Response to Comments

Integrated Disposal Facility Operating Class 3 Permit Modification

Sept. 13 – Oct. 28, 2021
July 25 – Sept. 9, 2022

For the **Nuclear Waste Program**

Washington State Department of Ecology

Richland, Washington

May 2023, Publication 23-05-004

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Author

Naoko Schiffern, Permit Lead

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Contact Information

Daina McFadden
Permit Communication Specialist
Nuclear Waste Program
3100 Port of Benton Blvd
Richland, WA 99354
Phone: 509-372-7950
Email: Hanford@ecy.wa.gov

Website[2]: Washington State Department of Ecology

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[1] https://apps.ecology.wa.gov/publications/summarypages/2305004.html
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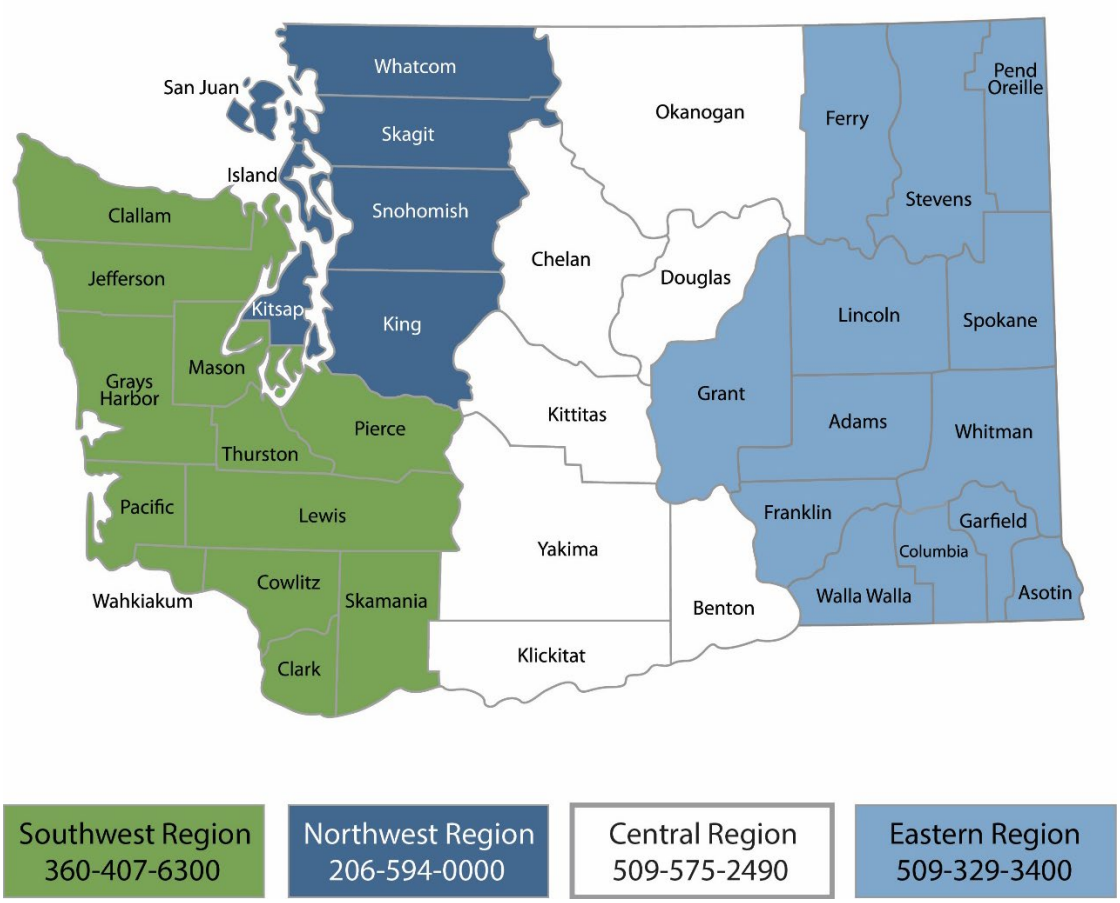

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Headquarters	Across Washington	PO Box 46700 Olympia, WA 98504	360-407-6000

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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 changes, 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	*Integrated Disposal Facility Operating Class 3 Permit Modification,* Sept. 13 – Oct. 28, 2021, and July 25 – Sept. 9, 2022
Permit	*Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit for the Treatment, Storage, and Disposal of Dangerous Waste*, Integrated Disposal Facility
Permittees	U.S. Department of Energy (USDOE) Central Plateau Cleanup Company LLC (CPCCo)
Original Issuance date	Sept. 28, 1994
Effective date	June 29, 2023

To see more information related to the Hanford Site and nuclear waste in Washington, please visit our webpage, Hanford Cleanup[3].

[3] https://www.ecology.wa.gov/Hanford

Reasons for Issuing the Permit

Ecology proposed this Class 3 permit modification to the Hanford Site-Wide Permit Revision 8C. The modification affects the Dangerous Waste Portion for the Treatment, Storage, and Disposal of Dangerous Waste for the Integrated Disposal Facility, located in Part III, Operating Unit Group 11.

The Integrated Disposal Facility (IDF) is located on 202 acres of land within the south-central portion of the 200 East Area of the Hanford Site. IDF provides disposal for the permanent, environmentally safe disposition of vitrified Immobilized low-activity waste (ILAW) packages and other operational waste streams that meet (RCRA) requirements for land disposal.

The changes to the permit update all chapters of the IDF Permit and provide detailed information to support the operation and maintenance of the IDF. The modification also incorporated new and modified information, including the addition of three dangerous waste management units:

- An additional disposal cell to dispose of mixed waste
- A storage pad
- A treatment pad

The permit modification allows the Permittees to dispose of Immobilized Low-Activity Waste and other secondary solid waste to support tank waste treatment and the Direct Feed Low-Activity Waste program, which plays an important part of the Hanford cleanup process.

The proposed modification provides operating details to the following:

- Unit-Specific Permit Conditions.
- Addendum A, “Part A Form.”
- Addendum B, “Waste Analysis Plan.”
    - Appendix BA, “Quality Assurance Project Plan for IDF Waste Analysis.”
    - Appendix BB, “Waste Stream Descriptions.”
- Addendum C, “Process Information.”
    - Appendix C1, “Phase I Critical Systems Design Report.”
    - Appendix C2, “Critical Systems Table.”
    - Appendix C3, “Design Drawings.”
    - Appendix C4, “Construction Quality Assurance Plans.”
    - Appendix C5, “Facility Response Action Plan.”
    - Appendix C6, “Construction Specifications.”
- Addendum D, “Groundwater Monitoring Plan.”
    - Appendix DA, “Quality Assurance Project Plan.”
    - Appendix DB, “Sampling Protocol.”
    - Appendix DC, “Well Construction.”
- Addendum E, “Security.”
- Addendum F, “Preparedness and Prevention.”
- Addendum G, “Personnel Training.”
- Addendum H, “Closure Plan.”

    - Appendix HA, “Sampling and Analysis Plan.”
    - Appendix HA.a, “Visual Sample Plan Report Documentation.”
- Addendum I, “Inspection Plan.”
- Addendum J, “Contingency Plan.”
- Addendum K, “Post-Closure.”

Public Involvement Actions

We encouraged public comment on the draft IDF Operating Permit Modification during two 45-day public comment periods held Sept. 13 – Oct. 28, 2021, and July 25 – Sept. 9, 2022.

We notified the public by:

- Mailing public notices announcing the comment period to 1,005 members of the public.
- Placing legal classified notices in the Tri-City Herald on Sept. 14, 2021, and July 24, 2022.
- Emailing notices announcing the start of the comment period to the Hanford-Info email list, which has 1,327 recipients.
- Posting the comment period notices on the Washington Department of Ecology – Hanford’s Facebook and Twitter pages.

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
- Fact Sheet for the proposed IDF Operating Permit Modification
- Draft IDF Operating Permit Modification

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

- Focus sheets
- Classified notices 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 IDF Operating Permit modification. The comments and responses are in Attachment 1.

Commenter	Organization
Anonymous Citizens (2)	Citizen
Kyle Bracken	Citizen
Dan Solitz	Citizen
Veronica Malakooti	Citizen
Barbara Davidson	Citizen
Sheila Dooley	Citizen
Jean Davis	Citizen
Mona Lee	Citizen
Kristin Edmark	Citizen
Derek Benedict	Citizen
Vicki Bucklin	Citizen
Ainsley Mayo	Citizen
Jennifer Ward	Citizen
Beth Marsau	Citizen
Elyette Weinstein	Citizen
Benjamin Mercer	Citizen
Bill Green	Citizen
Karen Hanreiter	Citizen
Kathleen Fitzgerald	Citizen
Steven Fine	Citizen
Duane Carter	Agency- U.S. Department of Energy
Central Plateau Cleanup Company	Organization
Hanford Challenge	Organization
Heart of America Northwest	Organization
Yakama Nation ERWM Program	Yakama Nation

Attachment 1: Comments and Responses

Description of comments:

Ecology accepted comments from Sept. 13 – Oct. 28, 2021, and July 25 – Sept. 9, 2022. This section provides a summary of comments that we received during each of the public comment periods 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: ANONYMOUS CITIZEN

Comment I-1-1

Thank you very much for providing the response to comments from the previous review in Publication 21-05-21. In the responses, Ecology noted that:

> *"Based on the current process flow, there are no plans to dispose EMF bottoms at IDF. This waste stream is planned to be recycled back into the processes at WTP or sent back to the DSTs. Ecology agrees* that grouting of ETF brine or other tank waste derived liquids offsite at Permafix requires NEPA coverage."

However, I was unable to see anything in the proposed permit that actually prevents transfer of non-approved or non-NEPA covered waste from Permafix to IDF. For example, permit condition 111.11.P.2.b refers to "documentation accompanying wastes accepted at the IDF from other on-site DWMUs or **any off-site facility.** This condition does not restrict receipts to NEPA covered waste. Brine, bottoms, or other tank waste processed at PFNW could escape detection until disposed.

In addition, I looked at Addendum A for the updated Part A permit application form. The updated part A allows that *"shipments of Hanford waste containers from an **offsite treatment facility** may be temporarily stored on the storage pad before placement in the IDF disposal cells."* This Part A allowed scope is also not specific enough to provide clarity that, at present, there are numerous wastes that will not be accepted at IDF, and particularly several that have been proposed for treatment at the PFNW Facility, which is a Non-DOE facility.

Can you provide some additional text to make it clear? Otherwise, in the future, shipments could be made that are contrary to Ecology's comment response and commitment.

Response to I-1-1

Thank you for your comment.
Permit condition 111.11.P.2.b is a record keeping requirement for all waste forms disposed at the IDF; and therefore, it is not intended to allow disposal of non-approved waste from off-site facility.

The above referenced sentence from Part A is a general description about the use of storage pad, and it is not intended to allow disposal of non-approved waste from off-site facility.

The IDF facility is responsible for establishing requirements for acceptance of wastes to be disposed at the IDF, and then performs confirmation to ensure that wastes do meet these requirements. Through this Class 3 Modification, there is a permit condition to limit the acceptable waste streams;

"The following MW forms will be approved for disposal at the IDF:

-ILAW in glass form from the WTP.

-Used WTP LAW melter systems.

-Secondary solid waste (SSW) from WTP.

-Solidified SSW from the Effluent Treatment Facility.

-Fast Flux Test Facility non-liquid waste and demolition waste resulting from decommissioning.

-Secondary waste (SW) (LLW and MLLW) from operations at the Tank Farms and Solid Waste Operations Complex.

-Non-Comprehensive Environmental Response, Compensation, and Liability Act of 1980, non-tank LLW and MLLW from various on-site generators.

-MW generated by IDF operations.

No other waste forms may be disposed at the IDF unless authorized via a final permit modification decision. Requests for Permit modifications must be accompanied by an analysis adequate for Ecology to comply with State Environmental Policy Act (SEPA), as well as by a risk assessment and groundwater modeling that demonstrates the environmental impact according to the process defined in Permit Condition III.11.E.10."(IDF Permit Condition III.11.E).

Ecology believes that EMF Concentrate (EMF bottoms) is a primary waste. To address several public comments with a concern for the disposition of EMF Concentrate, for final issuance, Ecology added the following sentence to the IDF Condition III.11.E.5.a:

> *"EMF Concentrate is not approved for disposal at the IDF."*

This permit does not establish requirements for PFNW to accept and treat only NEPA covered waste, which should be addressed through the Dangerous Waste Regulations (DWR) Permit for the Mixed Waste Facility (MWF) Operation at the PFNW, if applicable.

Comment I-1-2

This concern is justified due to previous experience with off-site shipments. I do not think Ecology was consulted, for example, when the first 3 gallons of tank waste was sent to PFNW from Hanford when grouting this material was not in the PFNW permit. It's still not in the permit or the NEPA basis. Further, PFNW has demonstrated that they will continue grouting waste in the in-container mixer even after being ordered to stop by Ecology. A lack of confidence is justified per the State of Washington Department of Ecology Dangerous Waste Violation Settlement Agreement and Agreed Order No. 13808, (In the Matter of Expedited Enforcement Action for Perma-Fix Northwest, Richland, Inc.) This Order states:

> *"PFNW accepted an excess of 50 MW containers during a 12-month time period for treatment in the in-container mixer. PFNW failed to comply with their permit conditions when the facility accepted waste for which it had no treatment capability. During this time frame, the facility removed the existing permitted in-container mixer and requested a permit modification for a new in-container mixer and a temporary authorization for its immediate use. A demonstration was provided to Ecology and USE PA staff of this in-container mixer's capabilities. The demonstration of the mixer was not successful, and Ecology denied the temporary authorization and Ecology permit writers instructed PFNW to cease acceptance of waste for the in-container mixer line of treatment. It appears that acceptance of MW for treatment in this line continued."*

Given that PFNW will scoff at permit requirements, it is possible that they could attempt to send non-NEPA approved waste to IDF, and worry about where it is in the IDF later. Anything

you can do to clarify and provide penalties for non-approved waste would be appreciated. Thank you for considering these comments.

Response to I-1-2

Thank you for your comment.

Ecology has the authority to regulate dangerous waste and the dangerous waste components of mixed (radioactive and dangerous) waste, under 70.105 Revised Code of Washington (RCW) and WAC 173-303. The Hanford Site-wide Permit has requirements for the treatment, storage, and disposal of dangerous and mixed waste at Hanford. Ecology does not regulate waste that is solely radioactive. USDOE has the exclusive authority to regulate radioactive materials and radioactive waste at Hanford. Through the IDF Permit, The IDF facility is authorized to accept mixed waste that satisfies the waste acceptance requirements listed in Addendum B and Permit Condition III.11.E, Waste Stream Acceptance.

> *Permit Condition III.11.E reads:*
> *"The IDF may accept LLW and MW. The only acceptable MW forms approved for disposal at the landfill cells include ILAW in glass form from the WTP Low-Activity Waste (LAW) Vitrification Facility and other waste streams as specified below.*
>
> - *Used WTP LAW melter systems.*
> - *Secondary solid waste (SSW) from WTP.*
> - *Solidified SSW from the Effluent Treatment Facility.*
> - *Fast Flux Test Facility non-liquid waste and demolition waste resulting from decommissioning.*
> - *Secondary waste (LLW and MLLW) from operations at the Tank Farms and Solid Waste Operations Complex.*
> - *Non-Comprehensive Environmental Response, Compensation, and Liability Act of 1980, non-tank LLW and MLLW from various on-site generators.*
> - *MW generated by IDF operations.*

No other waste forms may be disposed at the IDF unless authorized via a final permit modification decision. Requests for Permit modifications must be accompanied by an analysis adequate for Ecology to comply with State Environmental Policy Act (SEPA), as well as by a risk assessment and groundwater modeling that demonstrates the environmental impact according to the process defined in Permit Condition III.11.E.10".

Additionally, Permit Condition III.11.E.6 and III.11.E.7 requires DOE to certify to the State of Washington that it has determined that ILAW and WTP SSW are not high-level waste (HLW) prior to disposing of such waste. These permit conditions were established to give the State of Washington assurance that all waste to be disposed in the IDF would be LLW, not HLW.

Furthermore, Permit Condition III.11.E.1 reads:

> *"The Permittees will not dispose of any waste that does not comply with all appropriate and applicable treatment standards, including all applicable land disposal restrictions (LDR)."*

Under RCRA, LDR treatment standards attach to wastes when generated, and remain attached until the treatment standard is met. The treatment standard for the Hanford tank waste (LAW) is HLVIT. Therefore, grouted tank waste will not be able to meet the waste acceptance criteria for any landfill disposal facility in the state of Washington, including the IDF.

In other words, Perma-Fix NW is not permitted to treat tank waste (LAW) to ship for disposal at the IDF. Waste verification for waste acceptance is the responsibility of IDF as a receiving facility. Therefore, IDF is not approved to accept any tank waste treated at Perma-Fix NW.

Ecology developed the unit specific permit conditions (e.g. III.11.E) to support operations for the IDF, including acceptance, storage, treatment, and disposal of the approved waste. Enforcement action will follow if any incompliance is observed during the regularly scheduled inspections.

I-2: KYLE BRACKEN

Comment I-2-1

Please provide emergency iodine and daily tablets to those working with the disposal site. Please provide health coverages and insurance policies covering immediate family members. It is my understanding that the waste will be moved periodically into cooling ponds where we are hoping that it will glass off begining in 15-20 years for further "workability" please secure the soil during work periods with supressants. Any automotive activity should be kept only on site. Please consult every possible resource concerning the safety of the staff. Please do not worry about river clean up at this time. Just keep the areas around the river closed off to the public. Make sure all "IDK liners" have adaquit material composition to block the waste for the maximum amount of time with further workability at that time kept in mind. If the containers are not adiquite for this job do not go forward with it. The people who constructed this facility i realize are no longer with us so we must move forward knowing that anything constructed at this point must have the highest radiological resistance and timeline in mind. Make sure to referrance any and all education to any and all scientists working with staff on this job. Have contact numbers of doctors who can be on call with staff in the event of radiation sickness. Currently this project is so large in the amount of active waste and sludge that the quality of the idk liners have to be the best quality of production in our country which will last the most amount of time. Please referrance the employees of the san onofery nuclear power plant where each barrrel was hand moved into cement caskets on site of the plant. Whats happening at this hanover seems to be a similar style of movement on a much larger scale in terms of gallons that must be relocated. The actual transfer of the liquid is the crucial stage. No one must be exposed and none must spill and all soil must remain supressed. Again the quality of the transferring equipment and the liners must be the best quality that can possibly be constructed (nothing forigne) the inspection of the liners must go to the most qualified person who is able to do so. If hanover has to be changed at all with none of the origional staff alive to referrance it then it has to be done with the safty of the staff as the top priorty and then the quality of the equipment after that keeping in mind anyone who might work with it in the future. Total record of all work done must be kept and stored in an accessible facility so that it can be used at any time. The digging for new liners must disturbe as little soil as possible with prescision in mind. Again they all must have insurance and a doctor who can be reached at any

time during the job. Again this is based on commenting on information which was provided to me from you.

Response to I-2-1

Thank you for your comment.

The proposed permit modifications will allow the permittees to provide disposal of Immobilized Low-Activity Waste and other secondary waste to support tank waste treatment and the Direct-Feed Low-Activity Waste program mission. The Integrated Disposal Facility (IDF) is/will not be approved for disposal of high-level waste and is designed to be an appropriate disposal area for the wastes to be housed therein.

Ecology has the authority to regulate dangerous waste and the dangerous waste components of mixed (radioactive and dangerous) waste, under 70.105 RCW and WAC 173-303. It is Ecology's mission to protect human health and the environment, and we are ensuring the IDF permit includes complete and enforceable information for safe operations, including the safety of personnel. That information includes appropriate and applicable training requirements. Additionally, the U.S. Department of Energy is responsible to ensure that employees are kept safe during operations. Emergency situations are addressed through Addendum J Facility Response Plan and Hanford site emergency management plan (HEMP).

Surrounding area are also of concern to Ecology. And those surrounding areas include the Columbia River. Protection of the Columbia River is a priority for Ecology as our mission is protection of human health and the environment. We will continue to ensure, through our permits, that the Columbia River and its shorelines are safe.

Regarding your concerns about the IDF liner, Ecology reviewed the draft permit modification that included specifications on the liners. Based on our review of the technical information provided, we believe the material used and information provided by the Permittees are complete and technically sound. Specific technical information was included in the following Appendices with the draft permit modification:

- *Appendix C1, Critical Systems Design Report*
- *Appendix C2, Critical Systems Table*
- *Appendix C3, Design Drawings*
- *Appendix C4, Construction Quality Assurance Plans*
- *Appendix C5, Facility Response Action Plan*
- *Appendix C6, Construction Specification.*

Your concerns associated with transportation, storage, and management of the waste are covered in various areas, for example:

- *Current copy of procedures for waste placement in the IDF and the selection and operation of any equipment used within the lined portion of the IDF (III.11.F.9.a.iv)*
- *QA/QC requirements for selection and operation of the flow meter (III.11.F.9.f.iii).*
- *A description and quantity of each MW accepted for disposal by the IDF, and documentation of its disposal (III.11.P.2.a).*

- *The three-dimensional location of and quantity of waste in each waste container or canister disposed on in the IDF. (III.11.P.2.b)*
- *A copy of each waste profile (III.11.P.2.c)*
- *Records and results of any sampling or analysis of wastes accepted for disposal at the IDF, and from any other sampling and analysis required by Addendum B (III.11.P.2.d)*
- *Document for LDR requirement (III.11.P.3)*

Thank you again for your comment.

I-3: DAN SOLITZ

Comment I-3-1

Would it be more prudent to inventory the existing vegetation immediately outside the IDF boundary and on the existing IDF berm,that is volunteer and has naturally established itself, before deciding what to plant on the cover? Which plant species is specified should be able to hold its own against the surrounding species, or be more aggressive and have a wimpy root system. A timely public meeting would be useful.

Response to I-3-1

Thank you for your comment.

As described in Table H-2 in Addendum H, the Permittees are required to "submit the final cover design, specifications, and Construction Quality Assurance Plan to Ecology for review and approval six months prior to construction of the IDF landfill final cover (but no later than six months prior to acceptance of the last shipment of waste at the IDF). Construction of the final cover may not proceed until Ecology approves the final cover design via a permit modification". At that time, public will have an opportunity to review the draft final cover design through the public comment period. Ecology will consider holding a public meeting if there is enough interest.

I-4: ANONYMOUS CITIZEN

Comment I-4-1

LIMITATIONS. Ecology's Response to Comments (Ecology Publication 21-05-021) from the previous review states that "Limitations on waste that can be received at the IDF are contained in IDF Addendum B, "Waste Analysis Plan."

The proposed revision to the Waste Analysis Plan (WAP), however, deletes the previous limitations. In particular, the statement "Mixed waste disposed at the IDF will be limited to vitrified low-activity waste (LAW) from the RPP-WTP and DBVS and mixed waste generated by IDF operations" is deleted. Can you clarify? What waste is not allowed?

Response to I-4-1

Thank you for your comment.

The purpose of this class 3 permit modification includes the addition of additional secondary wastes. DBVS was removed from the IDF Permit because it is no longer considered as a waste stream proposed for disposal at the IDF. However, through this Class 3 Modification, there is a permit condition to limit the acceptable waste streams.

The following MW forms will be approved for disposal at the IDF:

- *ILAW in glass form from the WTP.*
- *Used WTP LAW melter systems.*
- *Secondary solid waste (SSW) from WTP.*
- *Solidified SSW from the Effluent Treatment Facility.*
- *Fast Flux Test Facility non-liquid waste and demolition waste resulting from decommissioning.*
- *Secondary waste (SW) (LLW and MLLW) from operations at the Tank Farms and Solid Waste Operations Complex.*
- *Non-Comprehensive Environmental Response, Compensation, and Liability Act of 1980, non-tank LLW and MLLW from various on-site generators.*
- *MW generated by IDF operations.*

No other waste forms may be disposed at the IDF unless authorized via a final permit modification decision. (IDF Permit Condition III.11.E)

Comment I-4-2

OFF-SITE TREATMENT. The amended WAP goes on to allow IDF-bound waste to be sent off-site for treatment and to allow (per WAP page B.26) receipt of "treated Hanford Site waste from of/site treatment facilities." This last statement would seem to allow disposal of waste at IDF that has not been properly reviewed in the IDF Performance Assessment and allow disposal of waste treated at a facility that does not have appropriate SEPA/NEPA coverage or a valid dangerous waste permit. I would appreciate if Ecology will insist on on-site LSW treatment (to create SSW), consistent with the preferred policy of DOE Manual 435.1-1. Trucking mixed waste brine and volatile acetonitrile to PFNW in the City of Richland creates needless risks to the environment and to the public. Ecology, in a previous response to comments, has already agreed that grouting of ETF brine or other tank waste derived liquids offsite at Permafix (PFNW) requires NEPA coverage that does not exist today (Publication 21-05-021).

