use of WAC 173-303-640(4)(e)(ii)(C) without obtaining a variance. This is not a vault system. See WAC 173-303-640(4)(g & h).

- Edit III.10.M.5.g to include required compliance with WAC 173-303-640(4)(f).

- Edit III.10.M.5.g to clarify where within the Permit Conditions compliance with WAC 173-303-810(14) is met.

I-4-3

Edit III.10.M.9. Compliance Schedule to include dates if feasible.

I-4-4

Clarify why Effluent Management Facility Miscellaneous Treatment Unit Subsystems Table 6A-6 'Inspection' and 'Frequency' columns are not populated. YN requests 'Frequency' to be daily for these.

I-4-5

Delete any discussions of new treatment standards to Hanford tank wastes within the WTP WAP. This needs to be fully vetted by the public prior to any preparation of a petition by WTP staff.

I-4-6

Ecology's use of Guidance for Preparing Waste Sampling and Analysis Documents and QA/QC Requirements at Nuclear Waste Sites should not hinder use of its Omnibus Authority to require additional sampling (i.e. aliquots of split samples for WTP analysis) prior to waste acceptance at the DFLAW facility or the identification of designation of secondary waste stream disposal and treatment path. YN requests Ecology edit the WTP WAP to include this additional sampling requirements and the identification of designation of secondary waste stream disposal and treatment paths.

I-4-7

Clarify how there is ensured EMF operations and coordination with LAW Permit Conditions (e.g. III.10.H.5.f).

Response to: Confederated Tribes and Bands of the Yakama Nation

I-4-1

We are sorry to hear that you feel Ecology did not adequately address some of the comments you provided on the Waste Analysis Plan (WAP) during the first public comment period for this Class 3 Modification. As noted in the Response to Comment document, Ecology has developed an Interim Compliance Schedule for the EMF. Interim Compliance Schedule Item EMF-3 requires WTP to "Update and submit for approval the Waste Analysis Plan and associated Quality Assurance Project Plan (Chapter 3A and 3B) to Ecology for review and approval." This Interim Compliance Schedule Item will need to be completed prior to operations of the facility. The comments provided specific to the WAP will be reviewed, evaluated, and addressed at that time.

Ecology appreciates the Yakama Nation's position regarding long term storage of TRU waste at Hanford. There is no language included in this permit modification that makes reference to Ecology's permitting and/or approval of long-term storage of TRU waste on the Hanford Site.

I-4-2

The Permittees are required to design Treatment, Storage, and Disposal facilities in accordance with all applicable WAC requirements. Permit Condition III.10.M.9.b.ii requires the Permittees to follow WAC 173-303-640(4)(b) through (f). Your requested edit has already been addressed in this EMF specific permit condition (III.10.M.9.b.ii). The Permittees are compelled and required to comply with their permit conditions.

Permit Condition III.10.M.5.g applies to Miscellaneous Treatment Units and WAC 173-303-640(4)(d) is a requirement specific to Tank Systems. Permit Condition III.10.M.9.b is specific to the secondary containment and leak detection requirements for the EMF Miscellaneous Unit and requires compliance with WAC 173-303-640, in accordance with WAC 173-303-680.

The Permittees are not pursuing a variance, and Permit Condition III.10.M.5.h requires impermeable coatings for all tank systems.

Permit Condition III.10.M.5.g applies to Miscellaneous Treatment Units and WAC 173-303-640(4)(f) is a requirement specific to Ancillary Equipment. Permit Condition III.10.M.9.b is specific to the secondary containment and leak detection requirements for the EMF Miscellaneous Unit and requires compliance with WAC 173-303-640, in accordance with WAC 173-303-680.

Compliance with WAC 173-303-810(14) is addressed in Permit Condition III.10.C.2.a, which applies to all WTP facilities.

I-4-3

Compliance Schedule dates are identified in Appendix 1.4, Interim Compliance Schedule - WTP Effluent Management Facility (EMF).

I-4-4

We appreciate the Yakama Nation's suggestion for inspection frequencies. In order to meet Interim Compliance Schedule Item EMF-4, Permittees will have to populate Table 6A-6 for Inspection Schedules.

I-4-5

The text included in the WAP Section 3A.6 is not new language to the WTP Permit. Ecology agrees, all proper regulatory requirements will be followed to ensure that any new treatment standards are reviewed and approved prior to incorporation into the WTP Permit.

I-4-6

Please see Chapter 3B, Quality Assurance Project Plan (QAPP) for Waste Analysis Plan for more information on the characterization of the waste feed and the characterization of secondary waste streams. As required by Appendix 1.4, Interim Compliance Schedule Item, EMF-3 the Waste Analysis Plan and associated Quality Assurance Project Plan will need to be updated and submitted for Ecology for review and issued for public comment prior to operation of the EMF. In order to ensure Quality Assurance and Quality Control, Ecology has the authority to request split samples at the facility.

I-4-7

Coordination between the LAW and EMF facilities will be ensured via the Permittee submittal of LAW and EMF Operating Permit Modifications. Ecology and the public will have an opportunity to review how the Permittees will ensure safe and compliant operations of the DFLAW configuration.

APPENDIX A: COPIES OF ALL PUBLIC NOTICES

Public notices for this comment period:

1. Statement of Basis
2. Focus Sheet
3. Classified advertisement in the *Tri-City Herald*
4. Notice sent to the Hanford-Info email list



DEPARTMENT OF
ECOLOGY
State of Washington

STATEMENT OF BASIS

**Proposed Permit Modification of the
*Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste
Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste,
Part III, Operating Unit Group 10, Waste Treatment and Immobilization Plant,
WA7890008967***

May 2017

This page intentionally left blank.

