



Response to Comments LERF/ETF Load-In Station Expansion/Backup Facility – Class 2 Permit Modification

Dec. 15, 2020 to Feb. 13, 2021

For the **Nuclear Waste Program**

Washington State Department of Ecology

Richland, Washington

March 2021, Publication 21-05-009



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Contact Information

Amena Mayenna, Environmental Engineer

Nuclear Waste Program

3100 Port of Benton Blvd

Richland, WA 99354

Phone: 509-372-7950

Email: Hanford@ecy.wa.gov

Website¹: [Washington State Department of Ecology](#)

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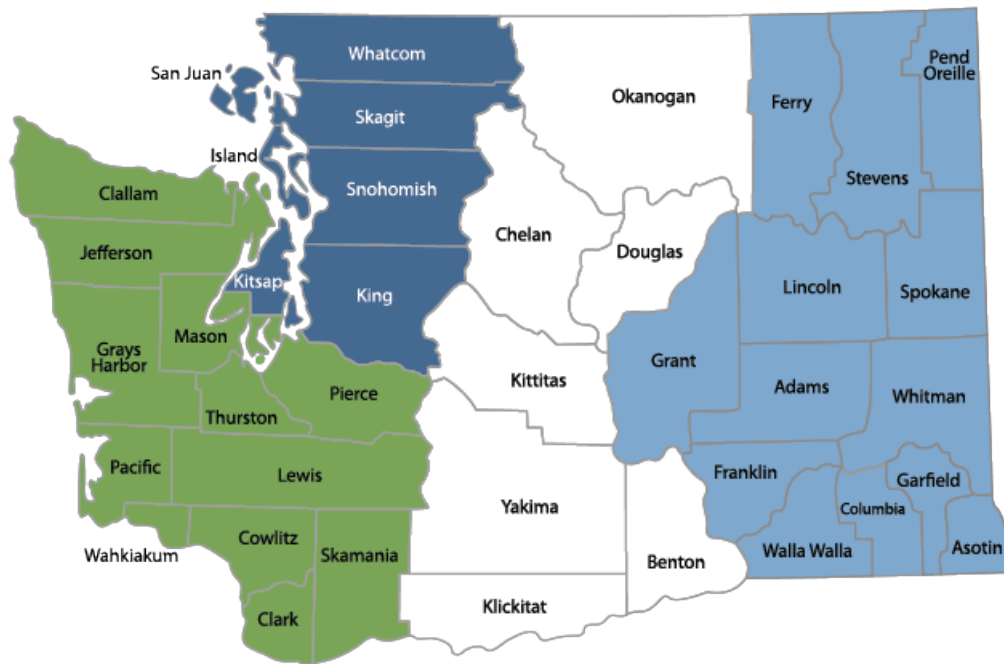
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¹ www.ecology.wa.gov/contact

Department of Ecology's Regional Offices

MAP OF COUNTIES SERVED



Southwest Region
360-407-6300

Northwest Region
425-649-7000

Central Region
509-575-2490

Eastern Region
509-329-3400

Region	Counties served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	3190 160th Ave SE Bellevue, WA 98008	425-649-7000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
Headquarters	Across Washington	PO Box 46700 Olympia, WA 98504	360-407-6000

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DEPARTMENT OF
ECOLOGY
State of Washington

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Introduction

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

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

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

This Response to Comments is prepared for:

Comment period	LERF/ETF Load-In Station Expansion/Backup Facility – Class 2 Permit Modification, Dec. 15, 2020, to Feb. 13, 2021
Permit	<i>Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit for the Treatment, Storage, and Disposal of Dangerous Waste</i> , Liquid Effluent Retention Facility (LERF) and the 200 Area Effluent Treatment Facility (ETF)
Permittees	U.S. Department of Energy
Original Issuance date	03/10/2021
Effective date	04/09/2021

To see more information related to the Hanford Site and nuclear waste in Washington, please visit our webpage, [Hanford Cleanup](#)².

² <https://www.ecology.wa.gov/Hanford>

Reasons for Issuing the Permit

The proposed Class 2 permit modification affects the Liquid Effluent Retention Facility (LERF) and the 200 Area Effluent Treatment Facility (ETF) portion of the Permit. Modifications are proposed that will improve efficiency and throughput, better enabling the 2025ED Load-In Station to support Hanford mission needs. The changes to the Permit include:

- The 2025ED Load-In Station will be expanded and support systems will be upgraded.
- Tanks 59A-TK-109 and 59A-TK-117 will be removed and the outdoor sump area will be covered.
- A Backup Load-In Station (2025EG) will be constructed and will operate while 2025ED is out of service.

Public Involvement Actions

The U.S. Department of Energy (USDOE) invited public comment on the LERF/ETF Load-In Station Expansion/Backup Facility – Class 2 Permit Modification during a 60-day public comment period held Dec. 15, 2020 through Feb. 13, 2021.

The following actions were taken to notify the public:

- Mailed a public notice announcing the comment period to 1,132 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 Dec. 15, 2020.
- Emailed a notice announcing the start of the comment period to the Hanford-Info email list, which has 1,318 recipients.
- Posted the comment period notice on the Washington Department of Ecology – Hanford’s Facebook and Twitter pages.

USDOE held a virtual public meeting at 5:30 pm Jan 21, 2021. Twenty-five members of the public attended, and zero comments were collected.

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

- Focus sheet
- Transmittal letter
- Statement of Basis for the proposed LERF/ETF Permit Modification
- Draft LERF/ETF Permit Modification

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

- Focus sheet
- Classified advertisement in the Tri-City Herald

- Notices sent to the Hanford-Info email list
- Notices posted on the Washington Department of Ecology – Hanford’s Facebook and Twitter pages

List of Commenters

The table below lists the names of organizations or individuals who submitted a comment on the LERF/ETF Load-in Station Permit modification. The comments and responses are in [Attachment 1](#).

Commenter	Organization
George Baggett	Citizen
Judy Pigott	Citizen
Anonymous Citizen	Citizen
Antoinette Bonsignore	Citizen
James Strick	Citizen
Pedro de la Torre III	Citizen
Kathleen Dickeman	Citizen
Kathleen Cain	Citizen
Linda Greene	Citizen
Jeanne Poirier	Citizen
Patricia Morton	Citizen
Laura Feldman	Citizen
Clara Kielkopf	Citizen
Coral Shaffer	Citizen
Mark Wittow	Citizen
Robert Masterson	Citizen
Nancy Arbuckle	Citizen
John Spear	Citizen
Bud Anderson	Citizen
Pamela Howard	Citizen
Mecal Seppalainen	Citizen
Dwight Rousu	Citizen
Beth Sanders	Citizen
Martha Rost	Citizen
Patricia Janesh	Citizen
Peter von Christierson	Citizen
James Millbauer	Citizen
Jean Baker	Citizen
Lori Stole	Citizen
Judy Todd	Citizen
Tom Carpenter	Hanford Challenge

Attachment 1: Comments and Responses

Description of comments:

Ecology accepted comments from Dec. 15, 2020, through Feb. 13, 2021. This section provides a summary of comments that we received during the public comment period and our responses, as required by RCW 34.05.325(6)(a)(iii). Comments are grouped by individual and each comment is addressed separately.

I-1: GEORGE BAGGETT

Comment I-1-1

Having followed the DOE Environmental Restoration projects since the Reconfiguration comment I made regarding the Preliminary Design Report, Priority System for Environmental Restoration, the Hanford projects have received the bulk of my attention. Hanford, being an example of anthropocene has taken on management of a wide variety of environmental issues. The Liquid Effluent Retention and 200 Area Effluent Treatment Facility and the Load-in stations reflect critical thinking associated with the issues and problems they will address. Having a history of working on environmental issues and remediation since the mid-1970s, I note that reading the Hanford documents has continued to be an enlightening and learning experience – evaluating the technologies in use, the chemistry of the plans, and assessment analysis methodology.

When Rick Perry was appointed, and the administration seemed to be unraveling government programs I worried Hanford restoration might become a victim of under-informed political personalities. Reading this document has swayed that concern. Wisdom seems to have prevailed and I commend those who stood in the path of denigrating the science and expertise that has been gained over the years.

Quoting from my 1991 comment:

"We are pleased that the DOE is beginning the arduous process of cleaning up the legacy of the nuclear era. It is our hope that our comment will assist the DOE in reconciling the desires of states, tribes and the U. S. EPA with the interests of local communities and the impact on the environment. We are also pleased to note the suggestion from Congress that the DOE cleanup priority system must rank and weigh in relative importance, health risk as the number one priority during this cleanup process. This is consistent with our goal of pollution prevention. We believe that activities that generate pollutants can be modified or have pollution control equipment installed which will greatly reduce or eliminate the impact on the environment and the health, safety and welfare of those who live near DOE facilities."

Since that time, I was involved with supplying carbide lime slurry to the KC DOE Bannister Road waste treatment facility prior to its closure. It was my great pleasure to see firsthand the professional approach to handling waste treatment with an integrated approach. This approach as permeated the DOE approach to our national issues related to the US nuclear anthropocene from the history of these facilities. My new hope is that long-term thinking along the lines of geological time frames will guide the final resting place of the end products of waste treatment.