Response to I-4-2

Thank you for your comment.

Existing PA evaluated LSW with an assumption that treatment of LSW would be at ETF, not from off-site facility. Ecology expects any Off-site treatment should be reflected in the future PA revisions per IDF Conditions III.11.E.4C and III.11.E.10.a.

Grouting of SSW (ETF brine or other tank waste derived liquids) offsite at Perma-Fix NW requires NEPA coverage. In January 2023, DOE issued a supplement analysis (SA) - "Supplement Analysis: Offsite Treatment and/or Disposal of Hanford Liquid and Solid Secondary Waste". The SA covers LSW, such as the ETF brine and acetonitrile distillate. However, a comment specific to PFNW's operation should be addressed through the PFNW's permit; therefore, it is outside the scope for this permit modification.

Comment I-4-3

TECHNICAL REQUIREMENTS DOCUMENT. The proposed IDF Permit Conditions are more specific than the WAP, in that the permit conditions accept secondary solid waste in the form of grouted ETF "brines" originating in the WTP EMF, but only as long as the waste has a "technical requirements" document. The technical requirements are described in section II1.11.E.5. I appreciate these permit conditions, but I think they could be used now (not later) to evaluate wastes for which there is inadequate or omitted evaluation in the Performance Assessment.

Response to I-4-3

Performance Assessment (PA) is outside the scope of this permit modification.

However, expectations for future PA revisions are ongoing, as stated in the IDF Condition III.11.E.4C. TC&WM EIS indicated that the SSW from WTP must be immobilized carefully, or impacts could occur from the SW above acceptable standards and thus, make such SW not disposable at IDF. As a mitigation to protect vadose zone and groundwater, Ecology developed new permit conditions to address the impact from disposal of SSW at the IDF (IDF Conditions III.11.E.5). Through SWTRD, Ecology intended to ensure that disposal of SSW at the IDF would be protective of vadose zone and groundwater.

During both public comment periods, Ecology received a number of public comments for the draft SWTRD conditions including those from the Permittees. In response to the public comments, for final issuance, we decided to revise the SWTRD permit conditions (III.11.E.5).

The revised final conditions (III.11.E.5) require, in addition to SWTRD as a forward-looking document (III.11.E.5.b), SSW Verification Document as a verification document (III.11.E.5.c). Ecology added SSW Verification Document requirement based on Ecology's determination that the combination of SWTRD and SSW Verification Document should be used as a tool for both Ecology and the Permittees to verify the successful performance of SSW disposed at IDF to protect human health and the environment.

Through both documents, we should be able to identify any gap that may exist between what was assumed and evaluated in PA/Risk Budget Tool (RBT) and the actual, real-world disposal of SSW at the IDF. If such gaps are identified, the path forward may include revising PA/RBT and SWTRD and/or an alternative disposal pathway or a different waste formulation for certain SSW stream.

Comment I-4-4

BRINE. It would help if Ecology can ensure that solidified ETF brine sent to the IDF is legitimately part of the Performance Assessment (PA) (RPP-RPT-59958, Rev 1) and that associated assumptions are verified. Page 5-155 of the PA states that "the liquid waste stream will be sent

to the ETF where it will be concentrated into a brine or dried to a powder. The resulting brine or powder will be mixed with dry ingredients to form a solidified waste form (LSW grout) that will be disposed in the IDF. The current expectation is that the dry ingredients will be a mixture of ordinary Portland cement, HL (Hydrated Lime), and BFS (Blast Furnace Slag). An early formulation for the LS9 grout used FA (fly ash) instead of HL, and model runs were performed to evaluate the potential impact of this change on post-closure performance of the disposal system."

The PA also states on page 3-248 that "simplifying assumptions" for the grouted brine were used.

How are the "simplifying" PA assumptions to be verified before the grouted brine SSW is acceptable per the IDF permit? Ecology should identify those assumptions and ensure they are verified in a revised PA and in the technical requirements document.

Response to I-4-4

PA is outside the scope of this permit modification. However, expectations for future PA revisions are ongoing, as stated in the IDF Condition III.11.E.4C. The future updates to the PA and the PA maintenance plan should include new information on grout formulation from ongoing lab an field investigations and research.

Ecology agrees that solidified ETF brine sent to the IDF must be legitimately part of PA, as described in the PA (RPP-RPT-59958, Rev 1) that disposal of the following SSW streams in carbon steel drums and burial boxes were included:

- *Encapsulated SSW debris from the tank waste treatment process.*
- *Solidified spent treatment media (non-debris).*
- *Solidified liquid waste.*
- *Fast Flux Test Facility decommissioning waste.*
- *Onsite, non-CERCLA non-tank waste.*
- *Other Hanford solid waste.*

TC&WM EIS indicated that the SSW from WTP must be immobilized carefully, or impacts could occur from the SW above acceptable standards and, thus, make such SW not disposable at IDF. For final issuance, pursuant to SEPA Substantive Authority, WAC 197-11-660, Ecology developed SWTRD and SSW Verification Document conditions to mitigate against potential contaminant impacts to vadose zone and groundwater that were identified in the EIS as related to grouted waste forms.

The draft SWTRD conditions reflected Ecology's expectation that the SSW stream, to be disposed at the IDF, will be evaluated using the similar requirements that are used for the evaluation of the ILAW glass. The draft SWTRD permit conditions were made available for public comments during both public comment periods.

During both public comment periods, Ecology received a number of public comments for the draft SWTRD conditions including those from the Permittees. For final issuance, Ecology decided to revise the SWTRD permit conditions (III.11.E.5) in light of comments received.

The revised final conditions (III.11.E.5) requires in addition to SWTRD as a forward-looking document (III.11.E.5.b), SSW Verification Document as a verification document (III.11.E.5.c). Ecology added SSW Verification Document requirement based on Ecology's determination that the combination of SWTRD and SSW Verification Document should be used as a tool for both Ecology and the Permittees to verify the successful performance of SSW disposed at IDF to protect human health and the environment.

Through both documents, we should be able to identify any gap that may exist between what was assumed and evaluated in PA/RBT and the actual, real-world disposal of SSW at the IDF. If such gaps are identified, the path forward may include revising PA/RBT and SWTRD and/or an alternative disposal pathway or a different waste formulation for certain SSW stream.

Comment I-4-5

NONTRIVIAL VOLUME. As an example, the IDF Performance Assessment (RPP-RPT- 59958, Rev 1) estimates the total volume of ETF Liquid Secondary Waste (LSW) to be grouted arises from 428 million gallons of effluent (PA page 3-249 footnote C). After ETF treatment and grouting the amount of grouted WTP LSW is estimated to be 18,900 m3 or about 5 million gallons. As a result the source term is non-trivial and the volume of brine to be treated, potentially off-site, inside the Richland City Limits, is also not trivial. Yet the PA is relying on "current expectations" and "simplifying assumptions" for the grout performance at IDF. As a result, the quality assurance element that requires verification of assumed grout properties is not met. Ecology should insist that the grout properties used in the PA be verified before accepting grouted ETF brine or powder waste.

Response to I-4-5

PA is outside the scope of this permit modification. However, expectations for future PA revisions are ongoing, as stated in the IDF Condition III.11.E.4.c. Ecology agrees that the existing PA evaluated LSW with an assumption that treatment of LSW would be at ETF, not from off-site facility. Ecology expects any Off-site treatment should be reflected in the future PA revisions per IDF Conditions III.11.E.4C and III.11.E.10.a.

Grouting of SSW (ETF brine or other tank waste derived liquids) offsite at Perma-Fix NW requires NEPA coverage. In January 2023, DOE issued a supplement analysis (SA) - "Supplement Analysis: Offsite Treatment and/or Disposal of Hanford Liquid and Solid Secondary Waste". The SA covers LSW, such as the ETF brine and acetonitrile distillate. However, a comment specific to PFNW's operation should be addressed through the PFNW's permit; therefore, it is outside the scope for this permit modification.

Comment I-4-6

ACETONITRILE. Further, the PA ignores the acetonitrile to be accumulated in a new ETF steam stripping concentrate. Rather, page 3-269 of the PA states that DOE expects acetonitrile to be destroyed in a thermal treatment process. Page 3-269 of the PA shows that 29,500 kg of acetonitrile are identified in the Best Basis Inventory (TC&WMEIS), and of that, only 295 kg would be disposed to IDF . Ecology should verify these numbers. Is 29,500 kg from the BBI limited to the acetonitrile total in all tank waste (prior to WTP treatment and without the new WTP effluent)?

Bechtel reported in 2004 (per HNF-8306, Rev 1) that WTP would produce about 100 lb/day of acetonitrile, which is 12,000 kg per year to dispose, based on 70% operability. If WTP operates for 40 years at 70% availability, the total WTP acetonitrile is 664,000 kg, not the 29,500 kg reported in the BBI and used in the TC&WM EIS. The PA "check mark" (on PA page 4-186) that the TC&WM EIS "included" acetonitrile is not entirely correct - t he evaluation in the EIS was seriously underestimated.

Further, per page 493 of the PA, the amount of acetonitrile disposed from ETF liquid secondary waste is expected to be zero, with the total amount contributed by WTP waste to be 3.91 kilograms (8.6 lb). Per page 3-269 of the PA, the Tank Closure and Waste Management EIS did not address acetonitrile in any secondary solid waste, from ETF or elsewhere, because of the expectation that acetonitrile was to be destroyed in a thermal treatment process.

New changes to the integrated flow sheet show a significant amount of acetonitrile now to be sent to ETF (100 lb/day vs 0 lb lifetime), where much will go up the stack and the rest is planned for solidification and disposal to the IDF. No permit modification for the IDF should be approved until the valid and safe treatment pathway for acetonitrile is approved.

Page 698 of the PA says the safe drinking water standard for acetonitrile is 100 micrograms per liter. Acetonitrile project ions are not included in the risk budget tool (RBT) . It should be included before this permit is approved. It might not take much to reach 100 micrograms per liter.

Response to I-4-6

This Class 3 modification is to incorporate new and modified information in the IDF Permit that includes the additions of three dangerous waste management units (operation of an additional disposal cell, storage pad, and treatment pad). This comment specific to treatment of acetonitrile should be addressed through a permit for the treatment facility; therefore, it is outside the scope for this permit modification.

Ecology agrees that existing PA didn't include acetonitrile projections. The Permittees explained to Ecology that acetonitrile was evaluated through their internal process, IDF Unreviewed Disposal Question, IDF-PRO-EN-54165. Based on the findings from the process, the Permittees determined that acetonitrile is safe to dispose of in the IDF and that no update to PA was necessary.

At the ETF, Acetonitrile will be concentrated through the Steam Stripper and the resulting vapors will be sent through the Vessel Off Gas System. The system includes a moisture separator, duct heater, pre-filter, high-efficiency particulate air filters, carbon absorber (when required to reduce organic emissions), exhaust fans, and ductwork. The concentrated Acetonitrile will be grouted for disposal at IDF, not being discharged from the ETF stack to the air.

WTP's current certified waste profile to LERF/ETF is the basis for waste codes and LDR requirements tracked through LERF/ETF. The certified waste profile information documents waste codes F001-F005. No "D" waste codes are applied to the certified WTP waste profile, and therefore no Underlying hazardous constituent (UHC) evaluation applies to the waste stream.

Normally, assignment of a "D" waste code is required to trigger the UHC evaluation. Acetonitrile is not identified as an LDR organic in this waste stream, and is not subject to LDR treatment standards when received at LERF/ETF. To meet the waste acceptance criteria for IDF, the acetonitrile distillate is solidified in grout so it can be disposed at IDF.

Grouting of SSW (ETF brine or other tank waste derived liquids) offsite at Perma-Fix NW requires NEPA coverage. In January 2023, DOE issued a supplement analysis (SA) - "Supplement Analysis: Offsite Treatment and/or Disposal of Hanford Liquid and Solid Secondary Waste". The SA covers LSW, such as the ETF brine and acetonitrile distillate. However, a comment specific to PFNW's operation should be addressed through the PFNW's permit; therefore, it is outside the scope for this permit modification. Ecology expects updated assumption for treatment and disposal of acetonitrile in the form of SSW should be reflected in the future PA revisions if needed per IDF Conditions III.11.E.4C and III.11.E.10.a.

TC&WM EIS indicated that the SSW from WTP must be immobilized carefully, or impacts could occur from the SW above acceptable standards and, thus, make such SW not disposable at IDF. For final issuance, pursuant to SEPA Substantive Authority, WAC 197-11-660, Ecology developed SWTRD and SSW Verification Document conditions to mitigate against potential contaminant impacts to vadose zone and groundwater that were identified in the EIS as related to grouted waste forms (III.1.E.5).

The draft SWTRD conditions reflected Ecology's expectation that the SSW stream, to be disposed at the IDF, will be evaluated using the similar requirements that are used for the evaluation of the ILAW glass. The draft SWTRD permit conditions were made available for public comments during both public comment periods.

During both public comment periods, Ecology received a number of public comments for the draft SWTRD conditions including those from the Permittees. For final issuance, Ecology decided to revise the SWTRD permit conditions (III.11.E.5) in light of comments received.

The revised final conditions (III.11.E.5) require, in addition to SWTRD as a forward-looking document (III.11.E.5.b), SSW Verification Document as a verification document (III.11.E.5.c). Ecology added SSW Verification Document requirement based on Ecology's determination that the combination of SWTRD and SSW Verification Document should be used as a tool for both Ecology and the Permittees to verify the successful performance of SSW disposed at IDF to protect human health and the environment.

Through both documents, we should be able to identify a gap that may exist between what was assumed and evaluated in PA/RBT and the actual, real-world disposal of SSW at the IDF. If such gaps are identified, the path forward may include revising PA/RBT and SWTRD and/or an alternative disposal pathway or a different waste formulation for certain SSW stream.

Comment I-4-7

Has DOE implemented the Unreviewed Disposal Question process for brine and acetonitrile wastes (per procedure IDF-PRO-EN-54165)? Does the procedure provide defensible answers? Has the procedure been used to evaluate the unverified assumptions for grouted ETF brine/powder? For acetonitrile? This procedure is supposed to ensure that the assumptions are valid.

Response to I-4-7

This Class 3 permit modification is to incorporate new and modified information that includes the additions of three dangerous waste management units (operation of an additional disposal cell, storage pad, and treatment pad).

IDF Unreviewed Disposal Question, IDF-PRO-EN-54165 is the Permittees' document for their internal procedure to ensure that proposed changes or new information are evaluated in IDF PA so that IDP PA is valid. The Permittees explained to Ecology that acetonitrile was evaluated through the Unreviewed Disposal Question process. Based on the findings from the process, the Permittees determined that acetonitrile is safe to dispose of in the IDF and that no update to PA was necessary.

Comments specific to treatment of waste (e.g., acetonitrile) should be addressed through a permit for the treatment facility (i.e. ETF); therefore, it is outside the scope for this permit modification. At the ETF, Acetonitrile will be concentrated through the Steam Stripper and the resulting vapors will be sent through the Vessel Off Gas System. The system includes a moisture separator, duct heater, pre-filter, high-efficiency particulate air filters, carbon absorber (when required to reduce organic emissions), exhaust fans, and ductwork.

WTP's current certified waste profile to LERF/ETF is the basis for waste codes and LDR requirements tracked through LERF/ETF. The certified waste profile information documents waste codes F001-F005. No "D" waste codes are applied to the certified WTP waste profile, and therefore no Underlying hazardous constituent (UHC) evaluation applies to the waste stream.

Normally, assignment of a "D" waste code is required to trigger the UHC evaluation. Acetonitrile is not identified as an LDR organic in this waste stream, and is not subject to LDR treatment standards when received at LERF/ETF. To meet the waste acceptance criteria for IDF, the acetonitrile distillate is solidified in grout so it can be disposed at IDF.

Comment I-4-8

RISKS TO THE AIR . Permit Condition III.11.E.5c states: "For SW forms which demonstrate unacceptable performance in the PA (performance assessment) and in the modeling-risk budget tool , the Permittees must meet with Ecology to discuss a path forward on these waste streams to be protective of the groundwater beneath the IDF prior to the disposal of the questionable waste form. If needed, the waste forms final treatment may need to be modified or an alternative disposal pathway may be identified."

I would appreciate if you could amend this section to include discussion of protection of the air as well, since DOE has proposed disposing of most of the acetonitrile received at ETF to the air. DOE is also proposing to dispose of tritium to the air (instead of the SALDS) as a result of the new ETF steam stripper.

Changes to waste treatment pathways can affect the air. Acetonitrile is a very toxic vapor (adds to tank farm vapors) and tritium is the highest source of doses to the public from the Hanford site. Protecting the groundwater by disposing to the air does not seem to be a good trade.

Response to I-4-8

TC&WM EIS indicated that the SSW from WTP must be immobilized carefully, or impacts could occur from the SW above acceptable standards and, thus, make such SW not disposable at IDF. For final issuance, pursuant to SEPA Substantive Authority, WAC 197-11-660, Ecology developed SWTRD and SSW Verification Document conditions to mitigate against potential contaminants impacts to vadose zone and groundwater that were identified in the EIS as related to grouted waste forms (III.1.E.5).

The draft SWTRD conditions reflected Ecology's expectation that the SSW stream, to be disposed at the IDF, will be evaluated using the similar requirements that are used for the evaluation of the ILAW glass. The draft SWTRD permit conditions were made available for public comments during both public comment periods.

During both public comment periods, Ecology received a number of public comments for the draft SWTRD conditions including those from the Permittees. For final issuance, Ecology decided to revise the SWTRD permit conditions (III.11.E.5) in light of comments received, including the draft condition III.11.E.5.c mentioned in this comment. For final issuance, the revised condition (III.11.E.5.e.i) address a rare, but possible scenario for when the Permittees discovers any SSW packages that are out of specification of the PA. Condition III.11.E.5.e.i requires the Permittees to perform an unreviewed disposal question (UDQ) to determine whether a special analysis (SA) of the SSW is necessary. If the UDQ/SA process determines that the SSW packages will not have an impact on the performance of the IDF, then the waste on limited case by case disposal can occur with notification to Ecology. Upon notification to Ecology, if Ecology determines that the waste is unfit for disposal according to the IDF Permit Conditions and Permit herein, letter will be issued to cease the disposal pending further discussion and review. For those wastes that are projected to impact the IDF performance, alternative disposal options will be explored. See Ecology's Response to Comment #A-1-28 for more details for this revised condition.

Comments specific to treatment of waste (e.g., acetonitrile) should be addressed through a permit for the treatment facility (i.e. ETF); therefore, it is outside the scope for this permit modification. At the ETF, Acetonitrile will be concentrated through the Steam Stripper and the resulting vapors will be sent through the Vessel Off Gas System. The system includes a moisture separator, duct heater, pre-filter, high-efficiency particulate air filters, carbon absorber (when required to reduce organic emissions), exhaust fans, and ductwork. The concentrated Acetonitrile will be grouted for disposal at IDF, not being discharged from the ETF stack to the air.

WTP's current certified waste profile to LERF/ETF is the basis for waste codes and LDR requirements tracked through LERF/ETF. The certified waste profile information documents waste codes F001-F005. No "D" waste codes are applied to the certified WTP waste profile, and therefore no Underlying hazardous constituent (UHC) evaluation applies to the waste stream.

Normally, assignment of a "D" waste code is required to trigger the UHC evaluation. Acetonitrile is not identified as an LDR organic in this waste stream, and is not subject to LDR treatment standards when received at LERF/ETF. To meet the waste acceptance criteria for IDF, the acetonitrile distillate is solidified in grout so it can be disposed at IDF.

Ecology has the authority to regulate dangerous waste and the dangerous waste components of mixed (radioactive and dangerous) waste, under 70.105 RCW and WAC 173-303. Therefore, comment specific to tritium is out of scope for this permit modification.

Section C.8 in Addendum C discusses applicability of air emission standards (40 CFR 264, Subpart AA through CC standards). This section explains the reasoning for why the IDF operation would not be applicable to the air emission standards.

Furthermore, Section F.5 in Addendum F discusses prevention of releases to the atmosphere from the IDF operation.

"Reasonable precautions are taken at the IDF to prevent releases to the atmosphere. Waste at the IDF is containerized and disposed in closed containers. Containers may contain vents, if required, and potential emissions will be managed in accordance with applicable air permits. Particulate matter emissions at IDF will be managed via dust control, such as periodic watering or use of soil stabilization products. Periodic watering may be used for excavations, backfill, haul roads, and other disturbed areas that show signs of blowing dust. Soil stabilization products may be used to mitigate wind and water erosion of areas disturbed by operations. Waste covering activities and storage pile work will be curtailed during high winds."

I-5: VERONICA MALAKOOTI

Comment I-5-1

How uncaring the government is to protect the citizens it is bound to protect

Response to I-5-1

Thank you for your comment.

Ecology works to ensure that waste will be treated, stored and disposed at an approved facility and in full compliance with dangerous waste regulations and applicable permits in a manner fully protective of human health and the environment. The proposed permit changes are not to allow new waste, but to better manage the waste already at Hanford.

I-6: BARBARA DAVIDSON

Comment I-6-1

Every step must consider and acknowledge the dangers involved. Ecology must not allow USDOE to claim any of the wastes or landfill cells are not subject to Ecology's authority. PLEASE!

Response to I-6-1

Thank you for your comment.

Ecology has the authority to regulate dangerous waste and the dangerous waste components of mixed (radioactive and dangerous) waste, under 70.105 RCW and WAC 173-303. The Hanford Site-wide Permit has requirements for the treatment, storage, and disposal of dangerous and

mixed waste at Hanford. Ecology does not regulate waste that is solely radioactive. USDOE has the exclusive authority to regulate radioactive materials and radioactive waste at Hanford.

It is Ecology's mission to protect human health and the environment, and we are ensuring the IDF permit includes complete and enforceable information for safe operations.

I-7: SHEILA DOOLEY

Comment I-7-1

As a cancer patient, I am very concerned with the health effects and environmental impacts from the quantities and new waste forms the USDOE may seek to bury in shallow IDF landfill cells. For our health, the permit must cover all wastes disposed in all cells and include the combined cancer risks when limiting how much waste may be disposed and in what form.

Response to I-7-1

Thank you for your comment.

It is Ecology's mission to protect human health and the environment, and we are ensuring the IDF permit includes complete and enforceable information for safe operations.

Through this Class 3 Modification, the following MW forms will be approved for disposal at the IDF:

- *ILAW in glass form from the WTP.*
- *Used WTP LAW melter systems.*
- *Secondary solid waste (SSW) from WTP.*
- *Solidified SSW from the Effluent Treatment Facility.*
- *Fast Flux Test Facility non-liquid waste and demolition waste resulting from decommissioning.*
- *Secondary waste (SW) (LLW and MLLW) from operations at the Tank Farms and Solid Waste Operations Complex.*
- *Non-Comprehensive Environmental Response, Compensation, and Liability Act of 1980, non-tank LLW and MLLW from various on-site generators.*
- *MW generated by IDF operations.*

No other waste forms may be disposed at the IDF unless authorized via a final permit modification decision. (IDF Permit Condition III.11.E)

Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS) Alternative 2 for tank waste treatment, Implement the Tank Waste Remediation System EIS Record of Decision with Modifications. Ecology is also adopting TC&WM EIS Waste Management Alternative 2: Disposal in IDF, 200-East Area Only. Appendix Q in the TC &WM EIS includes an assessment of potential human health impacts due to releases of radionuclides and chemicals from the waste being disposed at the IDF.