STATEMENT OF BASIS

Proposed Permit Modification of the *Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste,* Part III, Operating Unit Group 10, Waste Treatment and Immobilization Plant, WA7890008967

Permittees

United States Department of Energy
Office of River Protection
PO Box 450
Richland, Washington 99352

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

The Washington State Department of Ecology (Ecology) developed this Statement of Basis to fulfill the requirements of Washington Administrative Code (WAC) 173-303-840(2)(f)(iv).

The Statement of Basis provides information on Ecology's decision to modify the *Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste*, Part III, Operating Unit Group 10, Waste Treatment and Immobilization Plant (WTP), hereafter called the "WTP Permit."

This permit modification includes supporting technical information and engineering drawings for the design and construction of the secondary containment of the Effluent Management Facility (EMF) within the WTP.

The EMF is being built to support the Direct Feed Low Activity Waste (DFLAW) configuration. The EMF allows for the processing of waste at the Low Activity Waste (LAW) Vitrification Facility and Analytical Laboratory to start prior to the operation of the High-Level Waste (HLW) and Pretreatment (PT) Facilities. This DFLAW configuration feeds waste directly from the Low-Activity Waste Pretreatment System (LAWPS) to the LAW Facility. When the PT and HLW Vitrification facilities become operational, WTP will change to the baseline configuration. When the WTP is operating in the baseline configuration, it is anticipated that the EMF will not be operated. However, it will remain in standby until the treatment of the waste has been completed. DFLAW operations are designed to operate for ten years. This allows time to resolve technical issues with the HLW and PT processes and finish the construction of those facilities.

This proposed permit modification incorporates technical detail in the chapters within the WTP Permit. Ecology has drafted an Interim Compliance Schedule for EMF that is specific to the design, construction and eventual operations of the facility. Ecology has also drafted associated permit conditions and included them with this draft modification. Additionally, the appendices and figures have been revised, supporting information has been incorporated and format changes have been addressed where needed, in this modification.

Ecology chose to prepare a Statement of Basis as described in WAC 173-303-840(2)(f)(iv), rather than a Fact Sheet.

We prepared a Statement of Basis for previous major WTP permit modifications. This process will be followed for all permit modifications that incorporate similar design package information and other changes to the WTP Permit Conditions.

This Statement of Basis is divided into four sections:

- 1.0 Hanford Facility Resource Conservation and Recovery Act Permit (Site-wide Permit).
- 2.0 The WTP Permitting Process.
- 3.0 Procedures for Reaching a Final Decision on the Draft WTP Permit Modification.
- 4.0 Proposed Modifications to the WTP Permit.

Also included at the end of the Statement of Basis is a table, listing the design documents and drawings submitted by the permittees for incorporation into the WTP Permit.

1.0 HANFORD FACILITY RESOURCE CONSERVATION AND RECOVERY ACT PERMIT (SITE-WIDE PERMIT)

Ecology issued the Site-wide Permit in 1994. The Site-wide Permit provides standard and general facility conditions, as well as unit-specific conditions for the operation, closure, and post-closure care of mixed and dangerous waste Treatment, Storage, and Disposal (TSD) units at Hanford.

Approximately 40 TSD units are operating or closing under Resource Conservation and Recovery Act final status standards.

Conditions of the Site-wide Permit are presented in six parts:

- Part I Standard Conditions.
- Part II General Facility Conditions.
- Part III Unit-Specific Conditions for Final Status Operating Units.
- Part IV Corrective Action for Past Practice Units.
- Part V Unit-Specific Conditions for Units Undergoing Closure.
- Part VI Unit-Specific Conditions for Units in Post-Closure.

The WTP TSD Unit was added to Part III of the Site-wide Permit on September 25, 2002. The WTP Permit portion was effective on October 25, 2002. The WTP TSD Unit is currently being constructed under final permit status standards.

The Washington State Dangerous Waste Regulations in WAC 173-303-830 describe the types of changes or modifications that may be made to a Dangerous Waste Permit issued by Ecology.

The WTP Permit is modified as needed, typically one or more times a year, to incorporate Class 1, ¹1, 2, and 3 modifications; Agency-Initiated modifications; and minor changes in grammar, consistency, and presentation.

2.0 THE WTP PERMITTING PROCESS

The Permittees and Ecology are using a phased (or stepped) approach to permit the WTP TSD Unit. The first phase was completed on September 25, 2002, with issuance of a final Dangerous Waste Permit allowing construction of the LAW, PT, HLW, LAB, and BOF facilities to start.

This second phase of permitting is included in the compliance schedule, and requires the Permittees to submit design and other information for Ecology approval before regulated portions of the WTP TSD Unit are constructed.

A WTP Interim Compliance Schedule for the United States Department of Energy provides Ecology additional detailed information addressing the submittal of design documents necessary to support construction of the rest of the WTP TSD Unit, and its eventual operation.

The third phase of permitting is implementation of the last portion of the compliance schedule. This requires updating portions of the Dangerous Waste Permit Application and then modifying the WTP Permit prior to facility start-up operations. These portions (for example, Contingency Plan, Closure Plan, and Training Plan) of the WTP Permit are operational in nature and cannot be completed before the design is nearly complete.

When the three phases of permitting are completed, the WTP TSD Unit will comply with all the applicable requirements of WAC 173-303. Then, after receiving written permission from Ecology, the Permittees can begin treatment and storage of dangerous and mixed waste at the WTP.

Originally, the design submittals (second permitting phase) were structured to allow the Permittees to provide design information in roughly the same order as the WTP facilities are constructed.

The design packages start at the base level of the facilities (below-grade levels) and are submitted for regulated areas of each level before construction begins. This process was adjusted for some design packages. When the facility process systems are installed on more than one level, the design packages will address the associated components for each level. This prevents confusion caused by one process system description being segmented into multiple design packages.

The WTP Permit organizes design packages into three general groups by the type of regulated equipment:

1. Primary containment (i.e., tanks, miscellaneous units [evaporators and melters], and containment buildings).
2. Secondary containment.
3. Other associated regulated equipment (i.e., ancillary equipment, equipment associated with miscellaneous units, and instrumentation).