Response to I-1-1

Thank you for your comment.

I-2: JUDY PIGOTT

Comment I-2-1

The modifications that are requested SHOULD NOT be permitted. Changes in the make up of the material in the tanks, as requested, will increase chances for accidental seepage, for mistakes to be made for worker safety, and for pollution of the Columbia River.

Response to I-2-1

Thank you for your comment.

Ecology expects the Permittees to ensure safe operations of the LERF/ETF facilities to protect human health and the environment. This permit modification will help to ensure that the facility is operated in a safe manner and that the waste will be treated in a way that is protective of human health and the environment.

I-3: ANONYMOUS CITIZEN

Comment I-3-1

See [References](#) for original submission.

Response to I-3-1

Thank you for your comment.

Please see the responses for I-3-2 to I-3-6.

Comment I-3-2

My first comment is that I would appreciate if Ecology would reject ORP's proposal to alter TPA Milestone M-062-50. This milestone was supposed to be an integrated, up to date mass balance, and it was reported to the public as "On Schedule" as a single secondary document, month after month after month. Further, some of the information proposed to be substituted predates the establishment of the milestone, none of it is integrated, and some is presentation slides, which have no QA associated with them, as opposed to formal, checked, TPA documents. Ecology should receive a consistent set of assumptions to check to see if they are reasonable, and a set of results to show volumes and compositions underlying the present permit modification request parameters (such as the capacity of the expanded and new equipment), and also to compare to DOE promises about Double Shell Tank space. For example, a DOE official made an unsupported assertion to the DOE Office of Inspector General (DOE-OIG-20-57) that tank waste operations will "eliminate" the concern regarding sufficient DST space availability. It would help to know whether this conclusion is supported in the mass balance or if volumes of DST waste will pile up during DFLAW.

At a minimum, all reference material (including "Powerpoint" presentations) cited by DOE in letter 20-ECD-0057 should be compiled and made available to the public for review in the TPA administrative record, as a single secondary document, by the due date of January 31, 2021, so we can see for ourselves whether DOE's assumptions are consistently documented and integrated.

Of note is that DOE has not described what they were doing during the months of "on schedule" reporting for the milestone. Was this a case of continued time card fraud because they were not actually working on a mass balance? Or is it a case where the results were something DOE did not like and did not wish to share? It would be helpful for Ecology to hold DOE accountable to the original milestone. Additional comments where a mass balance could improve the current permit modification for LERF/ETF are below.

Response to I-3-2

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Double Shell Tank space:

In June 2019 Ecology issued to DOE milestones for new DSTs. Ecology's unilateral action is currently in the TPA dispute process. This comment's recommendation is an alternate approach to Ecology's position on new DSTs.

Letter 20-ECD-0057:

Ecology's permitting decision is not dependent on acceptance of the milestone as complete. Therefore, Ecology is not including the requested documents as part of this permit modification's administrative record.

Comment I-3-3

Per addendum page B.7, ETF products now include brine as well as powder. Brine is intended for "treatment at an authorized dangerous waste facility." DOE Should identify the facility and verify this is acceptable under the "authorized facility's" permits. If there is no facility with an active valid permits, DOE will have an orphan waste. Is the brine stream affected by the new grout skid that is in design, according to the monthly reports? Can it grout this brine? Please do not send, as was previously identified, ETF brine to PERMA-FIX Northwest in Richland. The brine can generate toxic gases when the pH is adjusted, and, without a mass balance, no one can tell how much ammonia or technetium, or tritium, or NOx sources will be included. Recently a Hanford Tank waste simulant evolved toxic NOx gas when treated improperly, according to the DNFSB2. The same thing could happen much closer to City of Richland residents if treatment occurs at PFNW. Safety and regulatory problems at Perma-Fix Northwest are identified in detail in a new Hanford Challenge report

Response to I-3-3

Generators of dangerous wastes must send their wastes to authorized facilities. Neither generator requirements nor permit requirements (for Treatment, Storage, or Disposal Facilities) need to specify where those wastes must be sent, merely that they must go to an authorized facility. However, Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations.

Depending on the source of the treatment campaign, powder or brine generated from the secondary treatment train may require additional treatment (grout) to meet RCRA Land Disposal Restrictions (LDRs), and waste acceptance criteria for the RCRA disposal facility [e.g., Integrated Disposal Facility (IDF)]. DOE stated to Ecology that two alternatives are being considered: (1) on-site treatment or (2) off-site treatment at PERMA-FIX Northwest (PFNW). DOE has not submitted a permit modification request to support either alternative. Ecology is separately preparing a SEPA evaluation (EIS supplement) to support renewal of the PFWW RCRA permit. The PFWW permit renewal will include Waste Acceptance Criteria that would address the potential hazards stated in this comment. The WA State Department of Health separately imposes license limits for PFWW for the radionuclides stated in this comment.

Comment I-3-4

Page addendum C.1 adds "WTP aqueous waste" to the list of wastes to be treated at ETF. As a result, there are new feeds and new products to be considered in this permit request. RPPIQRPE-50074, page 35, identifies Page RPP-RPT-62679, 2020, ETF Truck Load-In Expansion Project Non-Metallic Materials Report, Rev. 1, Washington River Protection Solutions, LLC, Richland, Washington, as the source of information on the "composition of the various ETF waste streams." No stream data are provided. Presumably, an integrated mass balance was used to prepare the waste stream composition. Ecology should ask for a copy of RPP-RPT-62679 to track down the source of the composition inputs to see if they are reliable and complete, and ask that the composition ranges be provided in the permit, similar to tank waste compositions listed for the Hose in Hose Transfer line specification (which is part of the LERF/ETF permit).

Response to I-3-4

Ecology received the document RPP-RPT-62679, 2020, ETF Truck Load-In Expansion Project Non-Metallic Materials Report, Rev. 1 as part of this permit modification package. Section 3.1 of this document states that the acceptance criteria for waste sent to LERF is used as the bounding conditions for the ETF wastewater chemical composition.

The mass balance analysis does not determine a waste streams' acceptability at the LERF and 200 Area ETF. This is determined by the facility's Waste Acceptance Criteria and a Waste Analysis Plan, which are included in this LERF and 200 Area ETF permit modification.

Comment I-3-5

Page Addendum C.13 deletes "39,000" gallons and refers to the "Part A" form in Addendum A for the maximum volume of dangerous waste that can be stored in containers. When I look at the Part A, I found that it says "the container design capacity 39,000 gallons, and the treatment capacity 5,000 gallons are "empirical" numbers based on maximum "anticipated" treatment. The basis for the "anticipated" amounts is not provided, but would be documented with a basis had DOE prepared an integrated mass balance. Ecology should ask for the basis documentation for these "anticipated" values, which include liquids from the current proposed permit modification.

Response to I-3-5

The current Addendum A, Part A Form states "The container design capacity 39,000 gallons is an empirical number based on the equivalent of storing 709, 55-gallon drums within the five-container storage areas." The capacity considers container storage area dimensions and used floor space to determine volume and number of drums that can be stored. Container capacities and treatment capacities are based on design criteria, not on a mass balance.

Comment I-3-6

Page Addendum B.8 states that aqueous waste from the WTP analytical laboratory is also transferred to LERF/ETF. It would help to have the integrated mass balance to provide a basis for the estimated flows of ALL the streams going to ETF/LERF. Was this stream included in the IQRPE report? The proposed permit modification does not say.

Response to I-3-6

The text referred to in the comment is existing permit language for transfers to LERF Basins, and not for transfers to the Load-In facilities. The request for an integrated mass balance for streams going to LERF and 200 Area ETF is outside the scope of this permit modification which addresses the 200 Area ETF Load-In Facility Expansion.

The IQRPE Design Assessment Report for 200 Area ETF Load-In Facility Expansion (RPP-IQRPE-50074) addresses waste compatibility in Section 2.2.2. The report determined that the tank systems are compatible with the wastes transported or otherwise handled in accordance with WAC 173-303-640(3)(a).

I-4: ANTOINETTE BONSIGNORE

Comment I-4-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments, Antoinette Bonsignore

Response to I-4-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-5: JAMES STRICK

Comment I-5-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

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I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments,

James Strick, Professor
Dept. of Earth and Environment
Franklin and Marshall College

Response to I-5-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the

mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-6: PEDRO DE LA TORRE III

Comment I-6-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments, Pedro de la torre III

Response to I-6-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-7: KATHLEEN DICKEMAN

Comment I-7-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I grew up in Richland, and I care about how Hanford's tank waste is treated. I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments,

Response to I-7-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-8: KATHLEEN CAIN

Comment I-8-1

To Whom It May Concern at the Department of Ecology,

Thank you for allowing me and the many other concerned citizens the opportunity to offer comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

I am asking you that make sure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I grew up in northwestern Montana and in Spokane, Washington (where many of my family members still live) and I now reside in Settle, so I am especially concerned about how Hanford's tank waste is treated. I want a transparent process that clearly and thoroughly documents—in one place— what happens to the tank waste once it begins treatment, where the contaminants will eventually end up and in what specific amounts. I am extremely concerned that there will be no "orphaned waste streams" - waste that has no pathway for further treatment or disposal. My current and future health depends on your actions.