Ecology agrees that the IDF permit must consider all wastes disposed within the IDF for human health and environment.

Radionuclides are evaluated with respect to DOE's All-Pathways dose limits specified in DOE M 435.1-1. Releases of radionuclides and select chemicals are computed using a PA system model. For the select list of chemicals evaluated with the PA model, the IDF PA has a plot of peak groundwater concentration in 10,000 years divided by the applicable groundwater protection standard for that chemical. None of the simulated chemicals exceeded their limiting concentrations. The RBT calculates groundwater concentrations 100 meters downgradient of the IDF and displays those concentrations along with a user-specific concentration standard. The standard is the groundwater protection standard concentration or the drinking water standard for radionuclides.

In accordance with IDF permit condition (III.11.E.10.a), the Permittees are required to maintain a modeling-RBT, which models the future impacts from both radionuclides and dangerous waste constituents of the planned IDF waste forms and their cumulative impact to underlying vadose zone and groundwater. Ecology will review the RBT and provide comments to the Permittees to ensure protection of vadose zone and groundwater from those waste forms. If these modeling efforts indicate results exceeding 75% of a performance standard, Ecology and the Permittees will meet to discuss mitigation measures or modified waste acceptance criteria for specific waste forms (III.11.E.10.a.ii).

The Permittees are require to prepare Immobilized Low-Activity Waste Form Technical Requirements Document for ILAW glass forms per IDF Permit Condition III.11.E.4. Additionally, for final issuance, Ecology decided to require the Permittees to prepare SWTRD and SSW Verification Document (IDF Permit Condition III.11.E.5). These documents will used as a tool for both Ecology and the Permittees to verify the successful performance of ILAW glass forms and SSW disposed at IDF for protection of human health and the environment.

I-8: JEAN DAVIS

Comment I-8-1

1) USDOE refuses to acknowledge that the State's permitting authority extends to all waste disposed in all cells of IDF. Unless all cells are subject to permitting and health based standards are applied to limit the total quantities and forms of waste disposed, Ecology should not permit a second massive "cell" to be opened at the IDF landfill.

Response to I-8-1

Thank you for your comment.

Ecology has the authority to regulate dangerous waste and the dangerous waste components of mixed (radioactive and dangerous) waste, under 70.105 RCW and WAC 173-303. The Hanford Site-wide Permit has requirements for the treatment, storage, and disposal of dangerous and mixed waste at Hanford. Ecology does not regulate waste that is solely radioactive. USDOE has the exclusive authority to regulate radioactive materials and radioactive waste at Hanford. It is

Ecology's mission to protect human health and the environment, and we are ensuring the IDF permit includes complete and enforceable information for safe operations.

This Class 3 modification is to incorporate new and modified information in the IDF Permit that includes the additions of three dangerous waste management units (operation of an additional disposal cell, storage pad, and treatment pad). If this modification become approved and effective, both IDF disposal cells will receive mixed waste and become subject to WAC 173-303 requirements.

Comment I-8-2

2) Ecology has not considered the health effects and environmental impacts from the quantities and new waste forms that USDOE may seek to bury in shallow IDF landfill cells. The State Environmental Policy Act (SEPA) requires that Ecology have a new, supplemental Environmental Impact Statement (EIS) for the public and Ecology's own decision makers before it can permit new cells at IDF. Ecology can not rely on an EIS that is 16 years old and does not consider independent new analyses of risks.

Response to I-8-2

Thank you for your comment.

For this permit modification, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS) Alternative 2 for tank waste treatment, Implement the Tank Waste Remediation System EIS Record of Decision with Modifications. Ecology is also adopting TC&WM EIS Waste Management Alternative 2: Disposal in IDF, 200-East Area Only. Title of Document Being Adopted: Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, WA, USDOE/EIS-0391, prepared December 5, 2012. This is available at: http://www.hanford.gov/page.cfm/FinalTCWMEIS.

Ecology made a SEPA determination # 202004362 for the IDF on August 24, 2020. Additional SEPA review is not required for this permit modification to support the operations of the IDF.

The above information was available in Fact Sheet during the public comment period.

Comment I-8-3

3) The permit for IDF must cover all wastes disposed in all cells and include the combined cancer risks from radionuclides and chemicals in limiting how much waste may be disposed and in what form. Ecology must not allow USDOE to claim any of the wastes or landfill cells are not subject to Ecology's authority.

Response to I-8-3

Ecology has the authority to regulate dangerous waste and the dangerous waste components of mixed (radioactive and dangerous) waste, under 70.105 RCW and WAC 173-303. The Hanford Site-wide Permit has requirements for the treatment, storage, and disposal of dangerous and mixed waste at Hanford. Ecology does not regulate waste that is solely radioactive. USDOE has the exclusive authority to regulate radioactive materials and radioactive waste at Hanford. It is Ecology's mission to protect human health and the environment, and we are ensuring the

Integrated Disposal Facility permit includes complete and enforceable information for safe operations.

For this permit modification, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS) Alternative 2 for tank waste treatment, Implement the Tank Waste Remediation System EIS Record of Decision with Modifications. Ecology is also adopting TC&WM EIS Waste Management Alternative 2: Disposal in IDF, 200-East Area Only. Title of Document Being Adopted: Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, WA, USDOE/EIS-0391, prepared December 5, 2012. This is available at: http://www.hanford.gov/page.cfm/FinalTCWMEIS.

Ecology made a SEPA determination # 202004362 for the IDF on August 24, 2020. Additional SEPA review is not required for this permit modification to support the operations of the IDF.

Ecology agrees that the IDF permit must consider all wastes disposed within the IDF for human health and environment.

Radionuclides are evaluated with respect to DOE's All-Pathways dose limits specified in DOE M 435.1-1. Releases of radionuclides and select chemicals are computed using a PA system model. For the select list of chemicals evaluated with the PA model, the IDF PA has a plot of peak groundwater concentration in 10,000 years divided by the applicable groundwater protection standard for that chemical. None of the simulated chemicals exceeded their limiting concentrations. The RBT calculates groundwater concentrations 100 meters downgradient of the IDF and displays those concentrations along with a user-specific concentration standard. The standard is the groundwater protection standard concentration or the drinking water standard for radionuclides.

In accordance with IDF permit condition (III.11.E.10.a), the Permittees are required to maintain a modeling-RBT, which models the future impacts from both radionuclides and dangerous waste constituents of the planned IDF waste forms and their cumulative impact to underlying vadose zone and groundwater. Ecology will review the RBT and provide comments to the Permittees to ensure protection of vadose zone and groundwater from those waste forms. If these modeling efforts indicate results exceeding 75% of a performance standard, Ecology and the Permittees will meet to discuss mitigation measures or modified waste acceptance criteria for specific waste forms (III.11.E.10.a.ii).

The Permittees are require to prepare Immobilized Low-Activity Waste Form Technical Requirements Document for ILAW glass forms per IDF Permit Condition III.11.E.4. Additionally, for final issuance, Ecology decided to require the Permittees to prepare SWTRD and SSW Verification Document (IDF Permit Condition III.11.E.5). These documents will used as a tool for both Ecology and the Permittees to verify the successful performance of ILAW glass forms and SSW disposed at IDF for protection of human health and the environment.

I-9: MONA LEE

Comment I-9-1

1) USDOE refuses to acknowledge that the State's permitting authority extends to all waste disposed in all cells of IDF. Unless all cells are subject to permitting and health based standards are applied to limit the total quantities and forms of waste disposed, Ecology should not permit a second massive "cell" to be opened at the IDF landfill.

Response to I-9-1

Thank you for your comment. This comment provided is the same as Comment # I-8-1. See Ecology's response to Comments # I-8-1.

Comment I-9-2

2) Ecology has not considered the health effects and environmental impacts from the quantities and new waste forms that USDOE may seek to bury in shallow IDF landfill cells. The State Environmental Policy Act (SEPA) requires that Ecology have a new, supplemental Environmental Impact Statement (EIS) for the public and Ecology's own decision makers before it can permit new cells at IDF. Ecology can not rely on an EIS that is 16 years old and does not consider independent new analyses of risks.

Response to I-9-2

This comment provided is the same as Comment # I-8-2. See Ecology's response to Comments # I-8-2.

Comment I-9-3

3) The permit for IDF must cover all wastes disposed in all cells and include the combined cancer risks from radionuclides and chemicals in limiting how much waste may be disposed and in what form. Ecology must not allow USDOE to claim any of the wastes or landfill cells are not subject to Ecology's authority.

Response to I-9-3

This comment provided is the same as Comment # I-8-3. See Ecology's response to Comments # I-8-3.

I-10: KRISTIN EDMARK

Comment I-10-1

Please deny modification on the IDF Integrated Disposal Facility. Nuclear waste is far too dangerous to permit additional capacity without thorough analysis of impacts to environment and health from the cumulative disposal of wastes. Please look more carefully at possible leakage to ground water and to the Columbia. All cells must be considered. The surrounding areas are growing in population. Contamination of the Columbia affects large geographical areas with large populations. Please continue further study including a Supplemental EIS to safeguard our area. The consequences could be too dangerous to too many and impossible to recapture once containment is breached.

Response to I-10-1

Thank you for your comment.

The proposed permit changes are not to allow new waste, but to better manage the waste already at Hanford. It is Ecology's mission to protect human health and the environment, and we are ensuring the IDF permit includes complete and enforceable information for safe operations.

For this permit modification, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS) Alternative 2 for tank waste treatment, Implement the Tank Waste Remediation System EIS Record of Decision with Modifications. Ecology is also adopting TC&WM EIS Waste Management Alternative 2: Disposal in IDF, 200-East Area Only. Title of Document Being Adopted: Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, WA, USDOE/EIS-0391, prepared December 5, 2012. This is available at: http://www.hanford.gov/page.cfm/FinalTCWMEIS.

Ecology made a SEPA determination # 202004362 for the IDF on August 24, 2020. Additional SEPA review is not required for this permit modification to support the operations of the IDF.

In accordance with IDF permit condition (III.11.E.10.a), the Permittees are required to maintain a modeling-RBT, which models the future impacts from both radionuclides and dangerous waste constituents of the planned IDF waste forms and their cumulative impact to underlying vadose zone and groundwater. Ecology will review the RBT and provide comments to the Permittees to ensure protection of vadose zone and groundwater from those waste forms. If these modeling efforts indicate results exceeding 75% of a performance standard, Ecology and the Permittees will meet to discuss mitigation measures or modified waste acceptance criteria for specific waste forms (III.11.E.10.a.ii).

I-11: DEREK BENEDICT

Comment I-11-1

Nuclear waste needs to be taken of properly and securely. Here's a list of my nits: 1) USDOE refuses to acknowledge that the State's permitting authority extends to all waste disposed in all cells of IDF. Unless all cells are subject to permitting and health based standards are applied to limit the total quantities and forms of waste disposed, Ecology should not permit a second massive "cell" to be opened at the IDF landfill.

Response to I-11-1

Thank you for your comment. This comment provided is the same as Comment # I-8-1. See Ecology's response to Comments # I-8-1.

Comment I-11-2

2) Ecology has not considered the health effects and environmental impacts from the quantities and new waste forms that USDOE may seek to bury in shallow IDF landfill cells. The State Environmental Policy Act (SEPA) requires that Ecology have a new, supplemental Environmental Impact Statement (EIS) for the public and Ecology's own decision makers before it can permit

new cells at IDF. Ecology can not rely on an EIS that is 16 years old and does not consider independent new analyses of risks.

Response to I-11-2

This comment provided is the same as Comment # I-8-2. See Ecology's response to Comments # I-8-2.

Comment I-11-3

3) The permit for IDF must cover all wastes disposed in all cells and include the combined cancer risks from radionuclides and chemicals in limiting how much waste may be disposed and in what form. Ecology must not allow USDOE to claim any of the wastes or landfill cells are not subject to Ecology's authority.

Response to I-11-3

This comment provided is the same as Comment # I-8-3. See Ecology's response to Comments # I-8-3.

I-12: VICKI BUCKLIN

Comment I-12-1

My family lives on the Columbia River. We want ALL waste to be closely regulated. 1) USDOE refuses to acknowledge that the State's permitting authority extends to all waste disposed in all cells of IDF. Unless all cells are subject to permitting and health based standards are applied to limit the total quantities and forms of waste disposed, Ecology should not permit a second massive "cell" to be opened at the IDF landfill.

Response to I-12-1

Thank you for your comment. This comment provided is the same as Comment # I-8-1. See Ecology's response to Comments # I-8-1.

Comment I-12-2

2) Ecology has not considered the health effects and environmental impacts from the quantities and new waste forms that USDOE may seek to bury in shallow IDF landfill cells. The State Environmental Policy Act (SEPA) requires that Ecology have a new, supplemental Environmental Impact Statement (EIS) for the public and Ecology's own decision makers before it can permit new cells at IDF. Ecology can not rely on an EIS that is 16 years old and does not consider independent new analyses of risks.

Response to I-12-2

This comment provided is the same as Comment # I-8-2. See Ecology's response to Comments # I-8-2.

Comment I-12-3

3) The permit for IDF must cover all wastes disposed in all cells and include the combined cancer risks from radionuclides and chemicals in limiting how much waste may be disposed and

in what form. Ecology must not allow USDOE to claim any of the wastes or landfill cells are not subject to Ecology's authority.

Response to I-12-3

This comment provided is the same as Comment # I-8-3. See Ecology's response to Comments # I-8-3.

I-13: AINSLEY MAYO

Comment I-13-1

1) USDOE refuses to acknowledge that the State's permitting authority extends to all waste disposed in all cells of IDF. Unless all cells are subject to permitting and health based standards are applied to limit the total quantities and forms of waste disposed, Ecology should not permit a second massive "cell" to be opened at the IDF landfill.

Response to I-13-1

Thank you for your comment. This comment provided is the same as Comment # I-8-1. See Ecology's response to Comments # I-8-1.

Comment I-13-2

2) Ecology has not considered the health effects and environmental impacts from the quantities and new waste forms that USDOE may seek to bury in shallow IDF landfill cells. The State Environmental Policy Act (SEPA) requires that Ecology have a new, supplemental Environmental Impact Statement (EIS) for the public and Ecology's own decision makers before it can permit new cells at IDF. Ecology can not rely on an EIS that is 16 years old and does not consider independent new analyses of risks.

Response to I-13-2

This comment provided is the same as Comment # I-8-2. See Ecology's response to Comments # I-8-2.

Comment I-13-3

3) The permit for IDF must cover all wastes disposed in all cells and include the combined cancer risks from radionuclides and chemicals in limiting how much waste may be disposed and in what form. Ecology must not allow USDOE to claim any of the wastes or landfill cells are not subject to Ecology's authority. As a young person right now there are already so many environmental issues that we have to reckon with. Please don't cut corners on the Hanford clean up and let nuclear contamination have a bigger impact on our future.

Response to I-13-3

This comment provided is the same as Comment # I-8-3. See Ecology's response to Comments # I-8-3.

I-14: JENNIFER WARD

Comment I-14-1

USDOE refuses to acknowledge that the State's permitting authority extends to all waste disposed in all cells of IDF. Unless all cells are subject to permitting and health based standards are applied to limit the total quantities and forms of waste disposed, Ecology should not permit a second massive "cell" to be opened at the IDF landfill.

Response to I-14-1

Thank you for your comment. This comment provided is the same as Comment # I-8-1. See Ecology's response to Comments # I-8-1.

Comment I-14-2

2) Ecology has not considered the health effects and environmental impacts from the quantities and new waste forms that USDOE may seek to bury in shallow IDF landfill cells. The State Environmental Policy Act (SEPA) requires that Ecology have a new, supplemental Environmental Impact Statement (EIS) for the public and Ecology's own decision makers before it can permit new cells at IDF. Ecology can not rely on an EIS that is 16 years old and does not consider independent new analyses of risks.

Response to I-14-2

This comment provided is the same as Comment # I-8-2. See Ecology's response to Comments # I-8-2.

Comment I-14-3

3) The permit for IDF must cover all wastes disposed in all cells and include the combined cancer risks from radionuclides and chemicals in limiting how much waste may be disposed and in what form. Ecology must not allow USDOE to claim any of the wastes or landfill cells are not subject to Ecology's authority.

Response to I-14-3

This comment provided is the same as Comment # I-8-3. See Ecology's response to Comments # I-8-3.

I-15: BETH MARSAU

Comment I-15-1

I am appalled that nothing is being done to protect water, wildlife, and people from this horrible waste. PLEASE DO SOMETHING to get these leaks stopped and protect the environment for goodness sake!! I want to see some action to make a difference in what has been done in the past for the health and safety of everyone.

Response to I-15-1

IDF is currently in a "pre-active life" status, and it has not received any waste yet. This Class 3 modification is to incorporate new and modified information in the IDF Permit that includes the

additions of three dangerous waste management units (operation of an additional disposal cell, storage pad, and treatment pad). This permit modification moves IDF into the active-life phase of the facility.

The proposed permit changes are not to allow new waste, but to better manage the waste already at Hanford. Therefore, this comment specific to actions needed to stop (on-going) leaks is outside the scope for this permit modification. It is Ecology's mission to protect human health and the environment, and we are ensuring the IDF permit includes complete and enforceable information for safe operations.

Ecology agrees that tank waste does pose a threat. We believe a better approach to addressing it is to transfer waste from the single shell tanks to the double-shell tanks to prepare for eventual treatment in the Waste Treatment Plant.

I-16: ELYETTE WEINSTEIN

Comment I-16-1

Please consider these comments before you proceed with the new Hanford landfill. Do not put the health and welfare of people at risk: 1) USDOE refuses to acknowledge that the State's permitting authority extends to all waste disposed in all cells of IDF. Unless all cells are subject to permitting and health based standards are applied to limit the total quantities and forms of waste disposed, Ecology should not permit a second massive "cell" to be opened at the IDF landfill.

Response to I-16-1

Thank you for your comment. This comment provided is the same as Comment # I-8-1. See Ecology's response to Comments # I-8-1.

Comment I-16-2

2) Ecology has not considered the health effects and environmental impacts from the quantities and new waste forms that USDOE may seek to bury in shallow IDF landfill cells. The State Environmental Policy Act (SEPA) requires that Ecology have a new, supplemental Environmental Impact Statement (EIS) for the public and Ecology's own decision makers before it can permit new cells at IDF. Ecology can not rely on an EIS that is 16 years old and does not consider independent new analyses of risks.

Response to I-16-2

This comment provided is the same as Comment # I-8-2. See Ecology's response to Comments # I-8-2.

Comment I-16-3

3) The permit for IDF must cover all wastes disposed in all cells and include the combined cancer risks from radionuclides and chemicals in limiting how much waste may be disposed and in what form. Ecology must not allow USDOE to claim any of the wastes or landfill cells are not subject to Ecology's authority.

Response to I-16-3

This comment provided is the same as Comment # I-8-3. See Ecology's response to Comments # I-8-3.

I-17: BENJAMIN MERCER

Comment I-17-1

1) USDOE refuses to acknowledge that the State's permitting authority extends to all waste disposed in all cells of IDF. Unless all cells are subject to permitting and health based standards are applied to limit the total quantities and forms of waste disposed, Ecology should not permit a second massive "cell" to be opened at the IDF landfill.

Response to I-17-1

Thank you for your comment. This comment provided is the same as Comment # I-8-1. See Ecology's response to Comments # I-8-1.

Comment I-17-2

2) Ecology has not considered the health effects and environmental impacts from the quantities and new waste forms that USDOE may seek to bury in shallow IDF landfill cells. The State Environmental Policy Act (SEPA) requires that Ecology have a new, supplemental Environmental Impact Statement (EIS) for the public and Ecology's own decision makers before it can permit new cells at IDF. Ecology can not rely on an EIS that is 16 years old and does not consider independent new analyses of risks.

Response to I-17-2

This comment provided is the same as Comment # I-8-2. See Ecology's response to Comments # I-8-2.

Comment I-17-3

3) The permit for IDF must cover all wastes disposed in all cells and include the combined cancer risks from radionuclides and chemicals in limiting how much waste may be disposed and in what form. Ecology must not allow USDOE to claim any of the wastes or landfill cells are not subject to Ecology's authority.

Response to I-17-3

This comment provided is the same as Comment # I-8-3. See Ecology's response to Comments # I-8-3.

I-18: BILL GREEN

Comment I-18-1

USDOE refuses to acknowledge that the State's permitting authority extends to all waste disposed in all cells of IDF. Unless all cells are subject to permitting and health-based standards

are applied to limit the total quantities and forms of waste disposed, Ecology should not permit a second massive "cell" to be opened at the IDF landfill.

Response to I-18-1

Thank you for your comment. This comment provided is the same as Comment # I-8-1. See Ecology's response to Comments # I-8-1.

Comment I-18-2

Ecology has not considered the health effects and environmental impacts from the quantities and new waste forms that USDOE may seek to bury in shallow IDF landfill cells. The State Environmental Policy Act (SEPA) requires that Ecology have a new, supplemental Environmental Impact Statement (EIS) for the public and Ecology's own decision makers before it can permit new cells at IDF. Ecology cannot rely on an EIS that is 16 years old and does not consider independent new analyses of risks. Ecology, in any event, is required by SEPA to consider the cumulative impacts to health and groundwater from all related actions, and the releases from adjacent cells are the epitome of related actions. Thus, Ecology must show in the SEPA analysis for this permit modification that the total releases from all cells will not exceed what Ecology has formally recognized as an appropriate limitation on disposal to protect health and groundwater (75% of any standard).

Response to I-18-2

This comment provided is similar to Comment # I-8-2. See Ecology's response to Comments # I-8-2.

Comment I-18-3

The permit for IDF must cover all wastes disposed in all cells and include the combined cancer risks from radionuclides and chemicals in limiting how much waste may be disposed and in what form. Ecology must not allow USDOE to claim any of the wastes or landfill cells are not subject to Ecology's authority.

Response to I-18-3

This comment provided is the same as Comment # I-8-3. See Ecology's response to Comments # I-8-3.

I-19: KAREN HANREITER

Comment I-19-1

This comment provided is the same as Comments # O-4-1 through # O-4-7.

Response to I-19-1

Thank you for your comment. This comment provided is the same as Comments # O-4-1 through # O-4-7. See Ecology's responses to Comments # O-4-1 through # O-4-7.

I-20: KATHLEEN FITZGERALD

Comment I-20-1

USDOE refuses to acknowledge that the State's permitting authority extends to all waste disposed in all cells of IDF. Unless all cells are subject to permitting and health based standards are applied to limit the total quantities and forms of waste disposed, Ecology should not permit a second massive "cell" to be opened at the IDF landfill.

Response to I-20-1

Thank you for your comment. This comment provided is the same as Comment # I-8-1. See Ecology's response to Comments # I-8-1.

Comment I-20-2

Ecology has not considered the health effects and environmental impacts from the quantities and new waste forms that USDOE may seek to bury in shallow IDF landfill cells. The State Environmental Policy Act (SEPA) requires that Ecology have a new, supplemental Environmental Impact Statement (EIS) for the public and Ecology's own decision makers before it can permit new cells at IDF. Ecology can not rely on an EIS that is 16 years old and does not consider independent new analyses of risks.

Response to I-20-2

This comment provided is the same as Comment # I-8-2. See Ecology's response to Comments # I-8-2.

Comment I-20-3

The permit for IDF must cover all wastes disposed in all cells and include the combined cancer risks from radionuclides and chemicals in limiting how much waste may be disposed and in what form. Ecology must not allow USDOE to claim any of the wastes or landfill cells are not subject to Ecology's authority.

Response to I-20-3

This comment provided is the same as Comment # I-8-3. See Ecology's response to Comments # I-8-3.

I-21: STEVEN FINE

Comment I-21-1

Last night I read Ecology's request for comments on creating a new burial site at Hanford for low level waste. I note Heart of America's response.

The answer as done at Savannah is to grout, but with the Off site manufacturer and send to an out of state burial site. One has to consider that the requirement to liquify the waste will create almost twice the waste to treat. And you need to treat the waste to offset leaking tanks, the

separation process for low and high rad waste to continue, and just move along. The NRC is acknowledging problems with a vitrified monolith because of byproducts created.