Using tank systems as an example, secondary containment packages include details of the design of secondary containment that must be in place in regulated areas when the floors and walls are built for that level of each facility (for example, the floor slope, and sump locations).

The installation of tanks and other large equipment usually follows construction of the floors and walls. Therefore, a tank package on that level will be included in the WTP Permit before installation. The tank package would contain, for example, structural details for those tanks or miscellaneous units showing nozzle locations, unit volumes, and tank shell thickness.

The last equipment usually installed on a level for a tank system is the ancillary equipment (for example, piping, pumps, process instrumentation, and electrical equipment). Therefore, the ancillary equipment package provides details for the equipment on that level that will be included in the WTP Permit before installation. Information in the package would include, for example, materials of construction, and pump types and their operating limits.

Because each WTP facility consists of multiple levels, many design packages are required. Of the estimated 180 design packages needed for WTP, approximately 40 remain to be incorporated in the WTP Permit.

The WTP Permit allows Permittees to reference previously submitted design information, therefore some design packages may consist mostly of references to information already provided.

The Effluent Management Facility (EMF) is an additional facility that is being incorporated into the WTP Operating Unit Group 10. Therefore, it will be permitted in the same phased approach as the rest of the WTP TSD Units and will have an associated Interim Compliance Schedule specific to the EMF. This draft modification is limited to the design and construction of the secondary containment of the EMF.

3.0 PROCEDURES FOR REACHING A FINAL DECISION ON THE DRAFT WTP PERMIT MODIFICATION

The Washington State Hazardous Waste Management Act (Chapter 70.105, Revised Code of Washington) and the rules declared in WAC Chapter 173-303 regulate the management of dangerous waste in Washington State. WAC 173-303-800 requires facilities that treat, store, and/or dispose of dangerous waste to obtain a permit for these activities.

Regulatory requirements for public notice and involvement on permit modifications are described in WAC 173-303-840(3) and (4). On November 28, 2016 the permittees submitted a Class 3 permit modification request to Ecology for the Secondary Containment of the EMF, which included updated chapters, appendices and design documents. The Permittees held a public comment period from November 28, 2016 through January 27, 2017. The Permittees also held a public meeting on January 9, 2017 at the Richland Public Library.

After review of the USDOE Class 3 permit modification, Ecology issued a completeness review letter on February 3, 2017 in accordance with WAC 173-303-830(4)(c)(vi) and WAC 173-303-840(1)(b) identifying the issues that were incomplete and the technical deficiencies. Additionally, Ecology issued letter on March 31, 2017 in accordance with WAC 173-303-840(1)(b). After working with the Permittees to resolve the items that were incomplete and the technical deficiencies, Ecology proceeded with drafting the permit to support a second public comment period.

Public comments from the Permittees' comment period are addressed by Ecology in a response to comments document. This response to comments document accompanies the draft permit modification. The response to comments document associated with this USDOE 60-day public comment period is available online at <http://ecy.wa.gov/programs/nwp/commentperiods.htm>.

As required by WAC 173-303-840(3)(d), draft modifications to the WTP Permit will have at least a 45-day public comment period. The public comment period for this proposed permit modification begins on May 22, 2017, and ends on July 7, 2017.

Comments must be post-marked, received by e-mail, or hand-delivered no later than close of business (5:00 p.m. PST) July 7, 2017. Direct all written comments to:

Mandy Jones
Washington State Department of Ecology
3100 Port of Benton Blvd.
Richland, Washington 99354

Electronic comment link: <http://wt.ecology.commentinput.com/?id=56Thj>

In accordance with WAC 173-303-840(10)(c), when a permit is modified, only the conditions subject to modification are open for comment. All other aspects of the existing Permit remain in effect for the duration of the modification.

Ecology will consider and respond to all written comments on this permit modification submitted by the deadline. Ecology will then make a final permit decision, which will become effective 30 days after Ecology provides notice of the decision to the Permittees and to all who commented. If the final decision includes substantial changes to the WTP Permit because of public comment, we will initiate a new public comment period.

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

Joanna Morse
Washington State Department of Ecology
(509) 372-7880
E-mail address: hanford@ecy.wa.gov

After completion of the 45-day public comment period, Ecology will provide a response to comments document and a notification of the final permit decision to the Permittees and all others who commented. The final permit decision may be appealed within 30 days after issuance of that decision.

Copies of the WTP Permit, including the proposed permit modification, are available for review at the NWP Resource Center, USDOE Administrative Record, and Hanford Public Information Repositories. For additional information call (509) 372-7950 or email hanford@ecy.wa.gov.

Administrative Record

Richland

Washington State Department of Ecology
Nuclear Waste Program Resource Center
3100 Port of Benton Boulevard
Richland, Washington 99354
Contact: Teresa Booth (509) 372-7950

United States Department of Energy
Administrative Record
2440 Stevens Drive
Richland, Washington 99354
Contact: Heather Childers (509) 376-2530

Hanford Public Information Repositories

Richland

United States Department of Energy
Reading Room
2770 Crimson Way, Room 101L
Richland, Washington 99354
Contact: Janice Parthree (509) 375-3308

Portland

Portland State University
Branford Price Millar Library
1875 Southwest Park Avenue
Portland, Oregon 97207
Contact: Claudia Weston (503) 725-4542

Seattle

University of Washington
Suzzallo Library
PO Box 352900
Seattle, Washington 98195
Contact: Hilary Reinert (206) 543-5597

Spokane

Gonzaga University
Foley Center
502 East Boone Avenue
Spokane, Washington 99258
Contact: John Spencer (509) 313-6110

This Statement of Basis, Public Notice and information for the proposed permit modification is also available online at <http://www.ecy.wa.gov/programs/nwp/commentperiods.htm>. If special accommodations are needed for public comment, contact Ecology, at (509) 372-7950 or hanford@ecy.wa.gov.