Thank you for considering my comments, Kathleen Cain

Response to I-8-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-9: LINDA GREENE

Comment I-9-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

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I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments, Linda Greene

Response to I-9-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-10: JEANNE POIRIER

Comment I-10-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

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I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thanks for letting me comment on this. Please do everything you can at Hanford to keep us all safe!

Response to I-10-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-11: PATRICIA MORTON

Comment I-11-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Several of my cousins died of cancer as a result of being exposed to radiation from Hanson site. I care about the remediation of this site deeply.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments.

Response to I-11-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-12: LAURA FELDMAN

Comment I-12-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments, Laura Feldman

Response to I-12-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-13: CLARA KIELKOPF

Comment I-13-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments, Clara Kielkopf, Ph.D.

Response to I-13-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-14: CORAL SHAFFER

Comment I-14-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow

from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments, Coral Shaffer

Response to I-14-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-15: MARK WITTOW

Comment I-15-1

To WA Department of Ecology:

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF.

I recommend that Ecology ensures the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I am concerned as to how Hanford's tank waste is treated. I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up. There should be no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments. Mark Wittow

Response to I-15-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-16: ROBERT MASTERSON

Comment I-16-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments, Robert V. Masterson

Response to I-16-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though

this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-17: NANCY ARBUCKLE

Comment I-17-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments, Nancy Arbuckle

Response to I-17-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-18: JOHN SPEAR

Comment I-18-1

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments,

Response to I-18-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-19: BUD ANDERSON

Comment I-19-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to

Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments, Bud Anderson

Response to I-19-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-20: PAMELA HOWARD

Comment I-20-1

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments, Pamela Howard

Response to I-20-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-21: MECAL SEPPALAINEN

Comment I-21-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments, Mecal Seppalainen

Response to I-21-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though

this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-22: DWIGHT ROUSU

Comment I-22-1

Please ensure the USDE meets requirements to submit a Mass Balance Flow as a single secondary document. We need clear and transparent documentation of potentially hazardous waste, which should not be recklessly covered up without due care to future generations.

Response to I-22-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

I-23: BETH SANDERS

Comment I-23-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments,

Response to I-23-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the

mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-24: MARTHA ROST

Comment I-24-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments, Martha Rost

Response to I-24-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-25: PATRICIA JANESH**Comment I-25-1**

Any modifications should NOT be permitted. Changes in the makeup of the material in the tanks will increase the chances for accidental seepage, for mistakes to be made for worker safety and pollution of the Columbia River and its FOOD sources as well as other non-water river food sources adjacent to the tanks.

Response to I-25-1

Thank you for your comment.

Ecology expects the Permittees to ensure safe operations of the LERF/ETF facilities to protect human health and the environment. This permit modification will help to ensure that the facility is operated in a safe manner and that the waste will be treated in a way that is protective of human health and the environment.

I-26: PETER VON CHRISTIERSON**Comment I-26-1**

This proposed permit modification is required to expand the existing 2025ED Load-In Station, construct the 2025EG Backup Load-In Station container storage and treatment area, and remove two unused tanks at the 2025ED Load-In Station, all of which are within the permit boundary.

The Load-In Station will be modified to include:

Extending the building footprint to the north sufficient to fit a large tanker

Reworking the concrete floor in the east bay to meet the applicable secondary containment requirements to allow for unloading of large tankers

Upgrading or replacing load in equipment (HVAC, safety shower, fire protection, etc.)

Removal of the abandoned Tanks 59A 109 and 117, and covering the outdoor sump

Designing and implementing a backup Load In Station to be utilized when the facility is out of service.

Response to I-26-1

Thank you for your comment.

I-27: JAMES MILLBAUER**Comment I-27-1**

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments,

Response to I-27-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-28: JEAN BAKER

Comment I-28-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments, Jean Baker

Response to I-28-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-29: LORI STOLE

Comment I-29-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments, Lori Stole

Response to I-29-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as

complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

I-30: JUDY TODD

Comment I-30-1

Dear Department of Ecology,

Thank you for the opportunity to provide comments on the Class 2 Permit Modification for LERF/ETF ending Saturday, February 13th.

Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that was due Jan 31, 2021, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms to ETF/LERF. (Note that this milestone number was changed to M-62-50.)

I care about how Hanford's tank waste is treated and I want a transparent process that clearly documents in one place what happens to the tank waste once it starts treatment, where contaminants end up and in what quantity. It is important to me that there are no "orphaned waste streams" - waste that has no pathway for further treatment or disposal.

Thank you for considering my comments, Judy Todd

Response to I-30-1

Thank you for your comment.

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Ecology shares your concern about orphaned waste streams. Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Though this comment is outside the scope of this permit modification, the public will have the opportunity to review relevant permit documentation and provide comments for future permit modifications at LERF and 200 Area ETF.

O-1: HANFORD CHALLENGE

Comment O-1-1

See [References](#) for original submission

Response to O-1-1

Please see the responses from O-1-2 to O-1-9.

Comment O-1-2

Require Submittal of Integrated Mass Balance Flow as a Single Secondary Document: Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that states: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms and to ETF/LERF. (Note that this milestone number was changed to M-62-50).

Response to O-1-2

Ecology accepted DOE's proposal to alter the TPA milestone based on DOE letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>). While Ecology accepted the milestone as complete, it is important to acknowledge that DOE's letter committed to continued work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Comment O-1-3

More Information Needed re: Addition of "WTP Aqueous Waste" (Addendum C-1, pdf p. 34 of 3641).: DOE should provide RPP-RPT-62679 to Ecology, so that Ecology has the necessary information to track down the source of the composition inputs to make sure they are reliable and complete. Please include the composition ranges for WTP Aqueous Waste in the permit, similar to tank waste compositions listed for the Hose in Hose Transfer line specifications in the LERF/ETF permit.

Response to O-1-3

Ecology received the document RPP-RPT-62679, 2020, ETF Truck Load-In Expansion Project Non-Metallic Materials Report, Rev. 1 as part of this permit modification package. Section 3.1 of this document states that the acceptance criteria for waste sent to LERF is used as the bounding conditions for the ETF wastewater chemical composition.

The mass balance analysis does not determine a waste streams' acceptability at the LERF and 200 Area ETF. This is determined by the facility's Waste Acceptance Criteria and a Waste Analysis Plan, which are included in this LERF and 200 Area ETF permit modification.

Comment O-1-4

Ensure Addition of Brine Will Not Create Orphaned Waste Stream: Brine has been added as an ETF waste product in addition to powder on Addendum B-8 (pdf p. 19 of 3641). Where will this brine be sent for treatment? Hanford Challenge has documented concerns with treating Hanford waste at Perma-Fix Northwest.

Response to O-1-4

Ecology will ensure the disposition of all waste streams is determined prior to commencement of treatment operations. Depending on the source of the treatment campaign, brine generated from the secondary treatment train may require additional treatment (grout) to meet RCRA Land Disposal Restrictions (LDRs), and the waste acceptance criteria for the authorized disposal facility. DOE stated to Ecology that two alternatives are being considered: (1) on-site treatment or (2) off-site treatment at PERMA-FIX Northwest (PFNW). DOE has not submitted a permit modification request to support either alternative. Ecology is separately preparing a SEPA evaluation (EIS supplement) to support renewal of the PFWN RCRA permit.

Comment O-1-5

Double-Shell Tank Waste Space Concerns: Please check the assertion made to the DOE OIG (DOE-OIG-20-57) claiming that tank waste operations will “eliminate” the concern regarding sufficient DST space availability. Is this conclusion supported in the mass balance, or will volumes of DST waste “pile up” during Direct Feed Low Activity Waste operations?

Response to O-1-5

Double-Shell Tank Waste Space is not within the scope of this permit modification. In June 2019 Ecology issued to DOE milestones for new DSTs. Ecology's unilateral action is currently in the TPA dispute process. This comment's recommendation is an alternate approach to Ecology's position on new DSTs.

Comment O-1-6

Build New Tanks - Contingency Planning for Tank Leaks and Backup Storage During DFLAW: Though not the topic of this comment period, Hanford Challenge believes that the agencies should initiate the appropriate actions to build new tanks to ensure that sufficient space is available during tank waste treatment.

Response to O-1-6

Building new tanks for backup storage during tank waste treatment is not within the scope of this permit modification.

Comment O-1-7

Make Reference Materials Accessible to the Public: Please make all reference material cited by DOE in letter 20-ECD-0057, including ,“Powerpoint,” presentations, available to the public for review in the TPA administrative record, as a single secondary document.