There was an article in the NY Times the week of August 29 wherein Governor Inslee was heralding his prescience in calling for Climate Control before others. But what about the environmental mess that has been created by the Vit plant that no one wants to acknowledge until it is too late because of an earthquake or climate change, as the Governor espouses.

Attached is a response sent to the NY Times regarding the subject article. The 500 is 500 plus square miles.

Response to I-21-1

Thank you for your comment.

This Class 3 modification is to incorporate new and modified information in the IDF Permit that includes the additions of three dangerous waste management units (operation of an additional disposal cell, storage pad, and treatment pad). Therefore, this comment specific to vitrification of tank waste is outside the scope for this permit modification.

A-1: DUANE CARTER

Comment A-1-1

Response to Comments, Attachment 2. Ecology accepted comments from May 1, 2012, to Oct 22, 2012, on the Hanford Facility Dangerous Waste Permit, Rev. 9. 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).

Response: Consistent with Washington State Department of Ecology's official position, comments provided for the 2012 Rev. 9 Hanford Facility Dangerous Waste Permit Renewal will not be included in this permit modification request. The Permittees and the Washington State Department of Ecology have a separate forum to address Rev. 9 comments, thus the Permittees will address Ecology's responses outside of this public comment period. Further, Ecology's official position is that Ecology will reopen the comment period to address the Rev. 9 public comments. Comments are not being made on Ecology's responses to Rev. 9 comments; this is not an indication of agreement.

Response to A-1-1

Thank you for your comment.

Ecology agrees that the Permittees and Ecology have a separate forum to address Rev. 9 comments. Ecology decided to address the Rev. 9 public comments in this Response to Comments document to ensure we are adequately addressing all public comment received that apply to IDF (OUG-11) , as required by RCW 34.05.325(6)(a)(iii).

Comment A-1-2

Fact Sheet, Section 2.0, Integrated Disposal Facility Dangerous Waste Management Unit Description. Ecology has defined the “pre-active life” period as the time between the end of construction and 180 days before the receipt of waste.

Response: In Section 2.0 of the fact sheet, Ecology states the “WAC 173-303-040 defines the “active life” of a facility as “the period from the initial receipt of dangerous waste at the facility until the department receives certification of final closure.” However, Ecology also defines the “pre-active life” period as the time between the end of construction and 180 days before the receipt of waste. These two timelines do not align with one another. Permittees recommend revising the “pre-active life” definition to align with the “active life” definition in WAC 173-303-040. “Ecology has defined the “pre-active life” period as the time between the end of construction and the initial receipt of waste.”

Response to A-1-2

The permittees requested this definition of "pre-active life" through a permit modification, and Ecology approved this modification in November 20, 2007. Ecology's final decision for this modification can be found in Hanford's Administrative Record (Accession # DA06227511).

To better align the timelines of "pre-active life" and "active-life", in the Fact Sheet for the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology re-defined "pre-active life" as follows;

"Ecology has defined the "pre-active life" period as the time between the end of construction and the initial receipt of waste."

Comment A-1-3

Fact Sheet, Section 2.0, Basis for Permit Conditions. Ecology worked with the Permittees to develop permit conditions that apply to the operation and maintenance of the DWMUs and associated ancillary equipment. As a result, Ecology has written conditions that require compliance with the regulations in WAC 173-303.

Response: Meetings were initiated between Ecology and the Permittees to negotiate Ecology drafted permit conditions. However, resolution was not attained on all permit conditions. The Permittees apprised Ecology of the Permittees’ intent to comment on unresolved permit conditions during the public comment period.

Response to A-1-3

Ecology's responses to the specific comments about the drafted permit conditions are provided in this Response to Comments document.

Comment A-1-4

Fact Sheet, Section 2.0, Basis for Permit Conditions. The intent of this draft permit and associated permit conditions is to protect human health and the environment while ensuring proper disposal of low-level radioactive waste and mixed waste at the IDF.

Response: This permit does not regulate low-level radioactive waste. This is promulgated in the unit description to the permit conditions that states, “Additionally, the landfill cells may be used for disposal of nondangerous radioactive low-level waste [LLW], which is outside of the scope of this permit.”

Response to A-1-4

Ecology agrees that this permit does not regulate low-level radioactive waste. In that Fact Sheet for the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the subject sentence as follows;

"The intent of this draft permit and associated permit conditions is to protect human health and the environment while ensuring proper disposal of mixed waste at the IDF."

Comment A-1-5

Fact Sheet, Section 4.0, Draft Permit Conditions Permit conditions were added to address the SSW. These SSW proposed permit conditions address issues like: addition of a Solid Waste Technical Requirements Document, inclusion of Secondary Waste in the Risk Budget Tool, waste performance modeling, waste form performance criteria, and protection of groundwater. Proposed permit conditions also address a certification from USDOE that the SSW is not High Level Waste. These permit conditions reflect Ecology’s expectation that the SSW stream, to be disposed at the IDF, will be evaluated using the similar requirements that are used for the evaluation of the ILAW glass.

Response: There is no justification for the added permit condition for secondary solid waste. Use of omnibus authority requires a clear and understandable justification for imposing permit conditions where existing regulatory requirements require supplementation to ensure that human health and the environment are adequately protected. Per RCRA Online Number (RO) 12553, additional standards can be justified by basing the standards on sources such as documented studies, expert opinions, and published articles.

In addition, Ecology failed to provide any justification in accordance with WAC 173-303-840(2)(f)(iii)(C) and (D), which states that the fact sheet will include “a brief summary of the basis for the draft permit conditions including supporting references” and “reasons why any requested variances or alternatives to required standards do or do not appear justified.”

Response to A-1-5

Ecology did not add the draft SWTRD permit conditions by a use of omnibus authority.

Ecology revised Section 4.0 in Fact Sheet to add justification for the added permit conditions for the SSW for the re-opened public comment period (7/25/2022 to 9/9/2022). Ecology's justification for the added conditions for the secondary solid waste is as follows;

"As detailed in Section 6.0, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS). TC&WM EIS indicated that the SSW (SW from WTP) must be immobilized carefully or impacts could occur from the SW above acceptable standards making it not disposable at the IDF. As a mitigation to protect vadose zone and groundwater, Ecology developed new permit conditions to address the impact from SSW. These

SSW proposed permit conditions address issues like: addition of a Secondary Waste Technical Requirements Document, inclusion of SW in the RBT, waste performance modeling, waste form performance criteria, and protection of groundwater. Proposed permit conditions also address a certification from USDOE that the SSW is not High Level Waste. These permit conditions reflect Ecology's expectation that the SSW stream, to be disposed at the IDF, will be evaluated using the similar requirements that are used for the evaluation of the ILAW glass."

During both public comment periods, Ecology received a number of public comments for the draft SWTRD conditions including those from the Permittees. For final issuance, Ecology decided to revise the SWTRD permit conditions (III.11.E.5) in light if comments received. Pursuant to SEPA Substantive Authority, WAC 197-11-660, Ecology added these permit conditions as a mitigation to protect vadose zone and groundwater.

The revised final conditions (III.11.E.5) require, in addition to SWTRD as a forward-looking document (III.11.E.5.b), SSW Verification Document as a verification document (III.11.E.5.c). Ecology added SSW Verification Document requirement based on Ecology's determination that the combination of SWTRD and SSW Verification Document should be used as a tool for both Ecology and the Permittees to verify the successful performance of SSW disposed at IDF to protect human health and the environment.

Through both documents, we should be able to identify any gap that may exist between what was assumed and evaluated in PA/RBT and the actual, real-world disposal of SSW at the IDF. If such gaps are identified, the forward may include revising PA/RBT and SWTRD and/or an alternative disposal pathway or a different waste formulation for certain SSW stream.

Comment A-1-6

Permit Conditions Addenda Appendix C6 Construction Specifications, RPP-18489, Rev. 1

Response: Appendix C6 is listed in the control log table, but the appendix was not included in the documents out for public review. The Permittees submitted formatting changes to this document in the 2019 submittal (20-AMRP-0007).

Recommendation: If no additional changes were made, the Permittees recommend that Appendix C6 be added to the IDF permit.

Response to A-1-6

Ecology agrees with this comment.

The proposed changes to Appendix C6 are specific to formatting changes from Appendix 4D to Appendix C6 throughout. Ecology added Appendix C6 for the re-opened public comment period (7/25/2022 to 9/9/2022).

Comment A-1-7

Permit Condition III.11.A Acronyms. The following acronyms are specific to the IDF unit:

Response: Acronyms listed in the acronym list do not reflect acronyms within the permit conditions. For example, HELP and MEMO are in the acronym list, but not within the permit conditions. Alternately, acronyms within the permit conditions, such as IQRPE and LS are not listed within the acronym list.

Recommendation: Ensure acronyms in list reflect acronyms within the permit conditions.

Response to A-1-7

Ecology updated the acronym list in Permit Condition III.11.A for the re-opened public comment period (7/25/2022 to 9/9/2022). Specific changes are the following;

- *CQA (Construction Quality Assurance) added to the list.*
- *ECN (Engineering Change Notice) added to the list.*
- *HELP (Hydrologic evaluation of landfill performance) deleted from the list.*
- *HFFACO (Hanford Federal Facility Agreement and Consent Order)*
- *HELP deleted from the list.*
- *IQPRE (Independent Qualified Registered Professional Engineer) added to the list.*
- *LS (Liner System) added to the list.*
- *MEMO (Monitoring Efficiency Model) deleted from the list.*
- *NCR (Non-Conformance Report) added to the list.*
- *SW (Secondary Waste) added to the list.*
- *SWTRD (Secondary Waste Form Technical Requirements) added to the list.*

Ecology corrected SWTRD to spell out "Secondary Waste Form Technical Requirements Document" with final issuance.

Comment A-1-8

Permit Condition III.11.A Definitions. Critical System: A list identifying the critical systems for the IDF is included in Permit Condition III.11.C.1.a.

Response: This does not provide a definition of the critical system term. As “critical systems” are not defined in WAC 173-303, the definition Ecology included in Part I Standard and Part II General Facility Conditions should be incorporated.

Recommendation: Include the definition from the Part I Standard and Part II General Facility Conditions. “Critical Systems: Specific portions of a TSD unit’s structure, or equipment, whose failure could lead to the release of dangerous waste into the environment, and/or systems which include processes which treat, transfer, store, or dispose of regulated wastes. A list identifying the critical systems for the IDF is included in Permit Condition III.11.C.1.a.”

Response to A-1-8

Ecology agrees with this comment.

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the definition of Critical System in Permit Condition III.11.A Definitions, as follows;

"Critical Systems: Specific portions of a Treatment, Storage, and Disposal unit's structure, or equipment, whose failure could lead to the release of dangerous waste into the environment, and/or systems which include processes which treat, transfer, store, or dispose of regulated wastes. A list identifying the critical systems for the IDF is included in Permit Condition III.11.C.1.a."

Comment A-1-9

Permit Condition III.11.A Definitions Leachate collection and removal system: Leachate is liquid generated from rainfall and the natural decomposition of waste that is filtered through the landfill to a leachate collection system. The leachate collection system's job is to direct the leachate to collection sumps so it can be properly removed from the landfill.

Response: The Permit does not address the "natural decomposition of waste." This permit condition should not introduce new concepts. In addition, leachate originates from precipitation and the application of nonhazardous liquids for dust suppression.

Recommendation: Revise permit condition to remove "natural decomposition," add language about liquids for dust suppression, and revise anthropomorphic reference to the leachate collection system: "Leachate collection and removal system (LCRS): Leachate is liquid generated from precipitation and the application of nonhazardous liquids for dust suppression (as applicable), that is filtered through the landfill to a leachate collection system. The leachate collection system directs the leachate to collection sumps where it can be properly removed from the landfill."

Response to A-1-9

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the definition of Leachate collection and removal system as;

" Leachate is liquid from precipitation and the application of water or nonhazardous liquids for dust suppression that filters through the landfill to the leachate collection and removal system. The leachate collection and removal system provides a flow path to convey leachate to the leachate collection and removal system sump. The leachate collection and removal system will continue to be operated in a manner that ensures that the leachate depth over the liner does not exceed 30.5 cm (12 in.) in accordance with WAC 173-303-665(2)(h)(ii). "

Comment A-1-10

Permit Condition III.11.A Definitions Leak detection system: A method in which the existence of a leak within a system is determined. The techniques are utilized across a wide range of systems where a container must seal in some material. The variety of detection methods can be classified as internal or external, depending on where the LDS is located.

Response: The leak detection system (LDS) for each disposal cell is located below the LCRS. The LDS provides a method for detecting and capturing leachate from the LCRS into the LDS sump, as described in Addendum C.

Recommendation: Revise definition to reflect Addendum C description: “Leak detection system (LDS): The LDS provides a method for detecting and capturing leachate from the LCRS into the LDS sump, and serves as a secondary LCRS for each IDF disposal cell. Leachate collected in the LDS sump will be measured to determine any leakage through the primary liner.”

Response to A-1-10

Ecology agrees with this comment. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the definition as follows;

"Leak detection system (LDS): The LDS is structurally similar to and located under the LCRS for collecting and conveying leachate from the LCRS into the LDS sump for detection, and serves as a secondary LCRS for each IDF disposal cell. Leachate collected in the LDS sump will be measured to determine any leakage through the primary liner."

Comment A-1-11

Permit Condition III.11.A Definitions. Microencapsulation: The process of enclosing chemical substances in microcapsules. Stabilization of the debris with the following reagents (or waste reagents) such that the leachability of the hazardous contaminants is reduced: (1) Portland cement; or (2) lime/pozzolans (e.g., fly ash and cement kiln dust). Reagents (e.g., iron salts, silicates, and clays) may be added to enhance the set/cure time and/or compressive strength, or to reduce the leachability of the hazardous constituents.

Response: The first sentence, “The process of enclosing chemical substances in microcapsules” is not consistent with the land disposal requirements definition.

Recommendation: Delete the first sentence: “The process of enclosing chemical substances in microcapsules.”

Response to A-1-11

Ecology agrees with this comment.

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology deleted the first sentence and revised the definition as follows;

"Microencapsulation: Stabilization of the debris with the following reagents (or waste reagents) such that the leachability of the hazardous contaminants is reduced: (1) Portland cement; or (2) lime/pozzolans (e.g., fly ash and cement kiln dust). Other reagents (e.g., iron salts, silicates, and clays) may be added to enhance the set/cure time and/or compressive strength, or to reduce the leachability of the hazardous constituents."

Comment A-1-12

Permit Condition III.11.A Definitions. Response action plan (RAP): A detailed report that includes the steps to remediate waste materials, soil, surface water, ground water. The RAP includes the intended level of cleanup to support closure.

Response: The response action plan does not support closure. It is a site-specific plan that establishes actions to be taken if leakage through the upper (primary) lining system of a landfill exceeds a certain rate.

Recommendation: Revise the definition to “Response action plan (RAP): A site-specific plan that establishes actions to be taken if leakage through the upper (primary) lining system of a landfill exceeds a certain rate.”

Response to A-1-12

Ecology agrees with this comment.

Ecology revised the definition for the re-opened public comment period (7/25/2022 to 9/9/2022), as follows;

"Response action plan (RAP): A site-specific plan that establishes actions to be taken if leakage through the upper (primary) lining system of a landfill exceeds a certain rate."

Comment A-1-13

Permit Condition III.11.D.2.a. Prior to the start of the Active Life of the IDF, the Permittees will manage the discharge of such water in accordance with the pollution prevention and best management practices required by State Waste Discharge Permit Number ST-4511.

Response: This disposal cell condition would not apply to the storage and treatment pads. The addition of the storage and treatment pad DWMUs make it necessary to differentiate the conditions that would apply only to the disposal cells.

Recommendation: Revise this section title to specify the disposal cells. “III.11.D.2 Rainwater Management for the Disposal Cells”

Response to A-1-13

Ecology disagrees with this comment.

Only non-contact, non-hazardous wastewaters are authorized to discharge to the ground under ST4511. Examples of authorized discharges include wastewater generated as part of maintenance activities, hydrotesting, concrete curing and cutting, and HVAC systems.

Ecology believes that this permit condition would apply to construction of not only the disposal cells, but also the storage and treatment pads. This permit condition is necessary to ensure the facility is staying in compliance with IDF's current water permit. The IDF Project requested dispensation from Ecology and this condition was written jointly to allow the project to operate in a pre-Active Life configuration and remain in compliance.

Comment A-1-14

Permit Condition III.11.D.2.b. The Permittees will inspect for liquids after significant rainfall events.

Response: This disposal cell condition would not apply to the storage and treatment pads. The addition of the storage and treatment pad DWMUs make it necessary to differentiate the conditions that would apply only to the disposal cells.

Recommendation: Revise this section title to specify the disposal cells. “III.11.D.2 Rainwater Management for the Disposal Cells”

Response to A-1-14

Ecology agrees with this comment that this condition would not apply to the storage and treatment pads. Inspections required after storms do not apply to the storage and treatment pads, as detailed in Inspection Plan (Addendum I).

To make this permit condition consistent with the Inspection Plan in Addendum I, for the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the condition to specify the disposal cells, as follows;

The Permittees will inspect the disposal cells for liquids after significant rainfall events."

Comment A-1-15

Permit Condition III.11.D.5.b. The Permittees will implement the Appendix C4, "Construction Quality Assurance Plans" during construction of the IDF.

Response: The construction quality assurance plans are not required for the storage or treatment pads.

Recommendation: Revise condition to specify the disposal cells: "The Permittees will implement the Appendix C4, 'Construction Quality Assurance Plans' during construction of the IDF disposal cells."

Response to A-1-15

Ecology agrees with this comment.

Appendix C4 applies to construction of IDF cells. Ecology revised the condition for the re-opened public comment period (7/25/2022 to 9/9/2022), as follows;

"The Permittees will implement the Appendix C4, "Construction Quality Assurance Plans" during construction of the IDF disposal cells".

Comment A-1-16

Permit Condition III.11.E.3. The only ILAW form acceptable for disposal at IDF is approved glass canisters that are produced in accordance with the terms, conditions, and requirements of the WTP portion of the Permit, as well as melters, glass shards, and other ILAW forms that are acceptable.

Response: The revision to this permit condition implies there is only one ILAW form acceptable due to "form" being singular. However, the permit condition continues to list the approved glass canisters, "as well as, melters, glass shards, and other ILAW forms" as acceptable waste forms.

Recommendation: Revise to ensure continuity of plural form: "ILAW wastes that can be disposed of at IDF are approved glass canisters that are produced in accordance with the terms, conditions, and requirements of the WTP portion of the Permit, as well as melters, glass shards, and other ILAW forms that are acceptable."

Response to A-1-16

Ecology agrees with this comment.

Additionally, Ecology revised the text "other ILAW forms that are acceptable" to "other approved ILAW forms" for clarification. Ecology revised the condition for the re-opened public comment period (7/25/2022 to 9/9/2022), as follows;

"The only ILAW forms acceptable for disposal at IDF are approved glass canisters that are produced in accordance with the terms, conditions, and requirements of the WTP portion of the Permit, as well as melters, glass shards, and other approved ILAW forms".

Comment A-1-17

Permit Condition III.11.E.4.c. The PA required by Permit Condition III.11.E.4.b was submitted on May 26, 2020; expectations for future PA revisions are ongoing.

Response: This is a narrative statement and not a condition. This statement is seeking to regulate a radioactive waste management document and is therefore outside the authority of the Washington Administrative Code (WAC) and preempted by the Atomic Energy Act (AEA). A Performance Assessment (PA) is a DOE required site-specific radiological assessment for low-level waste disposal facilities, as directed by DOE O 435.1. The objective of DOE O 435.1 is to ensure that all DOE radioactive waste is managed in a manner that is protective of human health and the environment. A PA is the computer modeling analysis that simulates the impacts from radiological constituents and determines whether the waste will meet the radiological performance objective established in DOE O 435.1. There are no similar processes used under WAC 173-303 to operate a landfill pursuant to WAC 173-303-665. As the IDF PA (RPP-RPT-59958) was developed to assess the radiological constituents to be disposed of in IDF, this document is not subject to WAC 173-303. Hazardous constituents that were addressed in the PA were included for informational purposes. Permit conditions specific to hazardous constituents are addressed in draft Permit Conditions III.11.E.8.

Washington law prohibits the arbitrary exercise of power by a state agency. State ex rel. Pub. Util. Dist. No. 1 of Okanogan County v. Dep't of Pub. Serv., 21 Wn.2d 201, 208-09 (1944). Imposing requirements that exceed an agency's statutory or regulatory authority constitutes arbitrary action. To the extent that the Department of Ecology has imposed conditions under the Permit that exceed the Department's authority, it has acted in an arbitrary manner. Accordingly, those conditions which have been arbitrarily imposed under the Permit should be stricken as the product of impermissible and arbitrary agency action.

This permit modification does not request changes to the Immobilized Low-Activity Waste Technical Requirements Document (IWTRD). In accordance with WAC 173-303-840(10)(c), “In a permit modification under this subsection, only those conditions to be modified will be reopened when a new draft permit is prepared. All other aspects of the existing permit will remain in effect for the duration of the unmodified permit.” Per WAC 173-303-830(3), “When a permit is modified, only the conditions subject to modification are reopened.” Adding additional requirements for the IWTRD is outside the scope of this permit modification.

Recommendation: Delete the language concerning “expectations for future PA revisions are ongoing” from this permit condition.

Response to A-1-17

Ecology disagrees with this comment.

The RBT uses the PA model results to forecast future impacts to groundwater under different inventory and waste form performance assumptions and provides comparisons to groundwater protection standards. PA input parameters and assumptions will be used in the modeling RBT. Even though PA itself is outside Ecology's regulatory authority, Ecology expects PA to be updated with proposed changed and new information.

Therefore, Ecology decided to retain the language concerning "expectations for future PA revisions are ongoing" in this permit condition.

The PA (RPP-RPT-59959, Rev. 01A) along with Draft Waste Incidental to Reprocessing Evaluation for Vitrified Low Activity Waste Disposed of Onsite at the Hanford Site, Washington, were made available for public review from May 26 to November 27, 2020 (See Ecology letter 20-NWP-177).

Therefore, for final issuance, Ecology deleted the following sentence that was shown in the subject draft permit condition during the re-opened public comment period (7/25/2022 to 9/9/2022):

"The PA was submitted to Ecology for review in July 2020."

Comment A-1-18

Permit Condition III.11.E.4.c. The QA/QC requirements process required by Permit Condition III.11.E.4.c which was to be submitted for Ecology review as soon as possible after issuance of the Final Tank Closure and Waste Management Environmental Impact Statement (EIS) and receipt of underlying codes and data packages, and at least one hundred and eighty (180) days prior to the date the Permittees expect to receive waste at the IDF.

Response: The language revision made to this portion of the permit condition causes this sentence to be incomplete. Language is undecipherable and does not provide distinct direction for the Permittees to comply.

Recommendation: Delete incomplete sentence from permit condition.

Response to A-1-18

Ecology agrees that Ecology is not waiting for additional submittal of the QA/QC requirements process prior to the date the Permittees receive waste at the IDF.

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the subject sentence, as follows;

"The QA/QC requirements process required by Permit Condition III.11.E.4.c was submitted to Ecology at least one hundred and eighty (180) days prior to the date the Permittees receive waste at the IDF."

Comment A-1-19

Permit Condition III.11.E.4.c. At a minimum, the Permittees will submit updates to the IWTRD to Ecology every five (5) years or more frequently, if any of the following conditions exist: The Permittees submit a permit modification request allowing additional waste forms to be disposed of at IDF. New waste forms could include ILAW glass not previously described, additional SSW, supplemental ILAW treatment, and other waste from the Hanford Site.