4.0 PROPOSED MODIFICATIONS TO THE WTP PERMIT

This proposed permit modification contains the following engineering, design, and permitting detail. New or revised documents submitted with the modification are listed below. See Table 1 at the end of this document for the entire list of documents submitted by the Permittees to support this permit modification.

This proposed permit modification addresses the design and construction of the secondary containment systems that have been designed to hold the permitted tanks, vessels, miscellaneous units, and ancillary equipment that will be housed in the EMF. There are five permitted secondary containment systems in the EMF located at the (-) 39' and 0' elevations. The secondary containment systems are provided with liners that are sloped to direct liquids to secondary sumps. All secondary containment systems meet WAC 173-303-640(4) waste removal criteria. The secondary containment systems are capable of detecting and collecting a release of liquid and include nine permitted secondary containment sumps. All sumps have leak detection instrumentation with the ability to detect a release of liquid in the secondary containment system. The secondary containment systems satisfy WAC 173-303-640(4) leak detection criteria, and all secondary containment systems are designed and will be operated to contain 100% capacity of the largest dangerous or mixed waste tank or vessel within its boundary. This modification is applicable to the following buildings: the Process (Bldg. 25), Low Point Drain (Bldg. 25A) and Utility (Bldg. 26) buildings at the EMF.

This proposed permit modification consists of:

- New Interim Compliance Schedule Appendix 1.4 for EMF
- Revised Part A
- Revised Permit Conditions
- Revised Permit Chapters
- New Permit Chapters (Chapter 2 and Chapter 4G)
- Revised Appendices and new Appendix 13 which include:
 - Process Flow Diagrams
 - Piping and Instrument Diagrams
 - General Arrangement Drawings
 - Civil, Structural and Architectural Criteria and Typical Details
 - Engineering Specifications
 - Material Selection Specifications
 - Independent, Qualified, Registered, Professional Engineer (IQRPE) report
 - Instrument Control Logic
 - Operating Documents

4.1 Incorporation of Class 1 and Class ¹1 Permit Modifications (PCNs) and Permit Equivalency Notices (PENs)

Previously approved Class 1 and Class ¹1 PCNs and PENs are incorporated through the Quarterly Modifications. There will be no PCNs or PENs incorporated through this proposed modification.

4.2 Supplemental Design Information

Table 1 lists the design information included in this proposed permit modification and the proposed location in the WTP Permit. At issuance of the final WTP Permit, Ecology will specify where each drawing or report resides in the WTP Permit.

Paper copies of the page changes to the WTP Permit that result from this modification will be placed in the Administrative Record.

The letter issuing the final WTP Permit decision to the Permittees and Hanford contractors will include the current WTP Permit with the modifications on a DVD.

4.3 Identifying Changes in this Proposed Permit Modification

As the WTP TSD Unit is constructed, Ecology will modify the WTP Permit for many reasons, including to clarify text, add new conditions, delete existing conditions, correct errors, or add information. To communicate the changes, proposed permit modifications will include page changes showing all significant proposed changes to the WTP Permit. The text to be deleted will be struck-out with a single line, and the new text will be redlined. Only the text being changed in the current modification will be indicated by redlines and strikeouts.

Newly added documents and drawings are provided for review in this proposed permit modification. New document and drawing numbers and titles are shown in redline/strikeout text in the affected appendix drawing lists.

When a WTP Permit modification is issued, “clean” pages incorporating permit modifications will be issued to the Permittees and placed in the Administrative Record. All redlines and strikeouts will be removed. Documents and drawings listed in the appendices will not be redlined and will be incorporated by reference only.

Ecology publication number 07-05-006, *Responsiveness Summary* (September 27, 2007), explains the reason for replacing permit version documents with source documents to which the WTP is constructed. Source documents are in a state of constant revision as design details are finalized and additional information is added to provide clarity and to correct typographical errors.

The Permittees use Document Change Notices (DCNs) to track changes not yet incorporated into source documents. In some cases, DCNs are issued at the time of Ecology’s review. These are not provided for public comment, but will appear in the next revision of the WTP Permit for review. Source documents have been replacing permit version documents since September 2007.

This page intentionally left blank.

**Table 1 – Design Information Submitted by Permittees
For Incorporation into the WTP Permit
Table of Contents**

Document Title	Document Number	Revision	Permit Condition	Included	Remarks
Permit Chapters					
Chapter 1, Part A	N/A	3	173-303-806(4)(a) 173-303-806(4)(c) 173-303-806(4)(a)(i)	Y	Update to incorporate addition of EMF to the WTP
Chapter 2, Topographic Map	N/A	N/A	173-303-806(4)(a)(xviii)	Y	Update to incorporate addition of EMF to the WTP
Appendix 3A, Waste Analysis Plan	N/A	N/A	173-303-806(4)(a)(iii) 173-303-300(5)	Y	Update to incorporate addition of EMF to the WTP
Appendix 3B, Quality Assurance Project Plan	N/A	N/A	173-303-806 173-303-335	Y	Update to incorporate addition of EMF to the WTP
Chapter 4, Process Information	N/A	N/A	173-303-806(4)(a)	Y	Update to incorporate addition of EMF to the WTP
Chapter 4A, Figure and Drawings	N/A	N/A	173-303-806(4)(a)	Y	Update to incorporate addition of EMF to the WTP
Chapter 4E, LAW	N/A	N/A	173-303-806(4)(a)	Y	Update to incorporate addition of EMF to the WTP
Chapter 4G, EMF	N/A	N/A	173-303-806(4)(a)	Y	Update to incorporate addition of EMF to the WTP
Chapter 4H, Lab	N/A	N/A	173-303-806(4)(a)	Y	Update to incorporate addition of EMF to the WTP
Chapter 4I, BOF	N/A	N/A	173-303-806(4)(a)	Y	Update to incorporate addition of EMF to the WTP
Chapter 6, Procedures for Preventing Hazards	N/A	N/A	173-303-806(4)(a)(vii) 173-303-350	Y	Update to incorporate addition of EMF to the WTP
Chapter 6A, Inspection Schedule	N/A	N/A	173-303-806(4)(a)(v) 173-303-320	Y	Update to incorporate addition of EMF to the WTP
Chapter 7, Contingency Plan	N/A	N/A	173-303-806(4)(a)(viii)	Y	Update to incorporate addition of EMF to the WTP
Chapter 7A, Emergency Response	N/A	N/A	173-303-806(4)(a)	Y	Delete Chapter 7A, all content was incorporated into Chapter 7.
Chapter 8, Personnel	N/A	N/A	173-303-806(4)(a)(viii)	Y	Update to incorporate addition of EMF to the WTP