Response to O-1-7

Ecology's permitting decision is not dependent on acceptance of the milestone as complete. Therefore, Ecology is not including the requested documents as part of this permit modification's administrative record. Ecology will, however, honor this request as a Public Records Act request.

Comment O-1-8

Information Before Approval: Ensure that additional information is provided to Ecology and shared with the public prior to approving these permit modifications.

Response to O-1-8

Ecology shares your concern for maintaining transparency and strives to ensure the public is apprised of the same level of information as the agency.

Appendix A. Copies of All Public Notices

Public notices for this comment period:

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



Comment Period

Dec. 15, 2020 – Feb. 13, 2021

Virtual Public Meeting

Jan. 21, 5:30 p.m. PT
(see page 3 for details)

Send comments by Feb. 13 to

<http://nw.ecology.commentinput.com/?id=69PsZ>

Administrative Record:

<https://pdw.hanford.gov/document/AR-04260>

Contact Information

Jennifer Colborn
(509) 528.6687
jennifer_m_colborn@rl.gov

Daina McFadden, Ecology
(509) 372-7950
Hanford@ecy.wa.gov



The U.S. Department of Energy (DOE) is holding a 60-day public comment period on a proposed Class 2 permit modification to the Hanford Dangerous Waste Permit, “Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility” chapter. This proposed permit modification is required to expand the existing 2025ED Load-In Station, construct the 2025EG Backup Load-In Station container storage and treatment area, and remove two unused tanks at the 2025ED Load-In Station, all of which are within the permit boundary.

Background

The Hanford Site is located in southeastern Washington state along the Columbia River. The 580-square-mile site was created in 1943 as part of the Manhattan Project to produce plutonium for the nation’s defense program. Today, waste management and environmental cleanup are the main missions at Hanford.

The DOE and its contractor Washington River Protection Solutions are requesting a Class 2 modification to the Liquid Effluent Retention Facility (LERF) and 200 Area Effluent Treatment Facility (ETF) operating unit group of the Hanford Dangerous Waste Permit. The LERF and 200 Area ETF are mixed-waste treatment and storage units for treating liquid effluents from operating Hanford cleanup facilities. These facilities include the 242-A Evaporator and the Waste Treatment and Immobilization Plant’s Effluent Management Facility (when it becomes operational) to support treating tank waste using the Direct-Feed Low-Activity Waste approach (see map).



Overview

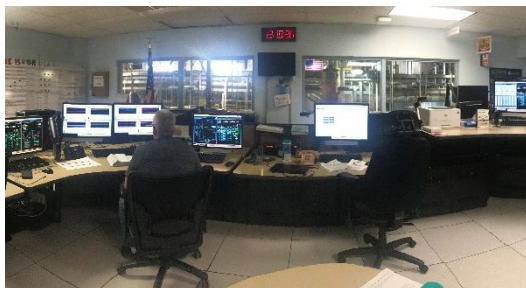
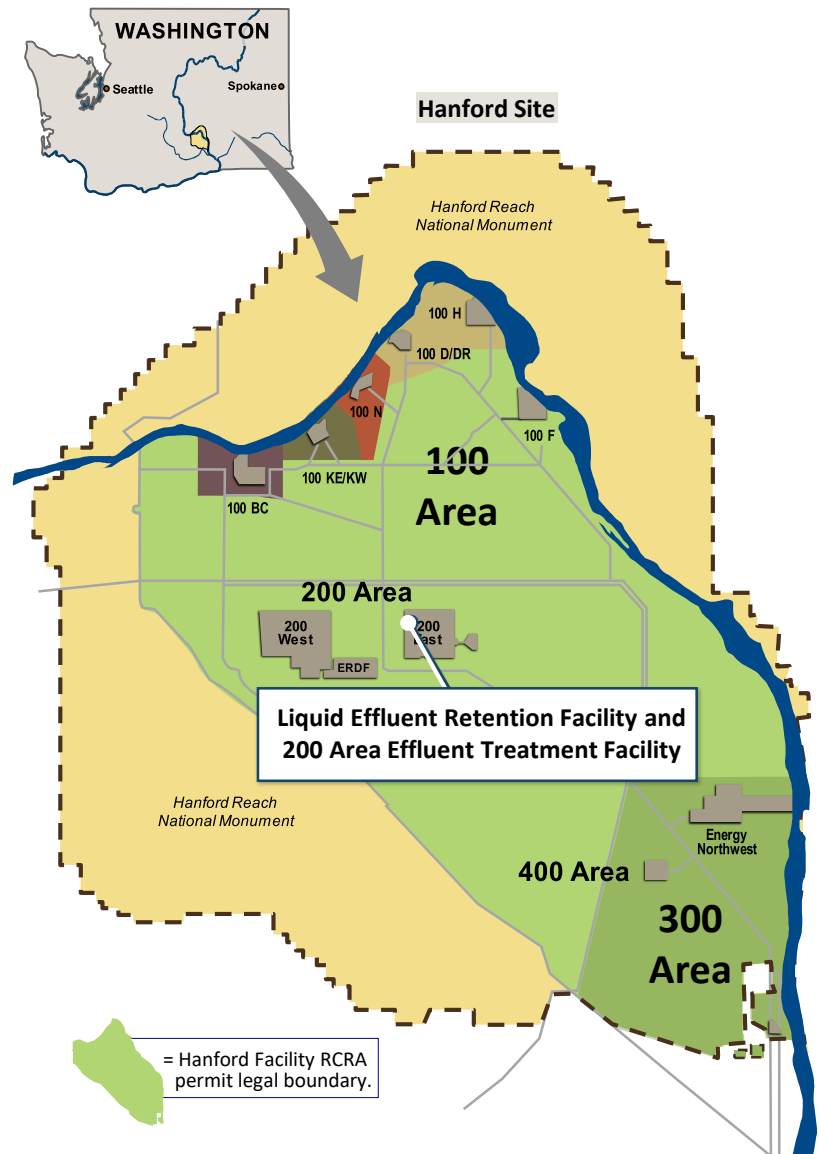
The Hanford Dangerous Waste Permit establishes requirements to ensure that waste management activities protect human health and the environment. DOE is proposing a Class 2 permit modification pursuant to [WAC 173-303-830](#), which requires a 60-day comment period, a public meeting, a newspaper notice, and a mailing list notice. This fact sheet is the mailing notice.

Summary of Changes

If approved, the modification would allow DOE to expand the 2025ED Load-In Station, construct the 2025EG Backup Load-In Station, and remove two unused tanks at the 200 Area ETF.

Permit Chapters Affected by this Modification

- Permit Conditions
- Addendum B, Waste Analysis Plan
- Addendum C, Process Information
- Addendum F, Preparedness and Prevention
- Addendum H, Closure Plan
- Addendum I, Inspection Requirements
- Addendum J, Contingency Plan



The Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility are monitored closely by the operations staff in the control room



Outside the 200 Area Effluent Treatment Facility

Public Involvement

A 60-day public comment period will begin Dec. 15, 2020, and continue through Feb. 13, 2021. A virtual public meeting will be held Jan. 21, 2021, at 5:30 p.m. PT, and will include a presentation introducing the LERF and 200 Area ETF modification for the expansion of the 2025ED Load-In Station, construction of 2025EG Backup Load-In Station, and removal of two tanks to meet the closure plan requirements.

During the virtual meeting, you can view the presentation, hear the speakers and ask your questions. To participate via GoToWebinar, please follow the instructions below:

Visual (presentation only):

Click the GoToWebinar link: <https://attendee.gotowebinar.com/register/9073672840153859598>;

ID #: 865-670-531

Audio:

1. Dial (509) 372-3087 (local) or (800) 664-0771 (long distance)

2. Enter Conference ID: 1333#

All comments must be submitted by Feb. 13, 2021, in writing, by mail or electronically (preferred) to:

Washington State Department of Ecology

3100 Port of Benton Boulevard

Richland, WA 99354

<http://nw.ecology.commentinput.com/?id=69PsZ> (preferred)

At the conclusion of the public comment period, the Washington State Department of Ecology will address public comments and issue a final permit.

Copies of the proposed plan and supporting documentation will be available online during the public comment period in the Administrative Record at <https://pdw.hanford.gov/document/AR-04260>. Hanford Public Information Repository locations are listed at <https://go.usa.gov/xVDTS>.

The permittee's compliance history during the life of the permit being modified is available from the Washington State Department of Ecology contact person.

Please contact Jennifer Colborn, at Jennifer_M_Colborn@rl.gov or (509) 528-6687, at least 10 working days prior to the event to request disability accommodation. DOE makes every effort to honor disability accommodation requests.



Jennifer Colborn
P.O. Box 450, H6-60
Richland, WA 99352

Daina McFadden, Ecology
3100 Port of Benton Boulevard
Richland, WA 99354

Public Involvement Opportunity

We want to hear from you.