Response: This permit condition is under the heading of "Immobilized Low-Activity Waste Form Technical Requirements Document." Per Permit Condition III.11.E.4, "For any ILAW glass form(s) that the Permittees intend to dispose in the IDF, the Permittees will provide to Ecology for review, an ILAW Waste Form Technical Requirements Document." "Additional SSW" and "other waste from the Hanford Site" are not considered an ILAW form, thus are not applicable for the IWTRD. Supplemental ILAW treatment is not discussed in the Permitting addenda, nor is it defined in the permit conditions. Permit Condition III.11.E.3, states that the "LDR standard for ILAW disposed to IDF is HLVIT." Changes to the treatment method would require a future permit modification. As supplemental ILAW treatment is not discussed in permitting documents and the permit condition states that ILAW will be treated to HLVIT, supplemental ILAW treatment should not be included. This permit modification does not request changes to the IWTRD. In accordance with WAC 173-303-840(10)(c), "In a permit modification under this subsection, only those conditions to be modified will be reopened when a new draft permit is prepared. All other aspects of the existing permit will remain in effect for the duration of the unmodified permit." Per WAC 173-303-830(3), "When a permit is modified, only the conditions subject to modification are reopened." Adding additional requirements for the IWTRD are outside the scope of this permit modification.

Recommendation: Revise bullet to remove reference to additional SSW, supplemental ILAW treatment, and other waste from the Hanford Site. "At a minimum, the Permittees will submit updates to the IWTRD to Ecology every five (5) years or more frequently, if any of the following conditions exist: The Permittees submit a permit modification request allowing additional waste forms to be disposed of at IDF."

Response to A-1-19

Ecology agrees that the language in this permit condition should be consistent with the heading, "Immobilized Low-Activity Waste Form Technical Requirements Document".

In the draft unit specific permit condition during the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the subject condition to remove reference to additional SSW and other waste from the Hanford Site. Ecology also previously added a definition of "supplemental ILAW treatment".

Ecology agrees that Supplemental ILAW treatment is not discussed in the Permitting Addenda. This permit modification is not approving disposal of waste from supplemental ILAW treatment. Therefore, in the final issuance for this permit modification, Ecology revised the condition as follows;

"At a minimum, the Permittees will submit updates to the IWTRD to Ecology every five (5) years or more frequently, if any of the following conditions exist:
-The Permittees submit a permit modification request allowing additional waste forms to be disposed of at IDF.

New waste forms could include ILAW glass not previously described."

Additionally, Ecology removed the definition of "supplemental ILAW treatment" which was added in the unit specific permit condition during the re-opened public comment period (7/25/2022 to 9/9/2022).

Comment A-1-20

Permit Condition III.11.E.4.c. Ecology comments will be dispositioned through the Review Comment Record (RCR) process and will be reflected in further modeling to modify the IDF ILAW waste acceptance requirements as appropriate.

Response: The current permit condition states that “Ecology comments… will be reflected in further modeling to modify the IDF ILAW Chapter 3.0, “Waste Analysis Plan” as appropriate. For this updated condition, the Waste Analysis Plan was replaced with “waste 8 acceptance requirements.” The term “waste acceptance requirements” is vague and does not provide clear direction for Permittee action.

Recommendation: Revise permit condition language to reference the Waste Analysis Plan: “…and will be reflected in further modeling to modify Addendum B, ‘Waste Analysis Plan,’ as appropriate.”

Response to A-1-20

Ecology agrees that Chapter 3.0, "Waste Analysis Plan" was replaced with Addendum B, "Waste Analysis Plan" through this permit modification. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the sentence, as follows;

"Ecology comments will be dispositioned through the Review Comment Record (RCR) process and will be reflected in further modeling to modify the IDF ILAW waste acceptance requirements in Addendum B, 'Waste Analysis Plan, as appropriate."

Comment A-1-21

Permit Condition III.11.E.4.d The Permittees will not dispose of any WTP ILAW or other waste streams not described and evaluated in the IWTRD.

Response: The phase “or other waste streams” was added to the permit condition. This permit condition is under the heading of “Immobilized Low-Activity Waste Form Technical Requirements Document.” Per Permit Condition III.11.E.4, “For any ILAW glass form(s) that the Permittees intend to dispose in the IDF, the Permittees will provide to Ecology for review, an ILAW Waste Form Technical Requirements Document.” Reference to other waste streams is not appropriate in the IWTRD section.

Recommendation: Delete “or other waste streams.”

Response to A-1-21

Ecology agrees that this permit condition should be consistent with the heading, "Immobilized Low-Activity Waste Form Technical Requirements Document".

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised this permit condition to delete "or other waste streams", as follows;

"The Permittees will not dispose of any WTP ILAW or other waste streams not described and evaluated in the IWTRD".

Comment A-1-22

Permit Condition III.11.E.5. Secondary Waste Form Technical Requirements Document

Response: Permit conditions under the heading of Secondary Waste Form Technical Requirements Document do not address requirements found in applicable Dangerous Waste regulations. These conditions would require administrative development under Omnibus provisions of 40 CFR 270.32 and WAC 173-303-815(2). Exercise of omnibus authority is not discretionary, but must be exercised when the permitting authority has a basis to determine that some aspect of treatment, storage or disposal at a facility requires regulatory control to be protective. Use of omnibus authority requires a clear and understandable justification for imposing permit conditions where existing regulatory requirements require supplementation to ensure that human health and the environment are adequately protected. Per RCRA Online Number (RO) 12553, additional standards can be justified by basing the standards on sources such as documented studies, expert opinions, and published articles.

This permit condition is an inappropriate use of the omnibus provision of the regulations. This condition is void since no basis has been articulated in the Permit, Fact Sheet, or supporting documents that supports the use of omnibus permitting authority to impose this condition. The State has failed to articulate specific facts supporting the contention that this condition is necessary to achieve compliance with the Hazardous Waste Management Act (HWMA), nor is there any specific provision in WAC 173-303 that necessitates the additional requirement. Compliance with the HWMA is fully addressed in the permitting requirements of WAC 173-303-810. This condition has no reasonable basis in fact or law, and no reasonable relation to the

"omnibus authority" in WAC 173-303-800(8) and WAC 173-303- 815(2)(b)(ii). A regulatory basis for this permit condition is absent from the Washington State 9 Hazardous Waste Act.

Recommendation: Delete all Secondary Waste Form Technical Requirements Document permit conditions.

Response to A-1-22

Ecology did not add the draft SWTRD permit conditions by a use of omnibus authority.

Ecology revised Section 4.0 in Fact Sheet to add justification for the added permit conditions for the SSW for the re-opened public comment period (7/25/2022 to 9/9/2022). Ecology's justification for the added conditions for the secondary solid waste is as follows;

"As detailed in Section 6.0, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS). TC&WM EIS indicated that the SSW (SW from WTP) must be immobilized carefully or impacts could occur from the SW above acceptable standards making it not disposable at the IDF. As a mitigation to protect vadose zone and groundwater, Ecology developed new permit conditions to address the impact from SSW. These SSW proposed permit conditions address issues like: addition of a Secondary Waste Technical Requirements Document, inclusion of SW in the RBT, waste performance modeling, waste form performance criteria, and protection of groundwater. Proposed permit conditions also address a certification from USDOE that the SSW is not High Level Waste. These permit conditions reflect Ecology's expectation that the SSW stream, to be disposed at the IDF, will be evaluated using the similar requirements that are used for the evaluation of the ILAW glass."

During both public comment periods, Ecology received a number of public comments for the draft SWTRD conditions including those from the Permittees. For final issuance, Ecology decided to revise the SWTRD permit conditions (III.11.E.5) in light of comments received. Pursuant to SEPA Substantive Authority, WAC 197-11-660, Ecology added these permit conditions as a mitigation to protect vadose zone and groundwater.

The revised final conditions (III.11.E.5) require, in addition to SWTRD as a forward-looking document (III.11.E.5.b), SSW Verification Document as a verification document (III.11.E.5.c). Ecology added SSW Verification Document requirement based on Ecology's determination that the combination of SWTRD and SSW Verification Document should be used as a tool for both Ecology and the Permittees to verify the successful performance of SSW disposed at IDF to protect human health and the environment.

Through both documents, we should be able to identify any gap that may exist between what was assumed and evaluated in PA/RRBT and the actual, real-world disposal of SSW at the IDF. If such gaps are identified, the path forward may include revising PA/RBT and SWTRD and/or an alternative disposal pathway or a different waste formulation for certain SSW stream.

Comment A-1-23

Permit Condition III.11.E.5.a. Secondary Waste (SW) includes, but is not limited to, 1) WTP waste – equipment, carbon beds, high-efficiency particulate air filters, encapsulate other debris, silver mordenite media, melters; and 2) Effluent Management Facility (EMF) - grouted ETF brines from WTP EMF overheads. For any SW forms produced in conjunction with

producing ILAW glass, that the Permittees intend to dispose in the IDF, the Permittees will provide to Ecology for review, a Secondary Waste Form Technical Requirements Document (SWTRD). The SWTRD will contain:

Response: Permit conditions under the heading of Secondary Waste Form Technical Requirements Document do not address requirements found in applicable Dangerous Waste regulations. These conditions would require administrative development under Omnibus provisions of 40 CFR 270.32 and WAC 173-303-815(2). Exercise of omnibus authority is not discretionary, but must be exercised when the permitting authority has a basis to determine that some aspect of treatment, storage or disposal at a facility requires regulatory control to be protective. Use of omnibus authority requires a clear and understandable justification for imposing permit conditions where existing regulatory requirements require supplementation to ensure that human health and the environment are adequately protected. Per RCRA Online (RO) Number 12553, additional standards can be justified by basing the standards on sources such as documented studies, expert opinions, and published articles.

This permit condition is an inappropriate use of the omnibus provision of the regulations. This condition is void since no basis has been articulated in the Permit, Fact Sheet, or supporting documents that supports the use of omnibus permitting authority to impose this condition. The State has failed to articulate specific facts supporting the contention that this condition is necessary to achieve compliance with the Hazardous Waste Management Act (HWMA), nor is there any specific provision in WAC 173-303 that necessitates the additional requirement. Compliance with the HWMA is fully addressed in the permitting requirements of WAC 173-303-810. This condition has no reasonable basis in fact or law, and no reasonable relation to the "omnibus authority" in WAC 173-303-800(8) and WAC 173-303- 815(2)(b)(ii). A regulatory basis for this permit condition is absent from the Washington State Hazardous Waste Act. In addition, this condition is not clear as to whether there is one SWTRD for all secondary waste or one SWTRD for each secondary waste form.

Recommendation: Delete permit condition.

Response to A-1-23

Ecology did not add the draft SWTRD permit conditions by a use of omnibus authority.

Ecology revised Section 4.0 in Fact Sheet to add justification for the added permit conditions for the SSW for the re-opened public comment period (7/25/2022 to 9/9/2022). Ecology's justification for the added conditions for the secondary solid waste is as follows;"

As detailed in Section 6.0, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS). TC&WM EIS indicated that the SSW (SW from WTP) must be immobilized carefully or impacts could occur from the SW above acceptable standards making it not disposable at the IDF. As a mitigation to protect vadose zone and groundwater, Ecology developed new permit conditions to address the impact from SSW. These SSW proposed permit conditions address issues like: addition of a Secondary Waste Technical Requirements Document, inclusion of SW in the RBT, waste performance modeling, waste form performance criteria, and protection of groundwater. Proposed permit conditions also address a certification from USDOE that the SSW is not High Level Waste. These permit conditions reflect

Ecology's expectation that the SSW stream, to be disposed at the IDF, will be evaluated using the similar requirements that are used for the evaluation of the ILAW glass."

During both public comment periods, Ecology received a number of public comments for the draft SWTRD conditions including those from the Permittees. For final issuance, Ecology decided to revise the SWTRD permit conditions (III.11.E.5) in light of comments received. Pursuant to SEPA Substantive Authority, WAC 197-11-660, Ecology added these permit conditions as a mitigation to protect vadose zone and groundwater.

For final issuance, Ecology revised the draft condition III.11.E.5.a to better identify and define the SSW consistently to Appendix BB, Waste Analysis Plan. Specifically, Ecology:

- *-Replaced "SW" with "SSW" throughout the III.11.E.5 Conditions for clarity that all the secondary waste will be solidified before disposal at the IDF.*
- *-Replaced "Effluent Management Facility (EMF) - grouted ETF brines from WTP EMF overheads" with "Grouted ETF brines and acetonitrile distillate from WTP EMF (Effluent Management Facility) overheads" for accuracy and consistency with the description of ETF-generated SSW in Section BB.2.1.4 in Appendix BB.*
- *-Omitted silver mordenite media because the Final Waste Incidental to Reprocessing Evaluation for Vitrified Low-Activity Waste (DOE/ORP-2022-03 Rev. 0) and its associated NEPA Supplement Analysis (DOE/EIS-0391-SA-3) exclude silver mordenite media, which will be generated by the current configuration of the HLW Vitrification Facility only.*
- *-Added the last sentence, "EMF Concentrate is not approved for disposal at the IDF" for clarity that EMF Concentrate is a primary waste and to address several public comments with the concerns for the disposition of EMF Concentrate.*

Comment A-1-24

Permit Condition III.11.E.5.a.i. A description of each SW form and the mechanisms of immobilization that the Permittees intend to use on these forms. In addition, this description will include SW waste form formulations for each waste form and the characteristics of key parameters (such as coefficient of diffusion) necessary to establish satisfactory performance after disposal that will protect human health and the environment. The description must include information which will demonstrate the cumulative impact from the disposed waste forms will not exceed 75% of state and federal performance standards for drinking water.

Response: Permit conditions under the heading of Secondary Waste Form Technical Requirements Document do not address requirements found in applicable Dangerous Waste regulations. These conditions would require administrative development under Omnibus provisions of 40 CFR 270.32 and WAC 173-303-815(2). Exercise of omnibus authority is not discretionary, but must be exercised when the permitting authority has a basis to determine that some aspect of treatment, storage or disposal at a facility requires regulatory control to be protective. Use of omnibus authority requires a clear and understandable justification for imposing permit conditions where existing regulatory requirements require supplementation to ensure that human health and the environment are adequately protected. Per RCRA Online

(RO) Number 12553, additional standards can be justified by basing the standards on sources such as documented studies, expert opinions, and published articles.

This permit condition is an inappropriate use of the omnibus provision of the regulations. This condition is void since no basis has been articulated in the Permit, Fact Sheet, or supporting documents that supports the use of omnibus permitting authority to impose this condition. The State has failed to articulate specific facts supporting the contention that this condition is necessary to achieve compliance with the Hazardous Waste Management Act (HWMA), nor is there any specific provision in WAC 173-303 that necessitates the additional requirement. Compliance with the HWMA is fully addressed in the permitting requirements of WAC 173-303-810. This condition has no reasonable basis in fact or law, and no reasonable relation to the "omnibus authority" in WAC 173-303-800(8) and WAC 173-303- 815(2)(b)(ii). A regulatory basis for this permit condition is absent from the Washington State Hazardous Waste Act.

EPA has created the RCRA regulations in 40 CFR and Ecology has promulgated regulations for their authorized program in WAC 173-303, based on the state's Hazardous Waste Management Act (RCW 70.105). These rules and regulations are based on a premise that dangerous waste (which includes mixed waste) disposal activities are protective of human health and the environment by complying with the land disposal restriction program in WAC 173-303-140 which incorporates by reference 40 CFR 268. Immobilization technologies are defined in 40 CFR 268.42, "Treatment Standards Expressed as Specified Technologies" and 40 CFR 268.45, "Alternative Treatment Standards for Hazardous Debris." Per draft Permit Condition III.11.E.1, "The Permittees will not dispose of any waste that does not comply with all appropriate and applicable treatment standards, including all applicable Land Disposal Restrictions (LDR)." Prior to accepting waste for disposal at IDF, the waste must be certified to meet the applicable land disposal restriction treatment standard. Permittees ensure that all waste meets LDR requirements as described in Addendum B, Waste Analysis Plan.

Further, Permit Condition III.11.E.10.a already provides direction on meeting drinking water standards: "The groundwater impact will be modeled in a concentration basis and should be compared against various performance standards including but not limited to drinking water standards (40 CFR 141 and 40 CFR 143)." As drinking water standards are legally enforceable standards that protect public health by limiting the level of contaminants, additional restrictions (i.e., 75%) are an arbitrary exercise of power.

Washington law prohibits the arbitrary exercise of power by a state agency. State ex rel. Pub. Util. Dist. No. 1 of Okanogan County v. Dep't of Pub. Serv., 21 Wn.2d 201, 208-09 (1944). Imposing requirements that exceed an agency's statutory or regulatory authority constitutes arbitrary action. To the extent that the Department of Ecology has imposed conditions under the Permit that exceed the Department's authority, it has acted in an arbitrary manner. Accordingly, those conditions which have been arbitrarily imposed under the Permit should be stricken as the product of impermissible and arbitrary agency action.

Recommendation: Delete permit condition.

Response to A-1-24

Ecology did not add the draft SWTRD permit conditions by a use of omnibus authority.

Ecology revised Section 4.0 in Fact Sheet to add justification for the added permit conditions for the SSW for the re-opened public comment period (7/25/2022 to 9/9/2022). Ecology's justification for the added conditions for the secondary solid waste is as follows;

"As detailed in Section 6.0, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS). TC&WM EIS indicated that the SSW (SW from WTP) must be immobilized carefully or impacts could occur from the SW above acceptable standards making it not disposable at the IDF. As a mitigation to protect vadose zone and groundwater, Ecology developed new permit conditions to address the impact from SSW. These SSW proposed permit conditions address issues like: addition of a Secondary Waste Technical Requirements Document, inclusion of SW in the RBT, waste performance modeling, waste form performance criteria, and protection of groundwater. Proposed permit conditions also address a certification from USDOE that the SSW is not High Level Waste. These permit conditions reflect Ecology's expectation that the SSW stream, to be disposed at the IDF, will be evaluated using the similar requirements that are used for the evaluation of the ILAW glass."

During both public comment periods, Ecology received a number of public comments for the draft SWTRD conditions including those from the Permittees. For final issuance, Ecology decided to revise the SWTRD permit conditions (III.11.E.5) in light of comments received. Pursuant to SEPA Substantive Authority, WAC 197-11-660, Ecology added these permit conditions as a mitigation to protect vadose zone and groundwater.

For final issuance, Ecology decided to require, in addition to SWTRD as a forward-looking document (III.11.E.5.b), SSW Verification Document as a verification document (III.11.E.5.c). Ecology believes that the combination of SWTRD and SSW Verification Document should be used as a tool for both Ecology and the Permittees to verify the successful performance of SSW disposed at IDF to protect human health and the environment. Additionally, through both documents, we should be able to identify any gap that may exist between what was assumed and evaluated in PA/RBT and the actual, real-world disposal of SSW at the IDF. If such gaps are identified, the path forward may include revising PA/RBT and SWTRD and/or an alternative disposal pathway or a different waste formulation for certain SSW stream.

Ecology made the following changes to the draft condition III.11.E.5.a.i to revise as III.11.E.5.b, III. E.5.b.i, and III.11.E.5.c:

- *In III.11.E.5.b for SWTRD, Ecology Replaced "SW waste form formulations for each waste form and the characteristics of key parameters (such as coefficient of diffusion)" with "waste codes, location of where each SSW form originated from and a treatment plan". Ecology agrees that this revised condition language would provide adequate information to review against IDF Permit and PA/RBT.*
- *Additionally, Ecology removed the last sentence as they are repetitive languages and are already covered by existing condition III.11.E.10 for RBT.*
- *In III.11.E.5.b.i, Ecology added the frequency of required submittal through a Class 11 permit modification and deadline of the first submittal. The SWTRD will be readily available to the public members through Hanford AR.*
- *Ecology added a new condition for SSW Verification Document (III.11.E.5.c).*

- We replaced "SW" with "SSW" throughout the III.11.E.5 Conditions for clarity that all the secondary waste will be solidified before disposal at the IDF.

Requirement on biennial verification portion of SWTRD will provide Ecology conservative measure and capability to address issues found from reviewing the SWTRD. Ecology intends that this requirement is to verify actual status against predicted and reforecast based on actual status and new information to assure impacts are adequately managed.

Comment A-1-25

Permit Condition III.11.E.5.a.ii.

A PA that provides a reasonable basis for assurance that each SW formulation will, once disposed in the IDF in combination with the other waste volumes and waste forms planned for disposal at the entire IDF, be adequately protective of human health and the environment; and will not violate or be projected to violate, any or all applicable state and federal laws, regulations, and environmental standards. Cumulative impact will not exceed 75% of the performance standard.

Response: Permit conditions under the heading of Secondary Waste Form Technical Requirements Document do not address requirements found in applicable Dangerous Waste regulations. These conditions would require administrative development under Omnibus provisions of 40 CFR 270.32 and WAC 173-303-815(2). Exercise of omnibus authority is not discretionary, but must be exercised when the permitting authority has a basis to determine that some aspect of treatment, storage or disposal at a facility requires regulatory control to be protective. Use of omnibus authority requires a clear and understandable justification for imposing permit conditions where existing regulatory requirements require supplementation to ensure that human health and the environment are adequately protected. Per RCRA Online (RO) Number 12553, additional standards can be justified by basing the standards on sources such as documented studies, expert opinions, and published articles.

This permit condition is an inappropriate use of the omnibus provision of the regulations. This condition is void since no basis has been articulated in the Permit, Fact Sheet, or supporting documents that supports the use of omnibus permitting authority to impose this condition. The State has failed to articulate specific facts supporting the contention that this condition is necessary to achieve compliance with the Hazardous Waste Management Act (HWMA), nor is there any specific provision in WAC 173-303 that necessitates the additional requirement. Compliance with the HWMA is fully addressed in the permitting requirements of WAC 173-303-810.

This condition has no reasonable basis in fact or law, and no reasonable relation to the "omnibus authority" in WAC 173-303-800(8) and WAC 173-303-815(2)(b)(ii). A regulatory basis for this permit condition is absent from the Washington State Hazardous Waste Act. This condition is seeking to regulate a radioactive waste management document and is therefore outside the authority of the WAC and preempted by the Atomic Energy Act (AEA). A Performance Assessment (PA) is a DOE required site-specific radiological assessment for low-level waste disposal facilities, as directed by DOE O 435.1, and is not subject to WAC 173-303.

Washington law prohibits the arbitrary exercise of power by a state agency. State ex rel. Pub. Util. Dist. No. 1 of Okanogan County v. Dep't of Pub. Serv., 21 Wn.2d 201, 208-09 (1944). Imposing requirements that exceed an agency's statutory or regulatory authority constitutes arbitrary action. To the extent that the Department of Ecology has imposed conditions under the Permit that exceed the Department's authority, it has acted in an arbitrary manner. Accordingly, those conditions which have been arbitrarily imposed under the Permit should be stricken as the product of impermissible and arbitrary agency action.

Further, EPA has created the RCRA regulations in 40 CFR and Ecology has promulgated regulations for their authorized program in WAC 173-303, based on the state's Hazardous Waste Management Act (RCW 70.105). These rules and regulations are based on a premise that dangerous waste (which includes mixed waste) disposal activities are protective of human health and the environment by complying with the land disposal restriction program in WAC 173-303-140 which incorporates by reference 40 CFR 268. Immobilization technologies are defined in 40 CFR 268.42, "Treatment Standards Expressed as Specified Technologies" and 40 CFR 268.45, "Alternative Treatment Standards for Hazardous Debris." Per draft Permit Condition III.11.E.1, "The Permittees will not dispose of any waste that does not comply with all appropriate and applicable treatment standards, including all applicable Land Disposal Restrictions (LDR)." Prior to accepting waste for disposal at IDF, the waste must be certified to meet the applicable land disposal restriction treatment standard. Permittees ensure that all waste meets LDR requirements as described in Addendum B, Waste Analysis Plan.

Recommendation: Delete permit condition.

Response to A-1-25

Ecology did not add the draft SWTRD permit conditions by a use of omnibus authority.

Ecology revised Section 4.0 in Fact Sheet to add justification for the added permit conditions for the SSW for the re-opened public comment period (7/25/2022 to 9/9/2022). Ecology's justification for the added conditions for the secondary solid waste is as follows;

"As detailed in Section 6.0, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS). TC&WM EIS indicated that the SSW (SW from WTP) must be immobilized carefully or impacts could occur from the SW above acceptable standards making it not disposable at the IDF. As a mitigation to protect vadose zone and groundwater, Ecology developed new permit conditions to address the impact from SSW. These SSW proposed permit conditions address issues like: addition of a Secondary Waste Technical Requirements Document, inclusion of SW in the RBT, waste performance modeling, waste form performance criteria, and protection of groundwater. Proposed permit conditions also address a certification from USDOE that the SSW is not High Level Waste. These permit conditions reflect Ecology's expectation that the SSW stream, to be disposed at the IDF, will be evaluated using the similar requirements that are used for the evaluation of the ILAW glass."