Document Title	Document Number	Revision	Permit Condition	Included	Remarks
Chapter 11, Closure Plan	N/A	N/A	173-303-806(4)(a)(xiii)	Y	Update to incorporate addition of EMF to the WTP
Appendix 7.5 - Civil, Structural and Architectural Criteria and Typical Details					
Permit Document – Secondary Containment Design	25490-WTP-PER-CSA-02-001	11	173-303-640(4)(c)	Y	To be incorporated into Appendix 7.5 (Replacing Rev. 10)
Appendix 7.7 – Engineering Specifications					
Engineering Specifications of field applied Special protective Coating	24590-WTP-3PS-AFPS-T0006	3	173-303-640-(3)(a) 173-303-806(4)(c)	Y	To be incorporated into Appendix 7.7 (Replacing Rev. 2).
Secondary Containment Areas					
Appendix 7.9 – Material Selection Documentation					
Permit Document – Material Selection for Building Secondary Containment/Leak Detection	24590-WTP-PER-M-02-001	4	173-303-806(4)(c)	Y	To be incorporated into Appendix 7.9 (Replacing Rev. 3).
Appendix 13.1 – Process Flow Diagrams					
Process Flow Diagram – Direct Feed Effluent Transfer (System DEP)	24590-BOF-M5-V17T-00011	0	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporated into Appendix 13.1
Process Flow Diagram – Direct Feed Effluent Evaporator System (System DEP)	24590-BOF-M5-V17T-00012	0	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporated into Appendix 13.1
Process Flow Diagram – Direct Feed Concentrate Transfer (System DEP and DVP)	24590-BOF-M5-V17T-00013	0	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporated into Appendix 13.1
Process Flow Diagram – Direct Feed Process Concentrate Transfer (System DEP)	24590-BOF-M5-V17T-00014	0	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporated into Appendix 13.1
Appendix 13.2 – Piping and Instrument Diagram (P&ID)					
P&ID – BOF/EMF Direct Feed LAW EMF – Process System Low Point Drain Vessel Pump - DEP-PMP-00001A/B	24590-BOF-M6-DEP-00001002	0	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporated into Appendix 13.2
P&ID – BOF/EMF Direct Feed LAW EMF – Process System – Process Area Sumps – DEP-SUMP-00002A/B	24590-BOF-M6-DEP-00009001	0	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporated into Appendix 13.2
P&ID – BOF/EMF Direct Feed LAW EMF – Process System – Process Vessel Area Sumps – DEP-SUMP-00004A/B	24590-BOF-M6-DEP-00009002	0	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporated into Appendix 13.2

Document Title	Document Number	Revision	Permit Condition	Included	Remarks
P&ID – BOF/EMF Direct Feed LAW EMF – Process System – Miscellaneous Sumps – DEP-SUMP- 00008	24590-BOF-M6-DEP-00009003	0	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporated into Appendix 13.2
P&ID – BOF/EMF Direct Feed LAW EMF – Process System – Process Area Sumps – DEP-SUMP-00003A/B	24590-BOF-M6-DEP-00009004	0	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporated into Appendix 13.2
P&ID – BOF/EMF Direct Feed LAW EMF – Process System – Process Area Sumps – DEP-SUMP-00005A/B	24590-BOF-M6-DEP-00009005	0	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporated into Appendix 13.2
P&ID – BOF/EMF Direct Feed LAW EMF – Process System – Effluent System Leak Detection DEP-LOB- 00001 Thru 00006	24590-BOF-M6-DEP-00011001	0	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporated into Appendix 13.2
P&ID – BOF/EMF Direct Feed LAW EMF Vessel Vent Process System DVP-EXHR-00001A/B	24590-BOF-M6-DVP-00001001	0	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporate into Appendix 13.2
BOF/EMF Buildings SDJ Plant Room V&ID Exhaust Stack Monitoring System	24590-BOF-M8-SDJ-00001	A	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporate into Appendix 13.2
Document Change Notices (DCNs)					
Document Change Notice – Miscellaneous Changes to Low Point Drain Vessel and P&ID	24590-BOF-M6N-DEP-00001 (issued against 24590-BOF-M6- DEP-00001002)	0		Y	To be incorporated into Appendix 13.2
Document Change Notice – Miscellaneous Title Changes and Removal of Auto/Manual on DEP-YC- 8650	24590-BOF-M6N-DEP-00007 (issued against 24590-BOF-M6- DEP-00009001/9003/9005)	0		Y	To be incorporated into Appendix 13.2
Document Change Notice – Addition, Removal, and Revision of Off sheet Connection for Leak Detection	24590-BOF-M6N-J21T-00002 (Issued against 24590-BOF-M6- DEP-00011001)	0		Y	To be incorporated into Appendix 13.2
Appendix 13.4 – General Drawings					
General Arrangement Plan – Balance of Facilities LAW Effluent Process BLDG. and LAW Effluent Drain Tank Bldg. General Arrangement Plan at Elevation 0FT – 0 IN	24590-BOF-P1-25-00001	0	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporated into 13.4