Comment Period:

Dec. 15, 2020 – Feb. 13, 2021

Public Meeting: Jan. 21, 5:30 p.m. (see page 3 for details)



NY health workers first to get vaccine in US

BY LAURAN NEERGAARD
Associated Press

The largest vaccination campaign in U.S. history got underway Monday as health workers in select hospitals rolled up their sleeves for shots to protect them from COVID-19 and start beating back the pandemic – even as the nation’s death toll neared 300,000.

“I feel hopeful today. Relieved,” said critical case nurse Sandra Lindsay after getting a shot in the arm at Long Island Jewish Medical Center in New York. Lindsay reportedly was the first person to receive the shot, according to the New York Times.

Shipments of frozen vials of vaccine made by Pfizer Inc. and its German partner BioNTech began arriving at hospitals around the country Monday.

“This is the light at the end of the tunnel. But it’s

a long tunnel,” New York Gov. Andrew Cuomo said as he watched Lindsay’s vaccination via video.

Several other countries also have OK’d the vaccine, including the U.K., which started vaccinating last week.

For health care workers who, along with nursing home residents, will be first in line for vaccination, hope is tempered by grief and the sheer exhaustion of months spent battling a coronavirus that still is surging in the U.S. and around the world.

“This is mile 24 of a marathon. People are fatigued. But we also recognize that this end is in sight,” said Dr. Chris Dale of Swedish Health Services in Seattle.

Packed in dry ice to stay at ultra-frozen temperatures, the first of nearly 3 million vaccine doses being shipped in staggered batches this week made their way by truck and plane around the country

Sunday from Pfizer’s Kalamazoo, Michigan, factory. Once they arrive at distribution centers, each state directs where the doses go next.

More of the Pfizer-BioNTech vaccine will arrive each week. And later this week, the FDA will decide whether to greenlight the world’s second rigorously studied COVID-19 vaccine, made by Moderna Inc.

Now the hurdle is to rapidly get vaccine into the arms of millions, not just doctors and nurses but other at-risk health workers such as janitors and food handlers – and then deliver a second dose three weeks later.

“We’re also in the middle of a surge, and it’s the holidays, and our health care workers have been working at an extraordinary pace,” said Sue Mashni, chief pharmacy officer at Mount Sinai Health System in New York City.

Plus, the shots can

“THIS IS MILE 24 OF A MARATHON. PEOPLE ARE FATIGUED. BUT WE ALSO RECOGNIZE THAT THIS END IS IN SIGHT.”

Dr. Chris Dale of Swedish Health Services in Seattle

cause temporary fever, fatigue and aches as they rev up people’s immune systems, forcing hospitals to stagger employee vaccinations.

A wary public will be watching closely to see whether health workers embrace vaccination. Just half of Americans say they want to get vaccinated, while about a quarter don’t and the rest are unsure, according to a recent poll by The Associated Press-NORC Center for Public Health Research.

The FDA, considered the world’s most strict medical regulator, said the Pfizer-BioNTech vaccine

appears safe and strongly protective – and laid out the data behind it in a public meeting last week for scientists and consumers.

“Please, people, when you look back in a year and you say to yourself, ‘Did I do the right thing?’ I hope you’ll be able to say, ‘Yes, because I looked at the evidence,’” Dr. Francis Collins, director of the National Institutes of Health, said Sunday on NBC’s “Meet the Press.”

“People are dying right now. How could you possibly say, ‘Let’s wait and see?’”

Still, emergency use means the vaccine was

cleared for widespread use before a final study in nearly 44,000 people is complete – and that research is continuing to try to answer additional questions. While effective against COVID-19 illness, it’s not yet clear whether vaccination will stop the symptomless spread that accounts for half of all cases.

The shots still must be studied in children, and during pregnancy. But the American College of Obstetricians and Gynecologists said late Sunday that vaccination should not be withheld from pregnant women who otherwise would qualify.

While the vaccine was determined to be safe, regulators in the U.K. are investigating several severe allergic reactions. The FDA’s instructions tell providers not to give it to those with a known history of severe allergic reactions to any of its ingredients.

Electors cast votes for Biden as next president

BY MARK SHERMAN
Associated Press

WASHINGTON

Presidential electors coast to coast on Monday cast the votes that formally choose Joe Biden as the nation’s next president.

Heightened security was in place in some states as electors in Arizona, Georgia, Michigan, Nevada, Pennsylvania and Wisconsin – the six battleground states that Biden won and President Donald Trump contested – gave Biden and Vice President-elect Kamala Harris their votes Monday in low-key proceedings. Nevada’s electors met via Zoom because of the coronavirus pandemic.

Monday was the day set by law for the meeting of the Electoral College. In reality, electors were meeting in all 50 states and the District of Columbia to cast their ballots. The results will be sent to Washington and tallied in a Jan. 6 joint session of Congress, over which Vice President Mike Pence will preside.

The electors’ votes have drawn more attention than usual this year because President Donald Trump has refused to concede the election and continues to make unsupported allegations of fraud.

When all the votes are in, Biden is expected to have 306 electoral votes to 232 for Trump. It takes 270 to be elected. In the popular vote count, Biden topped Trump by more than 7 million votes nationwide.

“In this battle for the soul of America, democracy prevailed,” Biden said in remarks prepared for a Monday evening speech. “We the people voted. Faith in our institutions held. The integrity of our elections remains intact. And so, now it is time to turn the page. To unite. To heal.”

Biden renewed his campaign promise to be a president for all Americans, whether they voted for him or not, and said the country has hard work ahead on the virus and economy.

There have been concerns about safety for the electors, virtually unheard of in previous years. In Michigan, lawmakers from both parties reported receiving threats.

Legislative offices there were closed Monday over threats of violence. The 16 electors were to meet in the Senate chamber in a

WHEN ALL THE VOTES ARE IN, BIDEN IS EXPECTED TO HAVE 306 ELECTORAL VOTES TO 232 FOR TRUMP.

ceremony headed by Democratic Gov. Gretchen Whitmer. Biden won the state by 154,000 votes, or 2.8 percentage points, over Trump.

Amber McCann, spokeswoman for Republican Senate Majority Leader Mike Shirkey, said the closures were made on recommendations from law enforcement “based on credible threats of violence.”

Georgia state police were out in force at the state Capitol in Atlanta before Democratic electors pledged to Biden met. There were no protesters to be seen less than an hour ahead of the meeting.

Even as the Electoral College was formally confirming Biden’s victory, some Republicans continued to refuse to acknowledge that reality. Yet their opposition to Biden had no practical effect on the electoral process, with the Democrat to be sworn in on Jan. 20.

Despite Biden’s wins in Georgia, Michigan, Pennsylvania and Wisconsin, Republicans who would have been Trump electors met anyway. Pennsylvania Republicans said they cast a “procedural vote” for Trump and Vice President Mike Pence in case courts that have repeatedly rejected challenges to Biden’s victory were to somehow still determine that Trump had won.

In North Carolina, Utah and other states across the country where Trump won, his electors turned out to duly cast their ballots for him. Electors in North Carolina had their temperatures checked before being allowed to enter the Capitol to vote.

Former President Bill Clinton and former Secretary of State Hillary Clinton, whom Trump defeated four years ago, were among New York’s 29 electors for Biden and Harris.

In New Hampshire, before the state’s four electors voted for Biden at the State House in Concord, 13-year-old Brayden Harrington led the group in the Pledge of Alle-

giance. He had delivered a moving speech at the Democratic National Convention in August about the struggle with stuttering he shares with Biden.

Vermont’s electors were the first in the nation to vote Monday, and they chose Biden and Harris.

Trump, meanwhile, is clinging to his false claims that he won the election, and trying to undermine Biden’s presidency before it begins.

“No, I worry about the country having an illegitimate president, that’s what I worry about. A president that lost and lost badly,” Trump said in a Fox News interview that was taped Saturday.

Following weeks of Republican legal challenges that were easily dismissed by judges, Trump and Republican allies tried to persuade the Supreme Court last week to set aside 62 electoral votes for Biden in four states, which might have thrown the outcome into doubt.

The justices rejected the effort on Friday.

In 32 states and the District of Columbia, laws require electors to vote for the popular-vote winner. The Supreme Court unanimously upheld this arrangement in July.

Electors almost always vote for the state winner anyway because they generally are devoted to their political parties. There’s no reason to expect any defections this year. Among prominent electors are Democrat Stacey Abrams of Georgia and Republican Gov. Kristi Noem of South Dakota.

The voting is by paper ballot. Electors cast one vote each for president and vice president.

The Electoral College was the product of compromise during the drafting of the Constitution between those who favored electing the president by popular vote and those who opposed giving the people the power to directly choose their leader.

Each state gets a number of electors equal to its total number of seats in Congress: two senators plus however many members the state has in the House of Representatives. Washington, D.C., has three votes, under a constitutional amendment that was ratified in 1961. With the exception of Maine and Nebraska, states award all their Electoral College votes to the winner of the popular vote in their state.

The bargain struck by the nation’s founders has produced five elections in which the president won the electoral votes but did not win the popular vote. Trump was the most recent example in 2016. Biden topped Trump in the popular vote by more than 7 million votes this year.