During both public comment periods, Ecology received a number of public comments for the draft SWTRD conditions including those from the Permittees. For final issuance, Ecology decided to revise the SWTRD permit conditions (III.11.E.5) in light of comments received. Pursuant to

SEPA Substantive Authority, WAC 197-11-660, Ecology added these permit conditions as a mitigation to protect vadose zone and groundwater.

For final issuance, Ecology decided to require, in addition to SWTRD as a forward-looking document (III.11.E.5.b), SSW Verification Document as a verification document (III.11.E.5.c). Ecology believes that the combination of SWTRD and SSW Verification Document should be used as a tool for both Ecology and the Permittees to verify the successful performance of SSW disposed at IDF to protect human health and the environment. Additionally, through both documents, we should be able to identify any gap that may exist between what was assumed and evaluated in PA/RBT and the actual, real-world disposal of SSW at the IDF. If such gaps are identified, the path forward may include revising PA/RBT and SWTRD and/or an alternative disposal pathway or a different waste formulation for certain SSW stream.

The RBT, required through IDF Permit Conditions, uses the PA model results to forecast future impacts of the planned IDF waste forms to underlying vadose zone and groundwater under different inventory and waste form performance assumptions and provides comparisons to groundwater protection standards. PA input parameters and assumptions will be used in the modeling RBT. RBT requirements (Condition III.11.E.10) applies to all waste going to the IDF for disposal, including SSW streams.

For final issuance, Ecology made the following changes to the draft condition III.11.E.5.a.ii to revise as III.11.E.5.d:

- *-Ecology replaced "PA" with "RBT" because although RBT modeling relies on PA input parameters and assumptions, RBT is the one required through IDF Permit Condition (III.11.E.10).*
- *-We replaced "SW" with "SSW" throughout the III.11.E.5 Conditions for clarity that all the secondary waste will be solidified before disposal at the IDF.*
- *-Removed "and will not violate or be projected to violate, any or all applicable state and federal laws, regulations, and environmental standards. Cumulative impact will not exceed 75% of the performance standard." This is because these languages are the repetitive languages and are already covered by existing condition III.11.E.10 for RBT.*
- *-Added the last sentence, "Any updates to the RBT will be in accordance with Permit Condition III.11.E.10."*

Comment A-1-26

Permit Condition III.11.E.5.a.iii.

A description of production processes including management controls and QA/QC requirements which demonstrate that SW produced for each formulation will perform in a reasonably similar manner to the SW formulation assumed in the PA.

Response: Permit conditions under the heading of Secondary Waste Form Technical Requirements Document do not address requirements found in applicable Dangerous Waste regulations. These conditions would require administrative development under Omnibus provisions of 40 CFR 270.32 and WAC 173-303-815(2). Exercise of omnibus authority is not discretionary, but must be exercised when the permitting authority has a basis to determine

that some aspect of treatment, storage or disposal at a facility requires regulatory control to be protective. Use of omnibus authority requires a clear and understandable justification for imposing permit conditions where existing regulatory requirements require supplementation to ensure that human health and the environment are adequately protected. Per RCRA Online (RO) Number 12553, additional standards can be justified by basing the standards on sources such as documented studies, expert opinions, and published articles.

This permit condition is an inappropriate use of the omnibus provision of the regulations. This condition is void since no basis has been articulated in the Permit, Fact Sheet, or supporting documents that supports the use of omnibus permitting authority to impose this condition. The State has failed to articulate specific facts supporting the contention that this condition is necessary to achieve compliance with the Hazardous Waste Management Act (HWMA), nor is there any specific provision in WAC 173-303 that necessitates the additional requirement. Compliance with the HWMA is fully addressed in the permitting requirements of WAC 173-303-810. This condition has no reasonable basis in fact or law, and no reasonable relation to the "omnibus authority" in WAC 173-303-800(8) and WAC 173-303- 815(2)(b)(ii). A regulatory basis for this permit condition is absent from the Washington State Hazardous Waste Act.

Per draft Permit Condition III.11.E.5.a, this Secondary Waste Technical Requirements Document applies to secondary waste from ILAW production at WTP. Information on production processes is located in the WTP portion of the RCRA Permit. QA/QC controls for another facility's production processes are not applicable to the disposal facility.

Recommendation: Delete permit condition.

Response to A-1-26

Ecology did not add the draft SWTRD permit conditions by a use of omnibus authority.

Ecology revised Section 4.0 in Fact Sheet to add justification for the added permit conditions for the SSW for the re-opened public comment period (7/25/2022 to 9/9/2022). Ecology's justification for the added conditions for the secondary solid waste is as follows;

"As detailed in Section 6.0, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS). TC&WM EIS indicated that the SSW (SW from WTP) must be immobilized carefully or impacts could occur from the SW above acceptable standards making it not disposable at the IDF. As a mitigation to protect vadose zone and groundwater, Ecology developed new permit conditions to address the impact from SSW. These SSW proposed permit conditions address issues like: addition of a Secondary Waste Technical Requirements Document, inclusion of SW in the RBT, waste performance modeling, waste form performance criteria, and protection of groundwater. Proposed permit conditions also address a certification from USDOE that the SSW is not High Level Waste. These permit conditions reflect Ecology's expectation that the SSW stream, to be disposed at the IDF, will be evaluated using the similar requirements that are used for the evaluation of the ILAW glass."

During both public comment periods, Ecology received a number of public comments for the draft SWTRD conditions including those from the Permittees. For final issuance, Ecology decided to revise the SWTRD permit conditions (III.11.E.5) in light of comments received. Pursuant to

SEPA Substantive Authority, WAC 197-11-660, Ecology added these permit conditions as a mitigation to protect vadose zone and groundwater.

For final issuance, however, Ecology deleted this condition as Addendum B and associated QAQC is already enforceable.

Comment A-1-27

Permit Condition III.11.E.5.b.

For SW forms which demonstrate acceptable performance in the PA and in the modeling-risk budget tool, the waste must be treated and confirmed to be treated to meet a range of 10-9 cm2 /sec-10-13cm2 /sec diffusion coefficient (EPA1315). The Permittees will provide to Ecology a report every five years to demonstrate confirmation.

Response: Permit conditions under the heading of Secondary Waste Form Technical Requirements Document do not address requirements found in applicable Dangerous Waste regulations. These conditions would require administrative development under Omnibus provisions of 40 CFR 270.32 and WAC 173-303-815(2). Exercise of omnibus authority is not discretionary, but must be exercised when the permitting authority has a basis to determine that some aspect of treatment, storage or disposal at a facility requires regulatory control to be protective. Use of omnibus authority requires a clear and understandable justification for imposing permit conditions where existing regulatory requirements require supplementation to ensure that human health and the environment are adequately protected. Per RCRA Online (RO) Number 12553, additional standards can be justified by basing the standards on sources such as documented studies, expert opinions, and published articles.

This permit condition is an inappropriate use of the omnibus provision of the regulations. This condition is void since no basis has been articulated in the Permit, Fact Sheet, or supporting documents that supports the use of omnibus permitting authority to impose this condition. The State has failed to articulate specific facts supporting the contention that this condition is necessary to achieve compliance with the Hazardous Waste Management Act (HWMA), nor is there any specific provision in WAC 173-303 that necessitates the additional requirement. Compliance with the HWMA is fully addressed in the permitting requirements of WAC 173-303-810. This condition has no reasonable basis in fact or law, and no reasonable relation to the "omnibus authority" in WAC 173-303-800(8) and WAC 173-303- 815(2)(b)(ii). A regulatory basis for this permit condition is absent from the Washington State Hazardous Waste Act.

EPA Method 1315 states: “The method [1315] is not required by federal regulations to determine whether waste passes or fails the toxicity characteristic as defined at 40 CFR 261.24.” It also states, “The information contained in this method is provided by the Environmental Protection Agency (EPA or the Agency) as guidance to be used by the analyst and the regulated community in making judgments necessary to generate results that meet the data quality objectives for the intended application.” This method is not intended to demonstrate compliance for RCRA disposal requirements.

EPA has created the RCRA regulations in 40 CFR and Ecology has promulgated regulations for their authorized program in WAC 173-303, based on the state’s Hazardous Waste Management Act (RCW 70.105). These rules and regulations are based on a premise that dangerous waste

(which includes mixed waste) disposal activities are protective of human health and the environment by complying with the land disposal restriction program in WAC 173-303-140 which incorporates by reference 40 CFR 268. Immobilization technologies are defined in 40 CFR 268.42, "Treatment Standards Expressed as Specified Technologies" and 40 CFR 268.45, "Alternative Treatment Standards for Hazardous Debris." Prior to accepting waste for disposal at IDF, the waste must be certified to meet the applicable land disposal restriction treatment standard.

Recommendation: Delete permit condition

Response to A-1-27

Ecology did not add the draft SWTRD permit conditions by a use of omnibus authority.

Ecology revised Section 4.0 in Fact Sheet to add justification for the added permit conditions for the SSW for the re-opened public comment period (7/25/2022 to 9/9/2022). Ecology's justification for the added conditions for the secondary solid waste is as follows;

"As detailed in Section 6.0, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS). TC&WM EIS indicated that the SSW (SW from WTP) must be immobilized carefully or impacts could occur from the SW above acceptable standards making it not disposable at the IDF. As a mitigation to protect vadose zone and groundwater, Ecology developed new permit conditions to address the impact from SSW. These SSW proposed permit conditions address issues like: addition of a Secondary Waste Technical Requirements Document, inclusion of SW in the RBT, waste performance modeling, waste form performance criteria, and protection of groundwater. Proposed permit conditions also address a certification from USDOE that the SSW is not High Level Waste. These permit conditions reflect Ecology's expectation that the SSW stream, to be disposed at the IDF, will be evaluated using the similar requirements that are used for the evaluation of the ILAW glass."

During both public comment periods, Ecology received a number of public comments for the draft SWTRD conditions including those from the Permittees. For final issuance, Ecology decided to revise the SWTRD permit conditions (III.11.E.5) in light of comments received. Pursuant to SEPA Substantive Authority, WAC 197-11-660, Ecology added these permit conditions as a mitigation to protect vadose zone and groundwater.

For final issuance, Ecology decided to require, in addition to SWTRD as a forward-looking document (III.11.E.5.b), SSW Verification Document as a verification document (III.11.E.5.c). Ecology believes that the combination of SWTRD and SSW Verification Document should be used as a tool for both Ecology and the Permittees to verify the successful performance of SSW disposed at IDF to protect human health and the environment. Additionally, through both documents, we should be able to identify any gap that may exist between what was assumed and evaluated in PA/RBT and the actual, real-world disposal of SSW at the IDF. If such gaps are identified, the path forward may include revising PA/RBT and SWTRD and/or an alternative disposal pathway or a different waste formulation for certain SSW stream.

For final issuance, Ecology replaced the draft condition III.11.E.5.b with III.11.E.5.d.ii. Specifically, Ecology removed requiring confirmation that SSW meets the range of diffusion coefficient by instead requiring through SSW Verification Document "a treatment plan, including

details of production of each SSW demonstrating compliance with grout performance in the PA" (III.11.E.5.c). Condition III.11.E.5.d.ii specifies SSW must meet one of the grouts modeled in the IDF PA (RPP-RPT-59958) and PA Maintenance Plan (DOE/ORP-2000-01) to demonstrate compliance. Additionally, we replaced "SW" with "SSW" throughout the III.11.E.5 Conditions for clarity that all the secondary waste will be solidified before disposal at the IDF.

As Ecology sees PA as a living document and providing reasonable basis for assurance that each SSW formulation will be protective of vadose zone and groundwater, this condition provides assurance that the Permittees make the right waste forms while providing them some flexibility yet consistency with PA.

Comment A-1-28

Permit Condition III.11.E.5.c.

For SW forms which demonstrate unacceptable performance in the PA and in the modeling-risk budget tool, the Permittees must meet with Ecology to discuss a path forward on these waste streams to be protective of the groundwater beneath the IDF prior to the disposal of the questionable waste form. If needed, the waste forms final treatment may need to be modified or an alternative disposal pathway may be identified.

Response: Permit conditions under the heading of Secondary Waste Form Technical Requirements Document do not address requirements found in applicable Dangerous Waste regulations. These conditions would require administrative development under Omnibus provisions of 40 CFR 270.32 and WAC 173-303-815(2). Exercise of omnibus authority is not discretionary, but must be exercised when the permitting authority has a basis to determine that some aspect of treatment, storage or disposal at a facility requires regulatory control to be protective. Use of omnibus authority requires a clear and understandable justification for imposing permit conditions where existing regulatory requirements require supplementation to ensure that human health and the environment are adequately protected. Per RCRA Online (RO) Number 12553, additional standards can be justified by basing the standards on sources such as documented studies, expert opinions, and published articles.

This permit condition is an inappropriate use of the omnibus provision of the regulations. This condition is void since no basis has been articulated in the Permit, Fact Sheet, or supporting documents that supports the use of omnibus permitting authority to impose this condition. The State has failed to articulate specific facts supporting the contention that this condition is necessary to achieve compliance with the Hazardous Waste Management Act (HWMA), nor is there any specific provision in WAC 173-303 that necessitates the additional requirement. Compliance with the HWMA is fully addressed in the permitting requirements of WAC 173-303-810. This condition has no reasonable basis in fact or law, and no reasonable relation to the "omnibus authority" in WAC 173-303-800(8) and WAC 173-303- 815(2)(b)(ii). A regulatory basis for this permit condition is absent from the Washington State Hazardous Waste Act.

In addition, EPA has created the RCRA regulations in 40 CFR and Ecology has promulgated regulations for their authorized program in WAC 173-303, based on the state's Hazardous Waste Management Act (RCW 70.105). These rules and regulations are based on a premise that dangerous waste (which includes mixed waste) disposal activities are protective of human

health and the environment by complying with the land disposal restriction program in WAC 173-303-140 which incorporates by reference 40 CFR 268. Immobilization technologies are defined in 40 CFR 268.42, "Treatment Standards Expressed as Specified Technologies" and 40 CFR 268.45, "Alternative Treatment Standards for Hazardous Debris." Per draft Permit Condition III.11.E.1, “The Permittees will not dispose of any waste that does not comply with all appropriate and applicable treatment standards, including all applicable Land Disposal Restrictions (LDR). Prior to accepting waste for disposal at IDF, the waste must be certified to meet the applicable Land Disposal Restriction treatment standard. Wastes that do not meet the LDR treatment standard will not be accepted for disposal.

In addition, this condition is void because the State has included requirements in the condition that are ambiguous. “Unacceptable performance” in relation to a performance assessment is not defined in the Hazardous Waste Management Act. A “Questionable Waste Form” is not defined in the Hazardous Waste Management Act. This condition does not provide the Permittees with sufficient information to ensure future compliance with the condition. Accordingly, this condition violates DOE's right to due process under the Washington and United States constitutions and should be stricken from the Permit.

Recommendation: Delete permit condition.

Response to A-1-28

Ecology did not add the draft SWTRD permit conditions by a use of omnibus authority.

Ecology revised Section 4.0 in Fact Sheet to add justification for the added permit conditions for the SSW for the re-opened public comment period (7/25/2022 to 9/9/2022). Ecology's justification for the added conditions for the secondary solid waste is as follows;

"As detailed in Section 6.0, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS). TC&WM EIS indicated that the SSW (SW from WTP) must be immobilized carefully or impacts could occur from the SW above acceptable standards making it not disposable at the IDF. As a mitigation to protect vadose zone and groundwater, Ecology developed new permit conditions to address the impact from SSW. These SSW proposed permit conditions address issues like: addition of a Secondary Waste Technical Requirements Document, inclusion of SW in the RBT, waste performance modeling, waste form performance criteria, and protection of groundwater. Proposed permit conditions also address a certification from USDOE that the SSW is not High Level Waste. These permit conditions reflect Ecology's expectation that the SSW stream, to be disposed at the IDF, will be evaluated using the similar requirements that are used for the evaluation of the ILAW glass."

During both public comment periods, Ecology received a number of public comments for the draft SWTRD conditions including those from the Permittees. For final issuance, Ecology decided to revise the SWTRD permit conditions (III.11.E.5) in light of comments received. Pursuant to SEPA Substantive Authority, WAC 197-11-660, Ecology added these permit conditions as a mitigation to protect vadose zone and groundwater.

For final issuance, Ecology decided to require, in addition to SWTRD as a forward-looking document (III.11.E.5.b), SSW Verification Document as a verification document (III.11.E.5.c). Ecology believes that the combination of SWTRD and SSW Verification Document should be used

as a tool for both Ecology and the Permittees to verify the successful performance of SSW disposed at IDF to protect human health and the environment. Additionally, through both documents, we should be able to identify any gap that may exist between what was assumed and evaluated in PA/RBT and the actual, real-world disposal of SSW at the IDF. If such gaps are identified, the path forward may include revising PA/RBT and SWTRD and/or an alternative disposal pathway or a different waste formulation for certain SSW stream.

For final issuance, Ecology replaced this draft condition with III.11.E.5.e.i. to address a rare, but possible scenario for when the Permittees discovers any SSW packages that are out of specification of the PA. Condition III.11.E.5.e.i requires the Permittees to perform an unreviewed disposal question (UDQ) to determine whether a special analysis (SA) of the SSW is necessary. If the UDQ/SA process determines that the SSW packages will not have an impact on the performance of the IDF, then the waste on limited case by case disposal can occur with notification to Ecology. Upon notification to Ecology, if Ecology determines that the waste is unfit for disposal according to the IDF Permit Conditions and Permit herein, letter will be issued to cease the disposal pending further discussion and review. For those wastes that are projected to impact the IDF performance, alternative disposal options will be explored.

This condition is consistent with the existing WTP condition that was added through 2+2 permit modification:

WTP Permit condition III.10.C.2.o.iii

"On a case-by-case basis, for any WTP mixed waste that does not meet the WAC for the disposal facility, Ecology will approve or deny acceptance of that waste to the disposal facility. This decision will be based on the disposal facility's WAC and compliance with WAC 173-303-140."

Additionally, Ecology replaced "SW" with "SSW" throughout the III.11.E.5 Conditions for clarity that all the secondary waste will be solidified before disposal at the IDF.

Comment A-1-29

Permit Condition III.11.E.5.d.

The uncertainty analysis must be included in all future performance assessments and modeling, and will contain the effects of variability in the grout mix formulation and the uncertainty in the paste and mortar formulations. Measurement error, variability from sample to sample for a given mix, and variability across different mixes will be included. American Society for Testing and Materials Coefficient of Diffusion methodology and U.S. Environmental Protection Agency (EPA) Leaching Procedures uncertainty in the diffusion coefficients will also be included.

Response: Permit conditions under the heading of Secondary Waste Form Technical Requirements Document do not address requirements found in applicable Dangerous Waste regulations. These conditions would require administrative development under Omnibus provisions of 40 CFR 270.32 and WAC 173-303-815(2). Exercise of omnibus authority is not discretionary, but must be exercised when the permitting authority has a basis to determine that some aspect of treatment, storage or disposal at a facility requires regulatory control to be protective. Use of omnibus authority requires a clear and understandable justification for imposing permit conditions where existing regulatory requirements require supplementation to

ensure that human health and the environment are adequately protected. Per RCRA Online (RO) Number 12553, additional standards can be justified by basing the standards on sources such as documented studies, expert opinions, and published articles.

This permit condition is an inappropriate use of the omnibus provision of the regulations. This condition is void since no basis has been articulated in the Permit, Fact Sheet, or supporting documents that supports the use of omnibus permitting authority to impose this condition. The State has failed to articulate specific facts supporting the contention that this condition is necessary to achieve compliance with the Hazardous Waste Management Act (HWMA), nor is there any specific provision in WAC 173-303 that necessitates the additional requirement. Compliance with the HWMA is fully addressed in the permitting requirements of WAC 173-303-810. This condition has no reasonable basis in fact or law, and no reasonable relation to the "omnibus authority" in WAC 173-303-800(8) and WAC 173-303- 815(2)(b)(ii). A regulatory basis for this permit condition is absent from the Washington State Hazardous Waste Act.

EPA has created the RCRA regulations in 40 CFR and Ecology has promulgated regulations for their authorized program in WAC 173-303, based on the state's Hazardous Waste Management Act (RCW 70.105). These rules and regulations are based on a premise that dangerous waste (which includes mixed waste) disposal activities are protective of human health and the environment by complying with the land disposal restriction program in WAC 173-303-140 which incorporates by reference 40 CFR 268. Immobilization technologies are defined in 40 CFR 268.42, "Treatment Standards Expressed as Specified Technologies" and 40 CFR 268.45, "Alternative Treatment Standards for Hazardous Debris." Per draft Permit Condition III.11.E.1, "The Permittees will not dispose of any waste that does not comply with all appropriate and applicable treatment standards, including all applicable Land Disposal Restrictions (LDR). Prior to accepting waste for disposal at IDF, the waste must be certified to meet the applicable Land Disposal Restriction treatment standard. Wastes that do not meet the LDR treatment standard will not be accepted for disposal.

In addition, this condition is void because the State has included requirements in the condition that are ambiguous. An "uncertainty analysis" in relation to a performance assessment is not defined in the Hazardous Waste Management Act. This condition does not provide the Permittees with sufficient information to ensure future compliance with the condition. Accordingly, this condition violates DOE's right to due process under the Washington and United States constitutions and should be stricken from the Permit.

Recommendation: Delete permit condition.

Response to A-1-29

Ecology agrees with this comment and removed the subject condition as Ecology recognizes that PA is not under the authority of Ecology or WAC 173-303.

However, PA and RBT are supporting documents for the SWTRD requirement set under IDF Condition III.11.E.5. Ecology believes that an uncertainty analysis is an important tool used in PA to recognize and attempt to account for uncertainties in the future of the facility, site, models, data, and parameters that affect the results of the PA.

Therefore, it is Ecology's expectation that PA include accurate information including the up-to-date uncertainty analysis per IDF Conditions III.11.E.4.C.

See also Ecology's response to Comment # O-2-7.

Comment A-1-30

Permit Condition III.11.E.5.e.

At a minimum, the Permittees will submit updates to the SWTRD to Ecology every five (5) years or more frequently if any of the following conditions exist:

· The Permittees submits a permit modification request allowing additional SW forms to be disposed of at IDF. New waste forms could include additional secondary solid waste and other waste from the Hanford Site.

· An unanticipated event or condition occurs that Ecology determines would warrant an update to the SWTRD.

Response: Permit conditions under the heading of Secondary Waste Form Technical Requirements Document do not address requirements found in applicable Dangerous Waste regulations. These conditions would require administrative development under Omnibus provisions of 40 CFR 270.32 and WAC 173-303-815(2). Exercise of omnibus authority is not discretionary, but must be exercised when the permitting authority has a basis to determine that some aspect of treatment, storage or disposal at a facility requires regulatory control to be protective. Use of omnibus authority requires a clear and understandable justification for imposing permit conditions where existing regulatory requirements require supplementation to ensure that human health and the environment are adequately protected. Per RCRA Online (RO) Number 12553, additional standards can be justified by basing the standards on sources such as documented studies, expert opinions, and published articles.

This permit condition is an inappropriate use of the omnibus provision of the regulations. This condition is void since no basis has been articulated in the Permit, Fact Sheet, or supporting documents that supports the use of omnibus permitting authority to impose this condition. The State has failed to articulate specific facts supporting the contention that this condition is necessary to achieve compliance with the Hazardous Waste Management Act (HWMA), nor is there any specific provision in WAC 173-303 that necessitates the additional requirement. Compliance with the HWMA is fully addressed in the permitting requirements of WAC 173-303-810. This condition has no reasonable basis in fact or law, and no reasonable relation to the "omnibus authority" in WAC 173-303-800(8) and WAC 173-303- 815(2)(b)(ii). A regulatory basis for this permit condition is absent from the Washington State Hazardous Waste Act.