Document Title	Document Number	Revision	Permit Condition	Included	Remarks
Balance of Facilities LAW Effluent Utility Bldg. & LAW Effluent Electrical Bldg. General Arrangement Plan at Elev. 0'-0"	24590-BOF-P1-26-00001	0	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporated into 13.4
Balance of Facilities LAW Effluent Utility Bldg. & LAW Effluent Electrical Bldg. General Arrangement Sections A& B	24590-BOF-P1-26-00002	0	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporated into 13.4
Appendix 13.11 – Independent, Qualified, Registered Professional Engineer (IQRPE) Reports					
IQRPE Independent Assessment Report	24590-CM-HC4-HXYG-00240-02-0017	0	173-303-640(3)(a) 173-303-806(4)(c)	Y	To be incorporated into 13.11
Appendix 13.13 – Instrument Control Logic and Narrative Description					
Permit Document – System Logic Description for the Direct Feed LAW Effluent Management Facility Process System (DEP)	24590-BOF-PER-J-16-001	0	173-303-640(4)(c) 173-303-806(4)(c)	Y	To be incorporated into Appendix 13.13
Appendix 13.18 – Operating Documents					
Permit Document – Leak Detection Capability for EMF Facility	24590-BOF-PER-M-16-001	0	173-303-806(4)(c)	Y	To be incorporated into Appendix 13.18
Permit Document – Waste Removal Capacity for the Direct Feed LAW Effluent Management Facility (EMF)	24590-BOF-PER-M-16-002	0	173-303-806(4)(c)	Y	To be incorporated into Appendix 13.18
Permit Document – Dangerous Waste Permit (DWP) Liner height in the Effluent Management Facility (EMF)	24590-BOF-PER-M-16-003	0	173-303-806(4)(c)	Y	To be incorporated into Appendix 13.18
Administrative Record					
Permit Document – Prevention of Hydrogen Accumulation in WTP Tank Systems and Miscellaneous Treatment Unit Systems	24590-BOF-PER-PR-03-001	2		N	To be incorporated into the Administrative Record (Replacing Rev. 1)
Effluent Management Facility Process Flow Diagrams Process Stream Tables (System DEP and DVP)	24590-BOF-M3-V17T-00001002	0		N	To be incorporated into the Administrative Record
Overview of the Effluent Management Facility Process Design (Mass Balance)	CCN 293458 (Superseding 290073 and 29401)	NA		N	To be incorporated into the Administrative Record

Document Title	Document Number	Revision	Permit Condition	Included	Remarks
Effluent Management Facility process Flow Diagrams Process Stream Tables (System DEP and DVP)	24590-BOF-M3-V17T-00001001	0		N	To be incorporated into the Administrative Record

Ecology Proposes Changes to Waste Treatment Plant Design

The [Washington State Department of Ecology](http://www.ecy.wa.gov) (Ecology) is proposing a modification to the *Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit, Revision 8C*. This change affects the *Dangerous Waste Portion for the Treatment, Storage, and Disposal of Dangerous Waste* for the Waste Treatment and Immobilization Plant (WTP Permit). The proposed change is located in Part III, Operating Unit Group 10.

The permittees are:

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

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

This class 3 permit modification provides the technical information and engineering drawings to support the design and construction of the secondary containment for the Effluent Management Facility (EMF) within the WTP. The modification includes information for the following buildings at EMF: Process (Building 25), Low Point Drain (Building 25A) and Utility (Building 26).

This proposal is one of many changes to the original WTP Permit. Periodic updates allow the permittees to continue construction while designing other parts of the WTP. All modifications to the WTP Permit are classified by Ecology under Washington Administrative Code 173-303-830.

Direct Feed LAW Configuration Overview

In order to initiate tank waste treatment by 2023, ORP developed a plan to begin feeding pre-treated low-activity tank waste directly to the WTP Low-Activity Waste (LAW) Vitrification Facility. This plan is called the Direct Feed Low-Activity Waste (DFLAW) configuration.

Why It Matters

The proposed permit changes affect the [Waste Treatment and Immobilization Plant](#) (WTP). WTP will immobilize in glass 56 million gallons of dangerous radioactive and chemical waste stored in 177 underground storage tanks at [Hanford](#).

Some waste from the tanks has polluted groundwater that flows toward, and can seep into, the Columbia River. Safely treating tank waste is an important goal to help protect people and the environment.

Public Comment Period

May 22, 2017 -
July 7, 2017

To Submit Comments

New! Please submit comments electronically (preferred) via: <http://wt.ecology.commentinput.com/?id=56Thj>, send by U.S. mail, or hand-deliver to:

Mandy Jones
3100 Port of Benton Blvd.
Richland, WA 99354

Public Meeting

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

Joanna Morse
509-372-7950
Hanford@ecy.wa.gov

Special Accommodations

To request ADA accommodation, including materials in a format for the visually impaired, call the Nuclear Waste Program at 509-372-7950.

Persons with impaired hearing may call Washington Relay Service at 711.

Persons with speech disability may call TTY at 877-833-6341.

The DFLAW configuration supports treatment by allowing the LAW Vitrification Facility and the Analytical Laboratory (Lab) to begin treating waste prior to the startup of the Pretreatment (PT) Facility and High-Level Waste (HLW) Vitrification Facility. Although most of the WTP facilities required for the DFLAW configuration are complete or near completion, the plan does require construction of two new facilities:

1. Effluent Management Facility (EMF).
2. LAW Pretreatment System (LAWPS) Facility (not within the scope of this modification).



The Waste Treatment Plant, commonly called the vit plant, in 2016 (photo courtesy of Bechtel).