US COVID-19 deaths top 300,000 just as vaccinations begin

BY ADAM GELLER AND
HEATHER HOLLINGSWORTH
Associated Press

The U.S. death toll from the coronavirus topped 300,000 Monday just as the country began dispensing COVID-19 shots in a monumental campaign to conquer the outbreak.

The number of dead rivals the population of St. Louis or Pittsburgh. It is equivalent to repeating a tragedy on the scale of Hurricane Katrina every day for 5 1/2 months. It is more than five times the

number of Americans killed in the Vietnam War. It is equal to a 9/11 attack every day for more than 100 days.

“The numbers are staggering – the most impactful respiratory pandemic that we have experienced in over 102 years, since the iconic 1918 Spanish flu,” Dr. Anthony Fauci, the government’s top infectious-disease expert, said days before the milestone.

The U.S. crossed the threshold on the same day health care workers rolled up their sleeves for Pfizer’s COVID-19 shot, marking the start of the biggest vaccination campaign in American history. If a second vaccine is authorized soon, as expected, 20 million people could be immunized by month’s end.

The death toll was reported by Johns Hopkins University from data supplied by health authorities across the U.S. The real number of lives lost is believed to be much higher, in part because of deaths that were not accurately recorded as coronavirus-related during the early stages of the crisis.

Globally the virus is blamed for more than 1.6 million deaths.

Experts say it could take well into spring for the shots and other measures to bring cases and deaths under control in the U.S.

THE HANFORD SITE



PUBLIC COMMENT PERIOD: DEC. 15, 2020 – FEB. 13, 2021



Class 2 Permit Modification to the Hanford Dangerous Waste Permit

The U.S. Department of Energy (DOE) is holding a 60-day public comment period on a proposed Class 2 permit modification to the Hanford Dangerous Waste Permit, “Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility” chapter. This proposed permit modification is required to expand the existing 2025ED Load-In Station, construct the 2025EG Backup Load-In Station container storage and treatment area, and remove two unused tanks at the 2025ED Load-In Station, all of which are within the permit boundary.

A virtual public meeting will be held Jan. 21, 2021 at 5:30 p.m. During the virtual meeting, you can view the presentation, hear the speakers and ask your questions. To participate via GoToWebinar, please follow the instructions below:

Visual (presentation only):
<https://attendee.gotowebinar.com/register/9073672840153859598>;
ID #: 865-670-531

Audio:
1. Dial (509) 372-3087 (local) or (800) 664-0771 (long distance)
2. Enter Conference ID: 1333#

Visit <https://pdw.hanford.gov/document/AR-04260> to review details on these proposed changes. All comments must be submitted by Feb. 13, 2021, in writing, by mail or electronically to:

Washington State Department of Ecology
3100 Port of Benton Boulevard
Richland, WA 99354
eComments (preferred): <http://nw.ecology.commentinput.com/?id=69PsZ>

Questions? Please contact Jennifer Colborn at jennifer_m_colborn@rl.gov, or Daina McFadden, Washington State Department of Ecology, at Hanford@ecy.wa.gov.

The permittee’s compliance history during the application of the relevant permit, is available from the Washington State Department of Ecology contact person.

Contact Jennifer Colborn, jennifer_m_colborn@rl.gov, 509-528-6687 at least 10 working days prior to the event to request disability accommodation.

Learn more about Hanford cleanup at www.hanford.gov

From: [^TPA](#)
To: HANFORD-INFO@LISTSERV.ECOLOGY.WA.GOV
Subject: Notice of Upcoming Public Comment Period on Proposed Changes to the Hanford Dangerous Waste Permit
Date: Thursday, November 12, 2020 8:59:01 AM
Attachments: [image001.png](#)

THE HANFORD SITE

This is a message from the U.S. Department of Energy

Notice of Upcoming Public Comment Period on Proposed Changes to the Hanford Dangerous Waste Permit

The U.S. Department of Energy is planning a 60-day public comment period on a proposed Class 2 permit modification to the Hanford Dangerous Waste Permit. This proposed permit modification is required to expand the 2025ED Load-In Station container storage and treatment area and construct a Backup Load-In Station container storage and treatment area at the Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility.

The comment period is expected to begin in December 2020, with a public meeting in January 2021.

The proposed modification and supporting documentation will be available online during the public comment period on the Hanford [events calendar](#), the Hanford [Administrative Record](#), and at the Hanford [Public Information Repositories](#).

A summary fact sheet and details of the public meeting will be provided when the comment period begins.

Questions? Please contact Jennifer Colborn, Mission Support Alliance, at Jennifer_M_Colborn@rl.gov, or Daina McFadden, Washington State Department of Ecology, at Hanford@ecy.wa.gov.

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From: ^TPA
To: HANFORD-INFO@LISTSERV.ECOLOGY.WA.GOV
Subject: Public Comment Period Begins Today on Proposed Changes to the Hanford Dangerous Waste Permit
Date: Tuesday, December 15, 2020 9:13:13 AM
Attachments: [image003.png](#)
[LERF-ETF_Fact_Sheet_Class_2_Load-In_Expansion_FINAL.pdf](#)

THE HANFORD SITE

This is a message from the U.S. Department of Energy

Public Comment Period on Proposed Changes to the Hanford Dangerous Waste Permit

The U.S. Department of Energy is holding a 60-day public comment period on a proposed Class 2 permit modification to the Hanford Dangerous Waste Permit, “Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility” chapter. This proposed permit modification is required to expand the existing 2025ED Load-In Station, construct the 2025EG Backup Load-In Station container storage and treatment area, and remove two unused tanks at the 2025ED Load-In Station, all of which are within the permit boundary.

The comment period is from Dec. 15, 2020, through Feb. 13, 2021. A virtual public meeting will be held Jan. 21, 2021, at 5:30 p.m. PT. To participate via GoToWebinar, please follow the instructions below:

Visual (presentation only):

Click the GoToWebinar link:

<https://attendee.gotowebinar.com/register/9073672840153859598>;

ID #: 865-670-531

Audio:

1. Dial (509) 372-3087 (local) or (800) 664-0771 (long distance)

2. Enter Conference ID: 1333#

Please submit any comments by **Feb. 13**, [electronically](#) (preferred) or by mail to:

Washington State Department of Ecology
3100 Port of Benton Boulevard
Richland, Washington 99354

Information about the proposed modification and supporting documentation are available online during the public comment period on the Hanford [events calendar](#), the Hanford [Administrative Record](#), and at the Hanford [Public Information Repositories](#). Please see the attached summary fact sheet.

Questions? Please contact Jennifer Colborn, Mission Support Alliance, at Jennifer_M_colborn@rl.gov, or Daina McFadden, Washington State Department of Ecology, at Hanford@ecy.wa.gov.

To request disability accommodation, please contact Jennifer Colborn, jennifer_m_colborn@rl.gov or (509) 376-5840 at least 10 working days prior to the event. DOE makes every effort to honor disability accommodation requests.

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Washington Department of Ecology - Hanford
Published by Ecology Ryan · 23h ·

A new [#Hanford](#) public comment period began yesterday, held by the U.S. Department of Energy, involving the Liquid Effluent Retention Facility and the 200 Area Effluent Treatment Facility.

Read more information about the permit modification and get your comments in by Feb. 13: <https://ecology.wa.gov/.../Nuclear.../Public-comment-periods>



YOUR VOICE MATTERS

Public comment period now open!



24 People Reached
5 Engagements



 3

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 Comment
 Share


Comment as Washington Department of Ec...


Ecology - Hanford
@ecyHanford · Dec 16

A new [#Hanford](#) public comment period held by [@HanfordSite/](#)
[@RiverProtection](#) ([@ENERGY](#)) began yesterday, involving the LERF/ETF facilities. Check out more information and submit your comments by Feb. 13: ecology.wa.gov/Waste-Toxics/N... [@EcologyWA](#) [@EPAnorthwest](#) [@EPA](#)



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183 views


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References

December 21, 2020

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DEC 28 2020

Department of Ecology
NWP - Richland

Washington State Department of Ecology
3100 Port of Benton Boulevard
Richland, WA 99354

SUBJECT: LERF and ETF Class 2 Modification to the Hanford Dangerous Waste Permit
- Public Comment Period December 15, 2020 to February 13, 2021

Dear Department of Ecology:

The LERF/ETF comment period is materially affected by a recent proposal by DOE regarding TPA milestone M-62-46, (which apparently was subsequently renumbered M-62-50). M-62-46/50 would have provided an integrated DFLAW-ETF tank waste and secondary waste mass balance using a uniform set of assumptions. DOE has, in what appears to be a case of "bait and switch," proposed to fulfill the milestone with old disconnected work, and presentations not subject to quality assurance.