Permit Condition III.11.E.5.a states that “SW includes, but is not limited to, 1) WTP waste - equipment, carbon beds, HEPA filters, encapsulate other debris, silver mordenite media, melters; and 2) EMF - grouted ETF brines from WTP EMF overheads. For any Secondary Waste (SW) forms produced in conjunction with producing ILAW glass that the Permittees intend to dispose in the IDF, the Permittees will provide to Ecology for review, a Secondary Waste Form Technical Requirements Document (SWTRD).” Per Permit Condition III.11.E.5.a, only waste forms produced in conjunction with producing ILAW glass would be included in the SWTRD.

However, this permit condition states that other waste from the Hanford Site would apply. These permit conditions are contradictory.

In addition, this condition is void because the State has included a requirement in the condition that is ambiguous. “An unanticipated event or condition” in relation to a SWTRD is not defined in the Hazardous Waste Management Act. This condition does not provide the Permittees with sufficient information to ensure future compliance with the condition. Accordingly, this condition violates DOE's right to due process under the Washington and United States constitutions and should be stricken from the Permit.

Recommendation: Delete permit condition.

Response to A-1-30

Ecology did not add the draft SWTRD permit conditions by a use of omnibus authority.

Ecology revised Section 4.0 in Fact Sheet to add justification for the added permit conditions for the SSW for the re-opened public comment period (7/25/2022 to 9/9/2022). Ecology's justification for the added conditions for the secondary solid waste is as follows;

"As detailed in Section 6.0, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS). TC&WM EIS indicated that the SSW (SW from WTP) must be immobilized carefully or impacts could occur from the SW above acceptable standards making it not disposable at the IDF. As a mitigation to protect vadose zone and groundwater, Ecology developed new permit conditions to address the impact from SSW. These SSW proposed permit conditions address issues like: addition of a Secondary Waste Technical Requirements Document, inclusion of SW in the RBT, waste performance modeling, waste form performance criteria, and protection of groundwater. Proposed permit conditions also address a certification from USDOE that the SSW is not High Level Waste. These permit conditions reflect Ecology's expectation that the SSW stream, to be disposed at the IDF, will be evaluated using the similar requirements that are used for the evaluation of the ILAW glass."

During both public comment periods, Ecology received a number of public comments for the draft SWTRD conditions including those from the Permittees. For final issuance, Ecology decided to revise the SWTRD permit conditions (III.11.E.5) in light of comments received. Pursuant to SEPA Substantive Authority, WAC 197-11-660, Ecology added these permit conditions as a mitigation to protect vadose zone and groundwater.

Ecology agrees that the SWTRD requirement should be applicable to only SSW forms. Therefore, we revised this condition for the re-opened public comment period (7/25/2022 to 9/9/2022) to remove the following languages:

- *"and other waste from the Hanford Site"*
- *"An unanticipated event or condition occurs that Ecology determines would warrant an update to the SWTRD."*

For final issuance, Ecology further revised the draft condition III.11.E.5.e for clarity in lights of comments received from the re-opened public comment period. Through SWTRD and SSW Verification Document, Ecology and the Permittees should be able to identify any gap that may exist between what was assumed and evaluated in PA/RBT and the actual, real-world disposal

of SSW at the IDF. This condition addresses one likely scenario that a new SSW stream had been already proposed for IDF disposal yet identified in neither the IDF Permit nor PA/RBT. In this case RBT must be updated to include the additional SSW stream and submitted to Ecology for approval through a permit modification process prior to disposal at the IDF.

Additionally, the revised condition is consistent with III.11.E Waste Stream Acceptance and III.11.E.4.c that a permit modification is required for allowing any additional waste form to be disposed at the IDF.

Comment A-1-31

Permit Condition III.11.E.5.f.

The Permittees will not dispose of any SW or other waste streams not described and evaluated in the SWTRD.

Response: Permit conditions under the heading of Secondary Waste Form Technical Requirements Document do not address requirements found in applicable Dangerous Waste regulations. These conditions would require administrative development under Omnibus provisions of 40 CFR 270.32 and WAC 173-303-815(2). Exercise of omnibus authority is not discretionary, but must be exercised when the permitting authority has a basis to determine that some aspect of treatment, storage or disposal at a facility requires regulatory control to be protective. Use of omnibus authority requires a clear and understandable justification for imposing permit conditions where existing regulatory requirements require supplementation to ensure that human health and the environment are adequately protected. Per RCRA Online (RO) Number 12553, additional standards can be justified by basing the standards on sources such as documented studies, expert opinions, and published articles.

This permit condition is an inappropriate use of the omnibus provision of the regulations. This condition is void since no basis has been articulated in the Permit, Fact Sheet, or supporting documents that supports the use of omnibus permitting authority to impose this condition. The State has failed to articulate specific facts supporting the contention that this condition is necessary to achieve compliance with the Hazardous Waste Management Act (HWMA), nor is there any specific provision in WAC 173-303 that necessitates the additional requirement. Compliance with the HWMA is fully addressed in the permitting requirements of WAC 173-303-810. This condition has no reasonable basis in fact or law, and no reasonable relation to the "omnibus authority" in WAC 173-303-800(8) and WAC 173-303- 815(2)(b)(ii). A regulatory basis for this permit condition is absent from the Washington State Hazardous Waste Act.

Recommendation: Delete permit condition.

Response to A-1-31

Ecology did not add the draft SWTRD permit conditions by a use of omnibus authority.

Ecology revised Section 4.0 in Fact Sheet to add justification for the added permit conditions for the SSW for the re-opened public comment period (7/25/2022 to 9/9/2022). Ecology's justification for the added conditions for the secondary solid waste is as follows;

"As detailed in Section 6.0, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS). TC&WM EIS indicated that the SSW (SW from WTP) must be immobilized carefully or impacts could occur from the SW above acceptable standards making it not disposable at the IDF. As a mitigation to protect vadose zone and groundwater, Ecology developed new permit conditions to address the impact from SSW. These SSW proposed permit conditions address issues like: addition of a Secondary Waste Technical Requirements Document, inclusion of SW in the RBT, waste performance modeling, waste form performance criteria, and protection of groundwater. Proposed permit conditions also address a certification from USDOE that the SSW is not High Level Waste. These permit conditions reflect Ecology's expectation that the SSW stream, to be disposed at the IDF, will be evaluated using the similar requirements that are used for the evaluation of the ILAW glass."

During both public comment periods, Ecology received a number of public comments for the draft SWTRD conditions including those from the Permittees. For final issuance, Ecology decided to revise the SWTRD permit conditions (III.11.E.5) in light of comments received. Pursuant to SEPA Substantive Authority, WAC 197-11-660, Ecology added these permit conditions as a mitigation to protect vadose zone and groundwater.

For final issuance, Ecology decided to require, in addition to SWTRD as a forward-looking document (III.11.E.5.b), SSW Verification Document as a verification document (III.11.E.5.c). Ecology believes that the combination of SWTRD and SSW Verification Document should be used as a tool for both Ecology and the Permittees to verify the successful performance of SSW disposed at IDF to protect human health and the environment. Additionally, through both documents, we should be able to identify any gap between what was assumed and evaluated in PA/RBT and the actual, real-world disposal of SSW at the IDF. If such gaps are identified, the path forward may include revising PA/RBT and SWTRD and/or an alternative disposal pathway or a different waste formulation for certain SSW stream.

For final issuance, Ecology revised the draft condition III.11.E.5.f for clarity. Specifically, we

- *Replaced "SW" with "SSW" for clarity that all the secondary waste will be solidified before disposal at the IDF.*
- *Added a requirement that SSW forms in the SWTRD must be identified in the IDF Permit.*

Comment A-1-32

Permit Condition III.11.E.8.

No WTP SSW may be disposed in the IDF until certification, as described in Permit Condition III.11.E.7, is provided by the Permittees via letter. Once certification is received by Ecology, disposal of the WTP SSW can become authorized via a Final Permit modification decision. Requests for Permit modifications must be accompanied by an analysis adequate for Ecology to comply with SEPA, as well as by a risk assessment and groundwater modeling to show the environmental impact. Permit Condition III.11.E.10 outlines the process by which waste sources in the IDF are modeled in an ongoing risk budget and a groundwater impact analysis.

Response: Per draft Permit Condition III.11.E, IDF can accept SSW from WTP, and this permit modification would authorize disposal, as specified in the fact sheet (“Upon approval and issuance of this permit modification, the IDF will be authorized to begin treatment, storage, and

disposal of dangerous and mixed waste."). The statement in this permit condition that "…disposal of the WTP SSW can become authorized via a Final Permit modification decision" does not align with Permit Condition III.11.E or the fact sheet. As certification requirements for SSW is described in Permit Condition III.11.E.7, it is unclear if Ecology is requiring an additional permit modification for current acceptance of WTP SSW or what parts of the permit would require a change.

NEPA/SEPA considerations are addressed in the Final Tank Closure and Waste Management Environmental Impact States for the Hanford Site, Richland, Washington (DOE/EIS-0391). The Hanford Facility Dangerous Waste Permit should not contain permit conditions to meet other requirements under the State Environmental Policy Act (SEPA). EPA Memorandum 9524.1983(01) addresses "Recurring Issues in Preparing RCRA Permits." Under section "Other Federal Authorities," the EPA states the following: "Therefore, as a general matter, permit writers should not include the RCRA permits conditions based on other Federal authorities merely for repetition or emphasis. Such conditions should only be used if the permit writer decides they are needed to meet RCRA regulatory requirements." In addition, this permit condition conflicts with Section 6.0 of the fact sheet that states, "Ecology made a State Environmental Policy Act (SEPA) determination # 202004362 for the IDF on August 24, 2020. Additional SEPA review is not required for the current permit modification to support the operations of the IDF."

There are also no requirements under WAC 173-303 to perform risk assessments for land disposal activities or groundwater modeling.

Recommendation: Delete permit condition.

Response to A-1-32

Ecology agrees that this condition should not require additional permit modification for the Permittees to dispose WTP SSW.

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology deleted the following language from this permit condition (III.11.E.8);

"via a Final Permit modification decision. Requests for Permit modifications must be accompanied by an analysis adequate for Ecology to comply with SEPA, as well as by a risk assessment and groundwater modeling to show the environmental impact. Permit Condition III.11.E.10 outlines the process by which waste sources in the IDF are modeled in an ongoing risk budget and a groundwater impact analysis."

After revision, the condition is as follows;

"No WTP SSW may be disposed in the IDF until certification, as described in Permit Condition III.11.E.7, is provided by the Permittees via letter. Once certification is received by Ecology, disposal of the WTP SSW can become authorized."

Comment A-1-33

Permit Condition III.11.E.10.a.

The Permittees will maintain a modeling-risk budget tool (RBT) (RPP-CALC-61194)…

Response: RPP-CALC-61194 is not the correct RBT reference. RPP-CALC-63176 is the correct citation.

Recommendation: Update language to refer to RPP-CALC-63176. “The Permittees will maintain a modeling-risk budget tool (RBT) (RPP-CALC-63176)…”

Response to A-1-33

Ecology agrees that RPP-CALC-63176 is the correct reference. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised this permit condition to refer to RPP-CALC-63176, as follows;

"The Permittees will maintain a modeling-risk budget tool (RBT) (RPP-CALC-63176)..."

Comment A-1-34

Permit Condition III.11.E.10.a.

Whenever the model is updated with additional information, the Permittees will perform an updated modeling run and submit the information to ECY.

Response: This addition to Permit Condition III.11.E.10.a would require administrative development under Omnibus provisions of 40 CFR 270.32 and WAC 173-303-815(2). Exercise of omnibus authority is not discretionary, but must be exercised when the permitting authority has a basis to determine that some aspect of treatment, storage or disposal at a facility requires regulatory control to be protective. Use of omnibus authority requires a clear and understandable justification for imposing permit conditions where existing regulatory requirements require supplementation to ensure that human health and the environment are adequately protected. Per RCRA Online Number (RO) 12553, additional standards can be justified by basing the standards on sources such as documented studies, expert opinions, and published articles.

This permit condition is an inappropriate use of the omnibus provision of the regulations. This condition is void since no basis has been articulated in the Permit, Fact Sheet, or supporting documents that supports the use of omnibus permitting authority to impose this condition. The State has failed to articulate specific facts supporting the contention that this condition is necessary to achieve compliance with the Hazardous Waste Management Act (HWMA), nor is there any specific provision in WAC 173-303 that necessitates the additional requirement. Compliance with the HWMA is fully addressed in the permitting requirements of WAC 173-303-810. This condition has no reasonable basis in fact or law, and no reasonable relation to the "omnibus authority" in WAC 173-303-800(8) and WAC 173-303- 815(2)(b)(ii). A regulatory basis for this permit condition is absent from the Washington State Hazardous Waste Act.

Recommendation: Delete the language that has been added to Permit Condition III.11.E.10.a.

Response to A-1-34

Ecology did not intend to use omnibus authority for the added language. However, Ecology determined that added language was not necessary as the existing Condition III.11.E.10.a already requires RBT be reviewed by Ecology and Ecology's comments will be reflected in the revised RBT.

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology deleted the following language from the permit condition;

"Whenever the model is updated with additional information, the Permittees will perform an updated modeling run and submit the information to Ecology."

Comment A-1-35

Permit Condition III.11.E.10.a.

Ecology will review PA modeling assumptions, input parameters, and results and will provide comments to the Permittees. Ecology comments will be dispositioned through the RCR process and comments will be reflected in further modeling to modify the IDF ILAW waste acceptance requirements as appropriate. The Permittees will provide responses to Ecology on comments and inform Ecology how the comments will be reflected in further modeling within one hundred and twenty (120) days of receipt of comments.

Response: Ecology added the PA review and following language, which were not requested by the Permittees: “The Permittees will provide responses to Ecology on comments and inform Ecology how the comments will be reflected in further modeling within one hundred and twenty (120) days of receipt of comments.” This permit modification does not request changes to the risk budget tool. In accordance with WAC 173-303-840(10)(c), “In a permit modification under this subsection, only those conditions to be modified will be reopened when a new draft permit is prepared. All other aspects of the existing permit will remain in effect for the duration of the unmodified permit.” Per WAC 173-303-830(3), “When a permit is modified, only the conditions subject to modification are reopened.” Adding additional requirements for the risk budget tools are outside the scope of this permit modification.

These additions to this permit condition seek to regulate a radioactive waste management document and is therefore outside the authority of the WAC and preempted by the Atomic Energy Act (AEA). A Performance Assessment (PA) is a DOE required site-specific radiological assessment for low-level waste disposal facilities, as directed by DOE O 435.1. The objective of DOE O 435.1 is to ensure that all DOE radioactive waste is managed in a manner that is protective of human health and the environment. A PA is the computer modeling analysis that simulates the impacts from radiological constituents and determines whether the waste will meet the radiological performance objective established in DOE O 435.1. There are no similar processes used under WAC 173-303 to properly operate a landfill pursuant to WAC 173-303-665. As the IDF PA (RPP-RPT-59958) was developed to assess the radiological constituents to be disposed of in IDF, this document is not subject to WAC 173-303. Hazardous constituents that were addressed in the PA were included for informational purposes. Permit conditions specific to hazardous constituents are addressed in draft Permit Condition III.11.E.8.

Washington law prohibits the arbitrary exercise of power by a state agency. State ex rel. Pub. Util. Dist. No. 1 of Okanogan County v. Dep't of Pub. Serv., 21 Wn.2d 201, 208-09 (1944). Imposing requirements that exceed an agency's statutory or regulatory authority constitutes arbitrary action. To the extent that the Department of Ecology has imposed conditions under the Permit that exceed the Department's authority, it has acted in an arbitrary manner. Accordingly, those conditions which have been arbitrarily imposed under the Permit should be stricken as the product of impermissible and arbitrary agency action.

Recommendation: Delete language that has been added to existing permit condition.

Response to A-1-35

Ecology did not intend to use omnibus authority for the added language. However, Ecology determined that added language was not necessary as the existing Condition III.11.E.10.a already requires RBT be reviewed by Ecology and Ecology's comments will be reflected in the revised RBT.

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology deleted "PA" in the first sentence and the following language from the permit condition;

"The Permittees will provide responses to Ecology on comments and inform Ecology how the comments will be reflected in further modeling within one hundred and twenty (120) days of receipt of comments".

After the revision, the subject sentences follows as;

"Ecology will review modeling assumptions, input parameters, and results and will provide comments to the Permittees. Ecology comments will be dispositioned through the RCR process and comments will be reflected in further modeling to modify the IDF ILAW waste acceptance requirements as appropriate."

Comment A-1-36

Permit Condition III.11.E.10.a.i.

The RBT will include a sensitivity analysis reflecting parameters, their uncertainties, and changes to parameters as requested by Ecology.

Response: The language "…their uncertainties…" was added to the current permit condition language. There are no requirements under WAC 173-303 to perform an uncertainty analysis.

Requiring an uncertainty analysis would require administrative development under omnibus provisions of 40 CFR 270.32 and WAC 173-303-815(2). Exercise of omnibus authority is not discretionary, but must be exercised when the permitting authority has a basis to determine that some aspect of treatment, storage or disposal at a facility requires regulatory control to be protective. Use of omnibus authority requires a clear and understandable justification for imposing permit conditions where existing regulatory requirements require supplementation to ensure that human health and the environment are adequately protected. Per RCRA Online Number (RO) 12553, additional standards can be justified by basing the standards on sources such as documented studies, expert opinions, and published articles.

Requiring an uncertainty analysis in this permit condition is an inappropriate use of the omnibus provision of the regulations. This condition is void since no basis has been articulated in the Permit, Fact Sheet, or supporting documents that supports the use of omnibus permitting authority to impose this condition. The State has failed to articulate specific facts supporting the contention that this condition is necessary to achieve compliance with the Hazardous Waste Management Act (HWMA), nor is there any specific provision in WAC 173-303 that necessitates the additional requirement. Compliance with the HWMA is fully addressed in the permitting requirements of WAC 173-303-810. This condition has no reasonable basis in fact or law, and no reasonable relation to the "omnibus authority" in WAC 173-303-800(8) and WAC 173-303-815(2)(b)(ii). A regulatory basis for this permit condition is absent from the Washington State Hazardous Waste Act.

In addition, this permit modification does not request changes to the risk budget tool. In accordance with WAC 173-303-840(10)(c), “In a permit modification under this subsection, only those conditions to be modified will be reopened when a new draft permit is prepared. All other aspects of the existing permit will remain in effect for the duration of the unmodified permit.” Per WAC 173-303-830(3), “When a permit is modified, only the conditions subject to modification are reopened.” Adding additional requirements for the Risk Budget Tool are outside the scope of this permit modification.

Recommendation: Delete “their uncertainties” from permit condition.

Response to A-1-36

Ecology did not intend to use omnibus authority for the added language. However, Ecology determined that added language was not necessary. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology deleted "their uncertainties" from the permit condition.

Comment A-1-37

Permit Condition III.11.E.10.a.iv.

The Permittees will provide access to PA modeling for the RBT reports to Ecology with the input provided by Ecology.

Response: This condition is seeking to regulate a radioactive waste management document, and is therefore outside the authority of the WAC and preempted by the Atomic Energy Act (AEA). A Performance Assessment (PA) is a DOE required site-specific radiological assessment for low-level waste disposal facilities, as directed by DOE O 435.1. The objective of DOE O 435.1 is to ensure that all DOE radioactive waste is managed in a manner that is protective of human health and the environment. A PA is the computer modeling analysis that simulates the impacts from radiological constituents and determines whether the waste will meet the radiological performance objective established in DOE O 435.1. There are no similar processes used under WAC 173-303 to properly operate a landfill pursuant to WAC 173-303- 665. As the IDF PA (RPP-RPT-59958) was developed to assess the radiological constituents to be disposed of in IDF, this document is not subject to WAC 173-303. Hazardous constituents that were addressed in the PA were included for informational purposes. Permit conditions specific to hazardous constituents are addressed in draft Permit Condition III.11.E.10.

Washington law prohibits the arbitrary exercise of power by a state agency. State ex rel. Pub. Util. Dist. No. 1 of Okanogan County v. Dep't of Pub. Serv., 21 Wn.2d 201, 208-09 (1944). Imposing requirements that exceed an agency's statutory or regulatory authority constitutes arbitrary action. To the extent that the Department of Ecology has imposed conditions under the Permit that exceed the Department's authority, it has acted in an arbitrary manner. Accordingly, those conditions which have been arbitrarily imposed under the Permit should be stricken as the product of impermissible and arbitrary agency action.

Recommendation: Delete permit condition.

Response to A-1-37

Ecology did not intend to use omnibus authority for the added language. However, Ecology determined that added language was not necessary. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology deleted "their uncertainties" from the permit condition.

Comment A-1-38

Permit Condition III.11.F.4.

The Permittees will operate the IDF in accordance with all specifications contained in Appendix C6.

Response: The Permittees cannot operate to Appendix C6 based on the process outlined by the permit conditions. The construction specifications of Appendix C6 are the original plans for construction activities for the IDF landfill cells and leachate tanks. In accordance with Permit Conditions II.L.2, II.R, and III.11.D.7, changes to the facility that deviate from the specifications of Appendix C6 are documented through the ECN or NCR process, and incorporated into the as-builts, as required. As design changes may not result in a permit modification, Appendix C6 will not include the most recent design changes. Appendix C3 would contain the latest design specification drawings.

Recommendation: Change permit condition to refer to Appendix C3: “The Permittees will operate the IDF in accordance with all specifications contained in Appendix C3.”

Response to A-1-38

Ecology agrees that the Permittees cannot operate to Appendix C6 based on the process outlined by the permit conditions.

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the subject permit condition, as follows;

"During the active life of the IDF, the Permittees will maintain and update all design drawings contained in Appendix C3. The Permittees will submit to Ecology a permit modification request for changes in design drawings (Appendix C3) that are beyond in-kind replacement/repair. "

Ecology received additional comment (Comment # A-2-15) during the re-opened public comment period (7/25/2022 to 9/9/2022). Ecology agrees that the language in this permit condition should be consistent with the Hanford Site-Wide 8c Permit Condition II.R.

However, Parts I and II Permit Conditions need to be adhered to a unit-specific permit condition (i.e. IDF permit condition) anyway, so to recite it in the IDF permit condition is a duplicate reference. In the current 8c Permit, the II.R condition exists already to give them that exception and it doesn't need to be repeated. Additionally, when the II.R condition will be eliminated with the Rev. 9 permit renewal, the Permittees have to reference WAC 173-303-830, Appendix I for equivalent/superior changes.

Therefore, for final issuance, Ecology revised the subject permit condition, as follows;

"During the active life of the IDF, the Permittees will maintain and update all design drawings contained in Appendix C3. The Permittees will submit to Ecology a permit modification request for changes in design drawings (Appendix C3) in accordance with WAC 173-303-830."

Comment A-1-39

Permit Condition III.11.F.5.c.

Waste packages will be placed in the landfill in a manner that limits interactions between waste packages to ensure reduction of chemical deterioration of waste packages and waste inside containers.

Response: This condition is not clear to the Permittees. The language "…limits interactions between waste packages…" implies the concern is between two containers. The language "…to ensure reduction of chemical deterioration of waste packages and waste inside containers" implies the concern is within a single container. The permit condition does not provide direction for actions required to "ensure reduction of chemical deterioration."

As described in Addendum B, "Waste Analysis Plan," incompatible waste is prohibited for acceptance at IDF, and all waste must be treated to LDR standards. Draft Permit Condition III.11.G.1 requires the Permittees to comply with the waste analysis plan requirements specific to Addendum B.

Recommendation: Delete permit condition.

Response to A-1-39

Ecology agrees that the condition was not clearly written. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the condition as follows;

"Waste packages will be placed in the landfill in a manner that ensures disposal of LDR-compliant waste that meets all IDF waste acceptance requirements in accordance with Addendum B, and the disposal requirements in Addendum C."

Comment A-1-40

Permit Condition III.11.F.5.d.

Grouted waste forms should not be disposed above vitrified waste forms.

Response: Request flexibility to allow grouted waste to be disposed above vitrified based on a demonstration of safe disposal.