Design Package for Effluent Management Facility Secondary Containment

The Effluent Management Facility (EMF) permit modification package 24590-BOF-PCN-EVN-15-002 addresses the design and construction of the secondary containment for the Process (Bldg. 25), Low Point Drain (Bldg. 25A) and Utility (Bldg. 26) buildings.

The DFLAW configuration is intended to be in operation for ten years. This allows time to resolve issues with the HLW and PT processes and finish the construction of those facilities. Once the HLW and PT facilities are completed, the WTP operations will shift to the original WTP baseline configuration and continue treatment of the tank waste. Once WTP is operating in the baseline configuration, EMF will discontinue operations. However, EMF will remain in cold stand-by until the treatment of tank waste has been completed.

The Direct Feed LAW Effluent Management Process (DEP) system within the EMF is in place to replicate some functions the Pretreatment Facility performed during baseline operations. Those functions will include management and treatment of the liquid effluent from the LAW and LAB Radioactive Liquid Waste Disposal systems. The major components of the DEP system include an evaporator, reboiler, three condensers, and nine regulated vessels, listed below:

- Evaporator (DEP-EVAP-00001)
- Reboiler (DEP-RBLR-00001)
- Condensers (DEP-COND-00001A/B/C)
- Low Point Drain Vessel (DEP-VSL-00001)
- Evaporator Feed Vessel (DEP-VSL-00002)
- Evaporator Concentrate Vessels (DEP-VSL-00003A/B/C)
- Overhead Sampling Vessels (DEP-VSL-00004A/B)
- Lag Storage Vessels (DEP-VSL-00005A/B)

Once effluents are treated at the EMF they may be transferred to one of three other facilities for further processing or storage. Those facilities are: the Tank Farms, the Liquid Effluent Retention Facility/Effluent Treatment Facility (LERF/ETF), or the LAW Vitrification Facility.

Future permit modifications to incorporate the major components of the DEP system into the WTP Permit will be documented in the draft Interim Compliance Schedule that is supplied with this draft permit modification for public review and comment. The permitting of these major components will be processed as Agency Initiated Modifications, to support the continued design and construction of the EMF.

Reviewing the Proposed Changes

Ecology invites you to review and comment on this proposed WTP Permit modification. The comment period runs from May 22, 2017, through July 7, 2017. See the box on the right side of page 1 for information on how to submit comments.

During the public comment period, documents will be available for review beginning May 22, 2017, on Ecology's website and at the locations listed on page 4.

Hanford's Information Repositories and Document Review Locations

Richland

Ecology Nuclear Waste Resource Center
3100 Port of Benton Blvd.
Richland, WA 99354
Contact: Teresa Booth
509-372-7950

Department of Energy Administrative Record
2440 Stevens Drive, Room 1101
Richland, WA 99354
Contact: Heather Childers
509-376-2530

Department of Energy Reading Room
2770 Crimson Way, Room 101L
Richland, WA 99354
Contact: Janice Parthree
509-375-3308

Portland

Portland State University
Branford Price Millar Library
1875 SW Park Avenue
Portland, OR 97207
Contact: Claudia Weston
503-725-4542

Seattle

University of WA Suzzallo Library
P.O. Box 352900
Seattle, WA 98195
Contact: Hilary Reinert
206-543-5597

Spokane

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

Terms To Know

Resource Conservation & Recovery Act (RCRA): Law authorizing the U.S. Environmental Protection Agency to manage hazardous waste, including the generation, transportation, treatment, storage, and disposal of radioactive hazardous and other solid waste and waste in underground tanks.

Dangerous Waste Permit: A State-issued permit allowing facilities to store, treat, and/or dispose of dangerous waste.

Underground storage tank: A tank that is entirely below the surface of and covered by the ground.

At Hanford, two types of underground storage tanks have capacities ranging from 50,000 to 1,000,000 gallons. The single-shell tanks have one steel liner encased in reinforced concrete, and do not comply with State environmental laws. The double-shell tanks have two steel liners in reinforced concrete and contain potential leaks, in compliance with the law.

Vitrification: Immobilizing waste by mixing it with glass formers and melting the mixture into a glass form that cools into a solid.

Waste Treatment and Immobilization Plant: Facility to thermally treat and vitrify tank waste at Hanford.

High-level waste: Results from reprocessing spent nuclear fuel. This includes liquid produced during reprocessing and solids derived from this liquid waste that contain fission products in sufficient concentrations and other highly radioactive material that, by law, requires permanent isolation.

Low-activity waste: Remains after as much radioactivity as is technically and economically practical has been separated from high-level waste. When vitrified, it may be disposed of as low-level radioactive waste in a near surface facility at Hanford.

Direct Feed Low-Activity Waste (DFLAW): Facility configuration in which low-activity waste is sent from the Hanford Tank Farms through the Low-Activity Waste Pretreatment Facility directly to Low-Activity Waste Vitrification Facility for treatment.



3100 Port of Benton Blvd.
Richland, WA 99354

PRESORTED
FIRST CLASS MAIL
US POSTAGE PAID
WA STATE DEPT
OF ENTERPRISE SRVCS
98501

Public Comment Period
Hanford's Waste Treatment Plant
Permit Modification

May 22, 2017 -
July 7, 2017

The Washington State Department of Ecology Announces a 45-Day Public Comment Period for Modifications to the Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste, Part III, Operating Unit 10, Waste Treatment and Immobilization Plant (WTP) Permit

Comment Period: May 22, 2017 through July 7, 2017

The Washington State Department of Ecology (Ecology) is proposing a change to the WTP Permit. The Permittees are: U.S. Department of Energy Office of River Protection
P.O. Box 450

Richland, Washington 99352
Bechtel National Inc.
2435 Stevens Center Place
Richland, Washington 99354

Why it Matters

The Waste Treatment and Immobilization Plant (WTP) is being designed and built to treat the 56 million gallons of dangerous radioactive and chemical waste from the 177 underground storage tanks at the Hanford Site north of Richland, Washington. Safely treating tank waste is an important goal to help protect people and the environment. The proposed permit changes affect the WTP.