- The Fact Sheet for the LERF/ETF permit modification notes that a load in station will be expanded, and a back-up load in station constructed apparently for LERF (which feeds ETF), and that unused tanks will be removed from ETF.
- The operation of LERF/ETF in support of the DFLAW and LAWPS missions is affected by the overall integrated flowsheet/mass balance flowsheet from the tank farms to low activity waste pretreatment, to low activity waste vitrification (LAW-WTP) to the Effluent Management Facility (EMF), to recycle to tank farms, and to ETF/LERF.
- Ecology was proactive in requesting a formal mass balance for the integrated system, resulting in TPA Milestone M-62-46, which was agreed as a new milestone on **July 11, 2019**, with the document (a secondary TPA document) due on **January 30, 2021**¹. The text of this milestone is:

M-62-46: Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms and to ETF/LERF.

[Note, in subsequent letters, this number was changed to M-62-50].

- The contents of milestone M-62-46 would inform Ecology's and the public's review of this LERF/ETF permit modification. Milestone M-62-46 would also be informative of

¹ Letter 19-ORPMGR-0006, Brian Vance to Alexandra Smith, CORRESPONDENCE REGARDING TANK WASTE RETRIEVAL AND TREATMENT PATHWAY AT HANFORD AND PROPOSED TRI-PARTY AGREEMENT CHANGE PACKAGES, July 11, 2019, Change Control Form M-62-19-01.

the ongoing dispute between Ecology and DOE as to whether new double shell tanks should be built.

After establishing milestone M-62-46 (aka M-62-50), the Department of Energy reported to Ecology and the public *many times* that the progress on the mass balance secondary document was “on schedule,” as listed below.

- December 2019 Office of River Protection TPA Monthly Report, (covering the period through November 2019),
M-062-50 Submit to Ecology as a Secondary Document, a Mass Balance Flow
Due January 31, 2021
Status: On Schedule
- January 2020 Office of River Protection TPA Monthly Report, (covering the period through December 2019),
M-062-50 Submit to Ecology as a Secondary Document, a Mass Balance Flow
Due January 31, 2021
Status: On Schedule
- February 2020 Office of River Protection TPA Monthly Report (covering the period through January 2020),
M-062-50 Submit to Ecology as a Secondary Document, a Mass Balance Flow
Due January 31, 2021
Status: On Schedule
- March 2020 Office of River Protection TPA Monthly Report (covering the period through February 2020),
M-062-50 Submit to Ecology as a Secondary Document, a Mass Balance Flow
Due January 31, 2021
Status: On Schedule
- April 2020 Office of River Protection TPA Monthly Report (covering the period through March 2020),
M-062-50 Submit to Ecology as a Secondary Document, a Mass Balance Flow
Due January 31, 2021
Status: On Schedule
- May 2020 Office of River Protection TPA Monthly Report (covering the period through April 2020),
M-062-50 Submit to Ecology as a Secondary Document, a Mass Balance Flow
Due January 31, 2021
Status: On Schedule
- June 2020 Office of River Protection TPA Monthly Report (covering the period through May 2020),
M-062-50 Submit to Ecology as a Secondary Document, a Mass Balance Flow

Due January 31, 2021
Status: *On Schedule*

- July 2020 Office of River Protection TPA Monthly Report (covering the period through June 2020),
M-062-50 Submit to Ecology as a Secondary Document, a Mass Balance Flow
Due January 31, 2021
Status: *On Schedule*
- August 2020 Office of River Protection TPA Monthly Report (covering the period through July 2020),
M-062-50 Submit to Ecology as a Secondary Document, a Mass Balance Flow
Due January 31, 2021
Status: *On Schedule*
- Office of River Protection TPA Project Managers' Meeting Minutes, August 13, 2020. This TPA record shows an Action 1 (with a start date of January 9, 2020) for DOE to "Provide a status update at *next month's* PMM on Milestone M-062-50, "Submit to Ecology as a Secondary Document, a Mass Balance Flow Sheet." The status of this action, established in January, was **OPEN** as of August 13, 2020. Minutes signed by Brian Harkins, DOE-ORP Project Manager.
- September 2020 Office of River Protection TPA Monthly Report (covering the period through August 2020),
M-062-50 Submit to Ecology as a Secondary Document, a Mass Balance Flow
Due January 31, 2021
Status: *On Schedule*
- Office of River Protection TPA Project Managers' Meeting Minutes, September 10, 2020.
This TPA record shows that Action 1, from January 9, 2020 was completed as follows: Action No. 1 (TF-20-01-01): ORP stated that the status of this action ("Submit to Ecology as a Secondary Document, a Mass Balance Flow Sheet") **is tracked in the monthly TPA report** under Milestone M-062-50, and that it was also providing updates to the Ecology Project Manager. As such, ORP proposed closing the action [without having any input of substance to the TPA meeting minutes]. Ecology agreed.
The action was closed.
- October 2020 Office of River Protection TPA Monthly Report (covering the period through September 2020),
M-062-50 Submit to Ecology as a Secondary Document, a Mass Balance Flow
Due January 31, 2021
Status: *On Schedule*
- **December 4, 2020**, Letter 20-ECD-0057, Glynn Trenchard, ORP, to Stephanie Schleif, ECY, "COMPLETION OF TRI-PARTY AGREEMENT MILESTONE M-062-50."

This letter proposes to **do away with the requirement for a separate secondary mass balance document**, and instead reference data from April 2017 for WTP and EMF; from May 2019 for Tank Side Cesium Removal, and from EMF/LERF information provided at meetings/presentations in March, April and October of 2020. This proposal is an attempt to renegotiate a milestone outside of public review.

1. My first comment is that I would appreciate if Ecology would reject ORP's proposal to alter TPA Milestone M-062-50. This milestone was supposed to be an integrated, up to date mass balance, and it was reported to the public as "On Schedule" as a single secondary document, month after month after month. Further, some of the information proposed to be substituted predates the establishment of the milestone, none of it is integrated, and some is presentation slides, which have no QA associated with them, as opposed to formal, checked, TPA documents. Ecology should receive a consistent set of assumptions to check to see if they are reasonable, and a set of results to show volumes and compositions underlying the present permit modification request parameters (such as the capacity of the expanded and new equipment), and also to compare to DOE promises about Double Shell Tank space. For example, a DOE official made an unsupported assertion to the DOE Office of Inspector General (DOE-OIG-20-57) that tank waste operations will "eliminate" the concern regarding sufficient DST space availability. It would help to know whether this conclusion is supported in the mass balance or if volumes of DST waste will pile up during DFLAW.

At a minimum, all reference material (including "Powerpoint" presentations) cited by DOE in letter **20-ECD-0057** should be compiled and made available to the public for review in the TPA administrative record, as a single secondary document, by the due date of January 31, 2021, so we can see for ourselves whether DOE's assumptions are consistently documented and integrated.

Of note is that DOE has not described what they were doing during the months of "on schedule" reporting for the milestone. Was this a case of continued time card fraud because they were not actually working on a mass balance? Or is it a case where the results were something DOE did not like and did not wish to share? It would be helpful for Ecology to hold DOE accountable to the original milestone.

Additional comments where a mass balance could improve the current permit modification for LERF/ETF are below.

2. Per addendum page B.7, ETF products now include brine as well as powder. Brine is intended for "*treatment at an authorized dangerous waste facility*." DOE Should identify the facility and verify this is acceptable under the "*authorized facility's*" permits. If there is no facility with an active valid permits, DOE will have an orphan waste. ~~Is~~ the brine stream affected by the new grout skid that is in design, according to the monthly reports? Can it grout this brine? Please do not send, as was previously identified, ETF brine to PERMA-FIX Northwest in Richland. The brine can generate toxic gases when the pH is adjusted, and, without a mass balance, no one can tell how much ammonia or technetium, or tritium, or NOx sources will be included. Recently a Hanford Tank waste simulant evolved toxic NOx

gas when treated improperly, according to the DNFSB². The same thing could happen much closer to City of Richland residents if treatment occurs at PFNW. Safety and regulatory problems at Perma-Fix Northwest are identified in detail in a new Hanford Challenge report³.

3. Page addendum C.1 adds “WTP aqueous waste” to the list of wastes to be treated at ETF. As a result, there are new feeds and new products to be considered in this permit request. RPP-IQRPE-50074, page 35, identifies Page RPP-RPT-62679, 2020, *ETF Truck Load-In Expansion Project Non-Metallic Materials Report*, Rev. 1, Washington River Protection Solutions, LLC, Richland, Washington, as the source of information on the “*composition of the various ETF waste streams.*” No stream data are provided. Presumably, an integrated mass balance was used to prepare the waste stream composition. Ecology should ask for a copy of RPP-RPT-62679 to track down the source of the composition inputs to see if they are reliable and complete, and ask that the composition ranges be provided in the permit, similar to tank waste compositions listed for the Hose in Hose Transfer line specification (which is part of the LERF/ETF permit).
4. Page Addendum C.13 deletes “39,000” gallons and refers to the “Part A” form in Addendum A for the maximum volume of dangerous waste that can be stored in containers. When I look at the Part A, I found that it says “the container design capacity 39,000 gallons, and the treatment capacity 5,000 gallons are “empirical” numbers based on maximum “anticipated” treatment. The basis for the “anticipated” amounts is not provided, but would be documented with a basis had DOE prepared an integrated mass balance. Ecology should ask for the basis documentation for these “anticipated” values, which include liquids from the current proposed permit modification.
5. Page Addendum B.8 states that aqueous waste from the WTP analytical laboratory is also transferred to LERF/ETF. It would help to have the integrated mass balance to provide a basis for the estimated flows of ALL the streams going to ETF/LERF. Was this stream included in the IQRPE report? The proposed permit modification does not say.

