



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**

November 2017

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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 focuses on the operations of the Analytical Laboratory (Lab) and provides the operating details for the Analytical Lab under the Direct-Feed Low-Activity Waste configuration.

The Washington State Department of Ecology (Ecology) and the Permittees participated in a series of facilitated workshops to determine the design and scope of an integrated operating permit. The result was the development of the Analytical Laboratory Specific Operating Conditions, Section III.10.L, and updates to Tables III.10.E.D and III.10.E.P which are proposed in this modification. Permit Conditions III.10.C.16 for Secondary Containment Devices and corresponding tables are also included in this modification.

The current WTP Permit contains design information related to construction of the Analytical Lab. As the Analytical Lab moves from construction to operations, operating details are necessary. The design information in the permit will be maintained in the WTP Permit until Ecology has confirmed that construction of the Analytical Lab is certified complete.

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.

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

We 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.

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

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 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 June 26, 2017 the Permittees submitted a Class 3 Permit Modification request to Ecology for the Analytical Laboratory Operations, which included revised chapters, Lab Specific Operating Conditions and revisions to Tables III.10.E.D and III.10.E.P. The Permittees held a public comment period from **July 3, 2017** through **September 1, 2017**. The Permittees also held a public meeting on August 3, 2017 at the Richland Public Library.

After review of the Permittee's Class 3 Permit Modification submittal, Ecology determined the application complete in accordance with [WAC 173-303-830](#)(4)(c)(vi) and [WAC 173-303-840](#)(1)(b). Ecology has proceeded with drafting the permit to support a second public comment period.

Public comments received from this 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 Permittee 60-day public comment period is available online at <https://fortress.wa.gov/ecy/publications/SummaryPages/1705013.html>

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 **December 4, 2017** and ends on **January 19, 2018**.

Comments must be post-marked, received by e-mail, or hand-delivered no later than close of business (5:00 p.m. PST) January 19, 2018. Direct all written comments to:

Daina McFadden
Washington State Department of Ecology
3100 Port of Benton Blvd.
Richland, Washington 99354

Electronic comment link: <http://wt.ecology.commentinput.com/?id=c4H9a>

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:

Daina McFadden
Washington State Department of Ecology
(509) 372-7950

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
(509) 372-7950

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

Hanford Public Information Repositories

Richland

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

Seattle

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

Spokane

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

Portland

Portland State University
Branford Price Millar Library

1875 Southwest Park Avenue
Portland, Oregon 97207
(503) 725-4542

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 focuses on the operations of the Analytical Laboratory (Lab) and provides the operating details for the Analytical Lab under the Direct-Feed Low-Activity Waste configuration.

The Washington State Department of Ecology (Ecology) and the Permittees participated in a series of facilitated workshops to determine the design and scope of an integrated operating permit. The result was the development of the Analytical Laboratory Specific Operating Conditions, Section III.10.L. Updates to Permit Condition Tables III.10.E.D and III.10.E.P, are provided to reflect the current operations information.

In addition, the Permittee's submitted package WTP-001 for Secondary Containment Devices. Ecology accepted the package and it was incorporated into the proposed permit for public review. Revisions needed to support the operations of the Analytical Lab in this modification include:

- Part III, WTP Unit Specific Permit Conditions
- Chapter 4H, Analytical Laboratory
- Chapter 6A, Inspection Plan
- Chapter 8, Personnel Training

The current WTP Permit contains design information related to construction of the Analytical Lab. As the Analytical Lab moves from construction to operations, operating details are necessary. The design information will be maintained in the WTP Permit until Ecology has confirmed that construction of the Analytical Lab is certified complete.

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

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.

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