The proposed modification provides the technical information and engineering drawings to support the design and construction of the secondary containment for the Effluent Management Facility (EMF) within the WTP.

In order to initiate tank waste treatment by 2023, ORP developed a plan to begin feeding pre-treated low-activity tank waste directly to the WTP Low-Activity Waste (LAW) Vitrification Facility. The plan is called the Direct Feed Low-Activity Waste (DFLAW) configuration.

The DFLAW configuration supports treatment by allowing LAW Vitrification Facility and the Analytical Laboratory (Lab) to begin treating waste prior to the startup of the Pretreatment (PT) and High-Level Waste (HLW) Vitrification Facilities. Although most of the WTP facilities required for the DFLAW configuration are complete, or near complete, the plan requires the construction of two new facilities which include the EMF and the Low-Activity Pretreatment System (LAWPS).

Design Package for Effluent Management Facility Secondary Containment
The Effluent Management Facility (EMF) permit modification addresses the design and construction of the following buildings at EMF: Process (Building 25), Low Point Drain (Building 25A) and Utility (Building 26).

This is a brief summary of the changes proposed for the WTP Permit. To review the proposed modification in detail beginning May 22, 2017, visit the Washington State Department of Nuclear Waste Program Public Comment Periods webpage. You can also review the proposal modification on May 22, 2017 at one of the Hanford Public Information Repositories.

Richland

Ecology Nuclear Waste Resource Center
3100 Port of Benton Blvd.
Richland, WA 99354
Contact: Teresa Booth
509-372-7950
Department of Energy Administrative Record

2440 Stevens Drive, Room 1101
Richland, WA 99354
Contact: Heather Childers
509-376-2530

Department of Energy Reading Room
2770 Crimson Way, Room 101L
Richland, WA 99354
Contact: Janice Parthree
509-9375-3308

Portland

Portland State University
Branford Price Millar Library
1875 SW Park Avenue
Portland, OR 97207
Contact: Claudia Weston
503-725-4542

Seattle

University of WA
Suzzallo Library
P.O. Box 352900
Seattle, WA 98195
Contact: Hilary Reinert
206-543-5597

Spokane

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

Your views and concerns are important to the Washington State Department of Ecology. For more information on the public comment period please contact Joanna Morse at Hanford@ecy.wa.gov
#3081535 05/21/2017

This is a message from the Washington Department of Ecology

The [Washington State Department of Ecology](#) Announces a 45-Day Public Comment Period for Modifications to the Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste, Part III, Operating Unit 10, Waste Treatment and Immobilization Plant (WTP) Permit

Comment Period: May 22, 2017 through July 7, 2017

Why It Matters

The WTP is being designed and built to treat the 56 million gallons of dangerous radioactive and chemical waste from the 177 underground storage tanks at the Hanford Site north of Richland, Washington. Treating the waste will reduce the risk to people and the environment. The proposed modifications affect facilities that are part of the WTP.

This class 3 permit modification provides the technical information and engineering drawings to support the design and construction of the secondary containment for the Effluent Management Facility (EMF) within the WTP. The modification includes information for the following buildings at EMF: Process (Building 25), Low Point Drain (Building 25A) and Utility (Building 26). This proposal is one of many changes to the original WTP Permit.

The EMF is being built to support the Direct Feed Low Activity Waste (DFLAW) configuration. The EMF allows for the processing of waste at the Low Activity Waste (LAW) Vitrification Facility and Analytical Laboratory to start prior to the operation of the High-Level Waste (HLW) and Pretreatment (PT) Facilities. This DFLAW configuration feeds waste directly from the Low-Activity Waste Pretreatment System (LAWPS) to the LAW Facility. When the PT and HLW Vitrification facilities become operational, WTP will change to the baseline configuration. When the WTP is operating in the baseline configuration, it is anticipated that the EMF will not be operated. However, it will remain in standby until the treatment of the waste has been completed. DFLAW operations are designed to operate for ten years. This allows time to resolve technical issues with the HLW and PT processes and finish the construction of those facilities.

This proposed permit modification incorporates technical details in the chapters within the WTP Permit. The details include an Interim Compliance Schedule for EMF that is specific to the design, construction and eventual operations of the facility. Additionally, Ecology has also drafted associated permit conditions and included them with this draft modification. Finally, the appendices and figures have been revised, supporting information has been incorporated and format changes have been addressed, in this modification.

This is a brief summary of the changes proposed for the WTP Permit.

To review the proposed modification in detail beginning May 22, 2017, visit the Washington State Department of Ecology Nuclear Waste Program Public Comment Periods webpage. You can also review the proposed modification on May 22, 2017 at one of the Hanford Public Information Repositories:

RichlandEcology Nuclear Waste Resource Center 3100 Port of Benton Blvd. Richland, WA 99354 Contact: Teresa Booth 509-372-7950 Dept. of Energy Administrative Record 2440 Stevens Drive, Room 1101 Richland, WA 99354 Contact: Heather Childers 509-376-2530 Department of Energy Reading Room 2770 Crimson Way, Room 101L Richland, WA 99354 Contact: Janice Parthree 509-375-3308 Portland Portland State University Branford Price Millar Library 1875 SW Park Avenue Portland, OR 97207 Contact: Claudia Weston 503-725-4542 Seattle University of WA Suzzallo Library P.O. Box 352900 Seattle, WA 98195 Contact: Hilary Reinert 206-543-5597 Spokane Gonzaga University Foley Center 502 E Boone Avenue Spokane, WA 99258 Contact: John Spencer 509-313-6110 Your views and concerns are important to the Washington State Department of Ecology. For more information on the public comment period, please contact Joanna Morse at Hanford@ecy.wa.gov.

Visit us on the [web](#) or [social media](#).

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