Thank you for considering these comments.

CC: David Bowen,
Stephanie Schleif
Washington Department of Ecology Nuclear Waste Program

² See DNFSB Hanford Activity Report for the Week Ending November 27, 2020, located at <https://www.dnfsb.gov/sites/default/files/document/22431/Hanford%20Week%20Ending%20November%2027%202020.pdf>

³ “Risky Business at Perma-Fix Northwest, The Inside Story on Hanford’s Off-Site Radioactive Treatment Facility,” Updated December 4, 2020, Located at: <https://static1.squarespace.com/static/568adf4125981deb769d96b2/t/5fce533274a40730fbc928bf/1607357241336/2020+12.04+PermaFix+Report+updated.pdf>



**U.S. Department of Energy
Hanford Site**

December 4, 2020

20-ECD-0057

Ms. Stephanie N. Schleif
Acting Program Manager
Nuclear Waste Program
Washington State Department of Ecology
3100 Port of Benton Boulevard
Richland, Washington 99354

Dear Ms. Schleif:

COMPLETION OF TRI-PARTY AGREEMENT MILESTONE M-062-50

Tri-Party Agreement (TPA) Milestone M-062-50 states the following:

“Submit to Ecology, **as a secondary document**, a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms and to LERF/ETF.”

Mass balance information has been submitted with various permit application related to the following facilities include:

- Waste Treatment and Immobilization Plant (WTP) Direct Feed Low-Activity Waste and Effluent Management Facility (EMF) mass balance information was submitted in April 2017.
- Tank Side Cesium Removal mass balance information was submitted in May 2019.
- Erik Olds provided revised information for EMF mass balance to the Liquid Effluent Retention Facility/Effluent Treatment Facility to Washington State Department of Ecology (Ecology) on March 25, 2020. A briefing was provided on April 13, 2020, and a subsequent briefing was provided on October 27, 2020.

In addition to the continued submittal of mass balance information related to the permit application and modifications, which addresses the more near term request related to mass balance information, Ecology has two WTP Interim Compliance Schedule Items, which address the longer-term issue related to mass balance.

December 4, 2020

Interim Compliance Schedule Item states the following related to mass balance, which were agreed upon in November 2017:

WTP-47 states: "Within nine (9) months of completion of the Pretreatment Facility (PTF) and High Level Waste (HLW) redesign, complete a gap analysis to determine if the PTF and HLW redesign changes affect the WTP mass balance. The analysis will be submitted to Ecology for inclusion in the Administrative Record." Due date September 30, 2025.

WTP-48 states: "After completing five (5) years of operations under the DFLAW configuration, complete a gap analysis to determine if DFLAW operations affect the WTP mass balance. The analysis will be submitted to Ecology for inclusion in the Administrative Record." Due date June 30, 2029.

U.S. Department of Energy (DOE) believes the requirement to submit mass balance information with permit submittals, and the interim compliance schedule items already in place meet the intent of the TPA milestone. Based on the information presented above, and discussions with John Price on November 2, 2020 DOE and Ecology believe TPA M-62-50 is complete.

If you have any questions, please contact me, or your staff may contact Christopher J. Kemp, Director, Environmental Compliance Division, Office of River Protection, on (509) 373-0649, or Janet Diediker, Low Activity Waste Pretreatment System Federal Project Director, Office of River Protection, on (509) 372-3043.

Sincerely,



Digitally signed by GLYN D. TRENCHARD
DN: c=us, o=u.s. government,
ou=department of energy, ou=Energy IT
Services, ou=Hanford Site, ou=People,
cn=GLYN D. TRENCHARD
Date: 2020.12.04 09:31:12 -08'00'

Glyn D. Trenchard, Assistant Manager
Technical and Regulatory Support
Office of River Protection

ECD:MEB

cc: T. Beam, WRPS
C. Strand, WRPS
S. Dahl, Ecology
M. Jones, Ecology
Administrative Record
Environmental Portal
WRPS Correspondence



February 12, 2021

Comments Submitted Electronically at: <http://nw.ecology.commentinput.com/?id=69PsZ>

Washington State Department of Ecology
3100 Port of Benton Boulevard
Richland, Washington 99354

To Whom It May Concern,

Thank you for the opportunity to submit comments on the *Class 2 Permit Modification to the Dangerous Waste Permit, "Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility"* chapter. Thank you, also, for holding a virtual public meeting on this comment period on January 21, 2021.

Hanford Challenge is a non-profit, public interest, environmental and worker advocacy organization located at 2719 East Madison Street, Suite 304, Seattle, WA 98112. Hanford Challenge is an independent 501(c)(3) membership organization incorporated in the State of Washington with a mission to create a future for the Hanford Nuclear Site that secures human health and safety, advances accountability, and promotes a sustainable environmental legacy. Hanford Challenge has members who work at the Hanford Site. Other members of Hanford Challenge work and/or recreate near Hanford, where they may also be affected by hazardous materials emitted into the environment by Hanford. All members have a strong interest in ensuring the safe and effective cleanup of the nation's most toxic nuclear site for themselves and for current and future generations, and who are therefore affected by conditions that endanger human health and the environment.

The safe and effective treatment of Hanford's high-level tank waste is essential to the protection of human health and the environment. All facilities that are a part of managing, storing, and treating this waste are a top concern of Hanford Challenge.

Hanford Challenge would like a transparent process that clearly documents in one place the mass balance flow; what happens to Hanford's tank waste once it starts treatment, and where contaminants end up and in what quantity.

It is important to our organization that the assumptions used in DOE and its contractors mass balance flow are clear and publicly accessible. The mass balance is needed to predict the types and quantities of contaminants in different waste streams during the treatment of Hanford's tank waste. It is very important that the tank waste treatment system is prepared for the different waste streams that will be generated during treatment and that there are no "orphaned waste streams" – waste that has no pathway for further treatment or disposal.

The Liquid Effluent Retention Facility (LERF) and Effluent Treatment Facility (ETF) will be accepting some of the least contaminated liquids from the tank waste treatment process, however it is important that we know what is in these “least contaminated liquids.” The concentrations of contamination may be lower, but the liquids could contain things like technicium-99 or ammonia. We won’t know the concentrations or types of contaminants DOE and its contractors are predicting will be in these liquids without the mass balance and the assumptions they used to produce that document.

Specific Comments include:

- **Require Submittal of Integrated Mass Balance Flow as a Single Secondary Document:** Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that states: *Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms and to ETF/LERF.* (Note that this milestone number was changed to M-62-50).
- **More Information Needed re: Addition of “WTP Aqueous Waste” (Addendum C-1, pdf p. 34 of 3641).**: DOE should provide RPP-RPT-62679 to Ecology, so that Ecology has the necessary information to track down the source of the composition inputs to make sure they are reliable and complete. Please include the composition ranges for WTP Aqueous Waste in the permit, similar to tank waste compositions listed for the Hose in Hose Transfer line specifications in the LERF/ETF permit.
- **Ensure Addition of Brine Will Not Create Orphaned Waste Stream:** Brine has been added as an ETF waste product in addition to powder on Addendum B-8 (pdf p. 19 of 3641). Where will this brine be sent for treatment? Hanford Challenge has documented concerns with treating Hanford waste at Perma-Fix Northwest.¹
- **Double-Shell Tank Waste Space Concerns:** Please check the assertion made to the DOE OIG (DOE-OIG-20-57) claiming that tank waste operations will “eliminate” the concern regarding sufficient DST space availability. Is this conclusion supported in the mass balance, or will volumes of DST waste “pile up” during Direct Feed Low Activity Waste operations?
- **Build New Tanks – Contingency Planning for Tank Leaks and Backup Storage During DFLAW:** Though not the topic of this comment period, Hanford Challenge believes that

¹ Risky Business at Perma-Fix Northwest: The Inside Story on Hanford’s Off-Site Radioactive Treatment Facility, Hanford Challenge, available at <https://www.hanfordchallenge.org/pfnw> (last accessed, February 12, 2021).

the agencies should initiate the appropriate actions to build new tanks to ensure that sufficient space is available during tank waste treatment.

- **Make Reference Materials Accessible to the Public:** Please make all reference material cited by DOE in letter 20-ECD-0057, including “Powerpoint” presentations, available to the public for review in the TPA administrative record, as a single secondary document.
- **Information Before Approval:** Ensure that additional information is provided to Ecology and shared with the public prior to approving these permit modifications.

Thank you for considering our comments.

A handwritten signature in blue ink, appearing to read "Tom Carpenter". The signature is fluid and cursive, with the first name "Tom" and last name "Carpenter" clearly distinguishable.

Tom Carpenter, Executive Director