Recommendation: Recommend revising permit condition to state: “Grouted waste forms should not be disposed above vitrified waste unless the Permittees can demonstrate in the Risk Budget Tool (Permit Condition III.11.E.10) that commingling of waste types will not impact underlying vadose or groundwater.”

Response to A-1-40

Ecology agrees with this comment. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the condition as;

"Grouted waste forms should not be disposed above vitrified waste unless the Permittees can demonstrate in the Risk Budget Tool that commingling of waste types will not impact underlying vadose or groundwater as outlined in Permit Condition III.11.E.10."

Comment A-1-41

Permit Condition III.11.F.9.a.iv and v.

III.11.F.9.a.iv Primary Liner Integrity: The Permittees will ensure that procedures for waste placement in the IDF, and the selection and operation of any equipment used within the lined portion of the IDF does not pose a risk of puncture or other damage to the primary liner, or damage berms. Only equipment that can be adequately supported by the operations layer, considering the geotechnical properties of the operating layer soils and the design and configuration of such equipment, will be used within the lined portion of the IDF. III.11.F.9.a.v

The Permittees will conduct waste management operations according to procedures for waste placement in the IDF and the selection and operation of any equipment used within the lined portion of the IDF to ensure such activities do not pose a risk of puncture or other damage to the primary liner or damage berms. These procedures will ensure that only equipment that can be adequately supported by the operations layer will be used. The Permittees will maintain a current copy of these procedures in the Hanford Facility Operating Record, IDF portion, and submit permit modifications for Addendum C appendices as necessary.

Response: Permit Conditions III.11.F.9.a.vi and III.11.F.9.a.v provide similar direction.

Recommendation: Recommend deletion of Permit Condition III.11.F.9.iv

Response to A-1-41

Ecology agrees with this Comment. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology deleted Permit Condition III.11.F.9.iv.

Comment A-1-42

Permit Condition III.11.F.9.a.vi.

The Permittees will construct berms and ditches to prevent run-on and runoff in accordance with the requirements of Addendum C. Before the first placement of waste in the IDF, the Permittees will submit to Ecology a final grading and topographical map on a scale sufficient to identify berms and ditches used to control run-on and runoff. Upon approval, Ecology will incorporate these maps into the permit as a permit modification.

Response: Current Permit Condition III.11.H.2 states that: “Upon approval, Ecology will incorporate these maps into the permit as a Class 1 1 modification.” For this modification, Ecology deleted reference to a “Class 1 1.” This permit modification does not request changes associated with this permit condition. In accordance with WAC 173-303-840(10)(c), “In a permit modification under this subsection, only those conditions to be modified will be reopened when a new draft permit is prepared. All other aspects of the existing permit will remain in effect for the duration of the unmodified permit.”

Recommendation: Reinstate permit condition as currently written: “Upon approval, Ecology will incorporate these maps into the permit as a Class 1 1 modification.”

Response to A-1-42

Ecology agrees with this comment. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology added "Class 11" back into the condition. After revision, the last sentence of the condition is as follows;

"Upon approval, Ecology will incorporate these maps into the permit as a Class 11 modification."

Comment A-1-43

Permit Condition III.11.F.9.c.

Prior to the first placement of waste in the IDF, the Permittee will apply soil stabilization materials as needed to prevent soil erosion in and around the landfill.

Response: As described in the Fact Sheet, the Permittees include both the U.S. Department of Energy and the Central Plateau Cleanup Company.

Recommendation: Pluralize Permittee: “…the Permittees will apply soil stabilization…”

Response to A-1-43

Ecology agrees that the Permittees include both the U.S. Department of Energy and the Central Plateau Cleanup Company. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised this permit condition to refer to "the Permittees".

Comment A-1-44

Permit Condition III.11.F.9.d.

The Permittees will inspect the various liquid collection sumps for liquids after significant rainfall events.

Response: The terms “various liquid collection sumps” and “significant rainfall events” are vague, and do not provide clear compliance direction. Addendum I, Inspection Plan, outlines the sumps that will be inspected, and defines a “significant rainfall event.” Draft Permit Conditions III.11.M.1 through 4 direct the Permittees to comply with Addendum I and conduct inspections according to Tables I-1 and I-2.

Recommendation: Delete permit condition or revise to state: “The Permittees will inspect the collection sumps for liquids after significant rainfall events, as defined in Addendum I, ‘Inspection Plan.’”

Response to A-1-44

Ecology agrees with this comment. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the condition, as follows;

"The Permittees will inspect the collection sumps for liquids after significant rainfall events, as defined in Addendum I, 'Inspection Plan.'"

Comment A-1-45

Permit Condition III.11.F.9.e.ii.

At least one hundred and twenty (120) days prior to initial waste placement in the IDF, the Permittees will submit a leachate monitoring plan to Ecology for review, approval, and incorporation into the permit. Upon approval by Ecology, this plan will be incorporated into the Permit as a Class [1]1 modification. The Permittees will not accept waste into the IDF until the requirements of the leachate monitoring plan have been incorporated into this Permit.

Response: The leachate monitoring plan was submitted to Ecology through a Class 3 permit modification request (21-ECD-001573).

Recommendation: Revise language to allow incorporation of the leachate monitoring plan through an alternate permit modification class: “Upon approval by Ecology, this plan will be incorporated into the Permit through a permit modification.”

Response to A-1-45

Ecology agrees that the leachate monitoring plan was submitted to Ecology through the other Class 3 Modification. However, this comment is outside the scope of this permit modification.

Comment A-1-46

Permit Condition III.11.F.9.e.iii.

At least one hundred and twenty (120) days prior to initial waste placement in the IDF, the Permittees will submit to Ecology for review, approval, and incorporation into the permit information on the Leachate Collection System, including adding the systems DWMUs as Miscellaneous Units. Upon approval by Ecology, this information will be incorporated into the Permit as a Class 3 modification. The Permittees will not accept waste into the IDF until the leachate collection system DWMUs have been incorporated into this Permit.

Response: A Class 3 permit modification request was submitted to Ecology on May 20, 2021 to include the Leachate Collection System (21-ECD-001573) as a miscellaneous DWMU, in accordance with Ecology letter 20-NWP-157. Please note that the Leachate Collection System consists of two units that have been managed as central accumulation area tanks since construction in 2006.

The permit condition states, “The Permittees will not accept waste into the IDF until the leachate collection system DWMUs have been incorporated into this Permit.” The leachate

tanks are already incorporated into the permit as critical systems. As critical systems, Ecology required inclusion of all information (e.g., design drawings, construction specifications) necessary to demonstrate safe operation of the tanks; therefore, ensuring protection to human health and the environment. Adding a permit condition requiring the leachate collection systems as DWMUs before acceptance of waste is not required to demonstrate safe operation, and could have the potential of delaying start-up of direct feed low activity waste (DFLAW).

Further, this permit modification request does not include modifications to the Leachate Collection System. In accordance with WAC 173-303-840(10)(c), "In a permit modification under this subsection, only those conditions to be modified will be reopened when a new draft permit is prepared. All other aspects of the existing permit will remain in effect for the duration of the unmodified permit." Per WAC 173-303-830(3), "When a permit is modified, only the conditions subject to modification are reopened." Adding a condition concerning the leachate collection system is outside the scope of this permit modification.

Recommendation: Delete permit condition.

Response to A-1-46

Ecology agrees that this permit modification request does not include modifications to the Leachate Collection System. However, Ecology believes that this condition is still within the scope of this permit modification considering that Leachate Collection System is a critical system to the IDF operation during the active-life.

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology deleted the last sentence, "The Permittees will not accept waste into the IDF until the leachate collection system DWMUs have been incorporated into this Permit."

Comment A-1-47

Permit Condition III.11.G.2.

The Permittees are authorized to accept dangerous/MW that satisfies the waste acceptance requirements listed in Addendum B.

Response: As described in Addendum B, Section B.1.1, "IDF provides treatment, storage, and disposal of Hanford Site mixed waste, as defined by WAC 173-303-040, Definitions, and Hanford Site low-level waste (LLW)." IDF will not treat, store, or dispose of dangerous-only waste.

Recommendation: Remove reference to dangerous waste: "The Permittees are authorized to accept MW that satisfies the waste acceptance requirements listed in Addendum B."

Response to A-1-47

Ecology agrees that IDF will not be authorized to accept dangerous waste. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the condition to remove reference to dangerous waste, as follows;

"The Permittees are authorized to accept MW that satisfies the waste acceptance requirements listed in Addendum B".

Comment A-1-48

Permit Condition III.11.H.6

For wells subject to this Permit, the Permittees will comply with WAC 173-160 and Chapter 18.104 RCW by replacing non-compliant wells subject to the permit with new wells under the schedule in Hanford Federal Facility Agreement and Consent Order (HFFACO) Milestone M-24, as amended, incorporated by reference into this Permit.

Response: The Permittees agree to comply with WAC 173-160 and Chapter 18.104 RCW, and agree to use the TPA milestone M-024 process to maintain a schedule of well installation as needed.

However, the Permittees disagree with incorporating M-024 by reference. By incorporation of the M-024 milestone, this condition seems to also allow for creation of an alternative schedule through the permit modification process. The language should not infer an expectation that the permit modification process could be used as a separate, redundant process. The schedule for well decommissioning is determined through the M-024 milestone.

Recommendation: Remove Milestone M-024 language, and revise permit condition to the following: "For wells subject to this Permit, the Permittees will comply with WAC 173-160 and Chapter 18.104 RCW by replacing non-compliant wells subject to the permit with new wells."

Response to A-1-48

Ecology disagrees with this comment. The M-24 milestone series includes a prioritization of well drilling on a site wide basis. The wells identified through the permitting process are top priority wells. The reference to M-24 in this permit condition should stay because, if it was removed, wells at IDF would be removed from the Tri-Parties' discussion of priorities.

Comment A-1-49

Permit Condition III.11.H.6.a.

The Permittees will submit a permit modification request to Ecology to decommission wells as necessary to ensure compliance with WAC 173-303-645. This permit modification request will include a schedule of compliance, which may incorporate by reference applicable schedule(s) in HFFACO Milestone M-24. For wells to be decommissioned, this permit modification must also include a request for installation of replacement wells, if necessary, to ensure compliance with WAC 173-303-645 requirements.

Response: The WAC 173-160 regulations already regulate and provide the needed requirements for when a well needs to be decommissioned, the notice provided to the State, and the submittals after decommissioning of the well. Ecology agreed to delete the permit condition during discussions between the Permittees and Ecology on proposed permit conditions. The Permittees received communication from Ecology on 06/17/2021 stating this condition would be deleted.

In addition, the Permittees disagree with incorporating M-024 by reference. By incorporation of the M-024 milestone, this condition seems to also allow for creation of an alternative schedule through the permit modification process. The language should not infer an expectation that the

permit modification process could be used as a separate, redundant process. The schedule for well decommissioning is determined through the M-024 milestone.

Recommendation: Delete permit condition.

Response to A-1-49

Ecology disagrees with the statement in this comment that reads, "The schedule for well decommissioning is determined through the M-024 milestone". HFFACO Milestone M-24 addresses only new well construction, not well decommissioning. Ecology also found this permit condition inaccurately referencing HFFACO Milestone M-24.

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology deleted this permit condition.

Comment A-1-50

Permit Condition III.11.L.5.

Proposed closure performance standards are presented in Addendum H. No later than six (6) months prior to acceptance of the last shipment of waste at the IDF, the Permittees will update the IDF "Closure Plan," Permit Addendum H, with the Closure Performance Standards identified in Ecology Letter 20-NWP-132 (or updated version of Closure Performance Standards) and submit to Ecology for review, approval, and incorporation into the Permit.

Response: The closure performance standards identified in Letter 20-NWP-132 were calculated for the WRPS tank systems and used Cleanup Levels and Risk Calculation (CLARC) values that are already outdated. The values in the letter do not include all waste codes listed in the IDF Part A, and do not use the most current CLARC table values. In addition, including a letter in a permit condition fails to comply with the rulemaking requirements of the Washington Administrative Procedures Act, as letters have not been vetted through the rule making process.

Recommendation: Revise permit condition to state: "Proposed closure performance standards are presented in Addendum H. No later than six (6) months prior to acceptance of the last shipment of waste at the IDF, the Permittees shall update the IDF Closure Plan, Permit Addendum H, with the most current Closure Performance Standards agreed to by DOE and Ecology, and submit to Ecology for review, approval, and incorporation into the Permit."

Response to A-1-50

Closure Performance Standards are included in Table HA-3 in Appendix HA, Sampling and Analysis Plan.

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the condition as;

"Proposed closure performance standards are presented in Appendix HA. No later than six (6) months prior to acceptance of the last shipment of waste at the IDF, the Permittees will update the IDF "Closure Plan," Permit Addendum H, with the most current Closure Performance Standards agreed to by the Permittees and Ecology and submit to Ecology for review, approval, and incorporation into the Permit."

Comment A-1-51

Permit Condition III.11.M.1.

The Permittees will comply with the inspection requirements specific to Addendum I, "Inspection Plan," and Permit Condition II.O, in accordance with WAC 173-303-320, -395, -630, -640, -665, and -680, incorporated by reference.

Response: This permit modification does not include the leachate collection tanks; thus, inspections in accordance with WAC 173-303-640 and 680 should not be included.

Recommendation: Delete reference to WAC 173-303-640 and -680.

Response to A-1-51

Ecology agrees with this comment. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology deleted the reference to WAC 173-303-640 and -680.

Comment A-1-52

Permit Condition III.11.O.2.

The Permittees will maintain institutional controls during post-closure to prevent damage from intrusion and ensure the cover functions as designed and approved. These controls may include, but are not limited to active maintenance and repair of vegetative cover to ensure evapotranspiration.

Response: This permit condition includes the term "may include, but are not limited to." This is vague and does not provide clear compliance direction. The post-closure plan addresses applicable requirements, and Permit Condition III.11.O.1 requires the Permittees to comply with the post-closure requirements specific to Addendum K.

Recommendation: Delete permit condition.

Response to A-1-52

Ecology agrees that maintenance and security are addressed in Appendix K in more detail than this permit condition.

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the condition for clarity, as follows;

"The Permittees will maintain institutional controls during post-closure to prevent damage from intrusion and ensure the cover functions as designed and approved in accordance with Addendum K. These controls include active maintenance and repair of vegetative cover to ensure evapotranspiration."

Comment A-1-53

Permit Condition III.11.P.2.a.

A description of and quantity of each dangerous/MW accepted for disposal by the IDF, and documentation of its disposal. [WAC 173-303-380(1)(a)].

Response: As described in Addendum B, Section B.1.1, “IDF provides treatment, storage, and disposal of Hanford Site mixed waste, as defined by WAC 173-303-040, Definitions, and Hanford Site low-level waste (LLW).” IDF will not treat, store, or dispose of dangerous-only waste.

Recommendation: Remove reference to dangerous waste: “A description of and quantity of each MW accepted for disposal by the IDF, and documentation of its disposal. [WAC 173- 303-380(1)(a)]”

Response to A-1-53

Ecology agrees that IDF will not be authorized to accept dangerous waste.

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the condition to remove reference to dangerous waste, as follows;

"A description of and quantity of each MW accepted for disposal by the IDF, and documentation of its disposal. [WAC 173-303-380(1)(a)]"

Comment A-1-54

Appendix C1.Phase I Critical Systems Design Report.

Response: The submitted appendix was based on the native 2019 permit file. Since receipt of the native file, PCN-IDF-2020-04 was submitted to Ecology and incorporated into the Permit. Language changes in PCN-IDF-2020-04 revised Appendix C1 to reflect the construction plan to remove the floating covers from the leachate collection tanks and install domes. In this version of Appendix C1 out for public comment, Ecology has used the current permit file, deleted references to the dome and associated piping, and added back in the floating cover language. The Permittees did not request these changes.

Recommendation: Ensure language changes made in PCN-IDF-2020-04 are included in the issued IDF permit.

Response to A-1-54

Ecology agrees with this comment that the modification (PCN-IDF-2020-04) was not incorporated into Appendix C1 that was made available for public review during the previous 45-day public comment period.

The modification (PCN-IDF-2020-04) was approved and incorporated into the current 8C Permit. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised Appendix C1 to incorporate all the changes made through this approved modification (PCN-IDF-2020-04).

Comment A-1-55

Appendix C1.Phase I Critical Systems Design Report – Appendices.

Note: Copies of each of the appendices listed below are located in the Integrated Disposal Facility (IDF) Administrative Record and can be viewed in the Ecology library.

Response: The Critical Design Report appendices were submitted to Ecology as Official Use Only, thus are withheld from public inspection and copying, which was stated in the 2004 IDF permit application submittal letter (04-TPD-021).

Recommendation: Delete added language “Note: Copies of each of the appendices listed below are located in the Integrated Disposal Facility (IDF) Administrative Record and can be viewed in the Ecology library.”

Response to A-1-55

Ecology agrees with this comment.

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology deleted the following language;

"Note: Copies of each of the appendices listed below are located in the Integrated Disposal Facility (IDF) Administrative Record and can be viewed in the Ecology library."

Comment A-1-56

Appendix C3. Design Drawings.

Response: The submitted appendix was based on the native 2019 permit file. Since receipt of the native file, PCN-IDF-2020-04 and PCN-IDF-2021-01 were submitted to Ecology and incorporated into the Permit. Drawing changes in PCN-IDF-2020-04 and PCN-IDF-2021-01 revised Appendix C3 to reflect the construction plan to install domes on the leachate collection tanks and build a pipeline between the tanks. In this version of Appendix C3 out for public comment, Ecology has used the current permit file, but deleted the drawings previously added. The Permittees did not request the deletion of these drawings.

Recommendation: Ensure the following drawings from PCN-IDF-2020-04 and PCN-IDF2021-01 are included in the issued IDF permit. Include the following drawings:

- H-2-830829 sh2
- H-2-830846 sh 1
- H-2-830846 sh 2
- H-2-830850 sh 2
- H-2-830851 sh 1
- H-2-830852 sh 1
- H-2-830854 sh 4
- H-2-830858 sh 1
- H-2-830869
- H-2-830872 sh 1
- 602899-10-00

Response to A-1-56

Ecology agrees that the above list of drawings were not included into Appendix C3 that were made available for public review during the previous 45-day public comment period.

Both modifications (PCN-IDF-2020-04 and PCN-IDF-2021-01) were approved and incorporated into the current 8C Permit. Specifically, PCN-IDF-2021-01 was submitted formally to Ecology after the agency had already prepared the draft permit modification. For the re-opened public

comment period (7/25/2022 to 9/9/2022), Ecology revised Appendix C3 to incorporate all the changes made through these already approved modifications in the draft modification for this Class 3 active-life modification.

Comment A-1-57

Addendum D, Section D.2.5, Sample Schedule Impacts, p. D.56, lines 29-30. DOE will provide informal notification to Ecology if sampling of the network is expected to be delayed 4 weeks.

Response: The notification information requires modification.

Recommendation: Revise the instruction for the notification: "DOE will provide informal notification1 to Ecology if sampling of the network is expected to be delayed past the end of the sampling period (e.g., quarterly, semiannual). Notification will be made within 4 weeks of the end of the sampling period."

Add the following associated footnote: "Informal notification may be an email, or a telephone call that is later documented via email."

Response to A-1-57

Ecology agrees with this comment.

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the notification information, as follows;

"DOE will provide informal notification to Ecology if sampling of the network is expected to be delayed past the end of the sampling period (e.g., quarterly, semiannual). Notification will be made within 4 weeks of the end of the sampling period."

Additionally, Ecology retained the following footnote (footnote number 2 to "notification"); "Informal notification may be an email, or a telephone call that is later documented via email".

Comment A-1-58

Addendum D, Section D.2.5, Sample Schedule Impacts, p. D.56, lines 35-36. Missed or cancelled sampling events are documented in the annual Hanford Site groundwater monitoring report (e.g., DOE/RL-2017-66, Hanford Site Groundwater Monitoring Report for 2017).

Addendum D, Section D.2.6, Annual Determination of Groundwater Flow Rate and Direction, p. D.57, lines 13-14. The annual determination of groundwater flow rate and direction is documented in the annual Hanford Site groundwater monitoring report (e.g., DOE/RL-2017-66).

Addendum D, Section D.2.9, Data Submittals to Ecology, p. D.58, lines 23-24. Sample data will be summarized in the annual Hanford Site groundwater monitoring report (e.g., DOE/RL-2017-66).

Addendum D, Section D.2.11, Reporting, p. D.65, lines 37-39. Formal reporting will be made within the annual Hanford Site groundwater monitoring report (e.g., DOE/RL-2017-66). This report will be placed in the Hanford facility operating record. DOE will include the following in the report:

Addendum D, Section D.2.11, Reporting, p. D.66, lines 10-11. A copy of the annual Hanford Site groundwater monitoring report will be placed into the Hanford facility operating record.

Addendum D, Section DA.2.5, Documents and Records p. Appendix DA.11, lines 26-27. Groundwater monitoring results are reported in the Hanford Site groundwater monitoring report (e.g., DOE/RL-2017-66, Hanford Site Groundwater Monitoring Report for 2017.

Response: Change instruction to remove reference to the annual Hanford Site groundwater monitoring report.

Recommendation: Revise the sentences above to the applicable sentences:

Addendum D, Section D.2.5, Sample Schedule Impacts, p. D.56, lines 35-36.
"Sample data will be reported annually."

Addendum D, Section D.2.6, Annual Determination of Groundwater Flow Rate and Direction, p. D.57, lines 13-14.
"The annual determination of groundwater flow rate and direction will be reported annually."

Addendum D, Section D.2.9, Data Submittals to Ecology, p. D.58, lines 23-24.
"Sample data will be summarized and reported annually."

Addendum D, Section D.2.11, Reporting, p. D.65, lines 37-39.
"Formal reporting will be performed annually and will be placed in the Hanford facility operating record)."

Addendum D, Section D.2.11, Reporting, p. D.66, lines 10-11.
"A copy of the annual groundwater monitoring report will be placed into the Hanford facility operating record."

Addendum D, Section DA.2.5, Documents and Records p. Appendix DA.11, lines 26-27.
"Groundwater monitoring results are reported annually."

Response to A-1-58

Ecology agrees with this comment. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised Addendum D by not specifically referencing the "Hanford Site Groundwater Monitoring Report".

Comment A-1-59

Addendum D, Section D.2.10.1, Statistical Methods, p. D.61, line 19 - 28. Prior to calculating a prediction interval, the baseline/background dataset will be evaluated for outliers, statistical (sample) distribution, temporal trends, and spatial variance. Outliers will be determined through a combination of statistical tests (e.g., Grubbs, Dixon, or Rosner tests) together with visual inspection of the data using, for example, time-series plots, probability plots, and boxplots. As part of this evaluation, any data determined to be the result of well corrosion will be considered an outlier. Identified outliers will be removed from the baseline/background dataset prior to calculating prediction intervals.

Initially, UPLs will be calculated for each constituent at each well (as appropriate), based on the baseline/background dataset. UPLs may be updated after it has been determined that the data are representative of the baseline/background condition; however, UPLs are not updated at each sampling event....

Response: Additional statistical information should be added.

Recommendation: Revise lines to include underlined text shown below: "Prior to calculating a prediction interval, the baseline/background dataset will be evaluated for outliers, statistical (sample) distribution, temporal trends, and spatial variance. Outliers will be determined through a combination of statistical tests (e.g., Grubbs, Dixon, or Rosner tests) together with visual inspection of the data using, for example, time-series plots, probability plots, and boxplots. As part of this evaluation, any data determined to be the result of well corrosion will be considered an outlier. Identified outliers will be removed from the baseline/background dataset prior to calculating prediction intervals and the outliers and methods used to identify outliers will be reported with the results. The site-wide false positive rate will be minimized by balancing the number of individual tests, the individual test false positive rate and the size of the background dataset. Effective power curves will be compared to EPA reference power curves to determine the appropriate parameters needed to obtain acceptable to good statistical power.

Initially, UPLs will be calculated for each constituent at each well (as appropriate), based on the baseline/background dataset. Statistical distribution testing, such as the Shapiro-Wilk test, will be used to determine if a parametric or nonparametric method is appropriate for calculating UPLs for a specific well-analyte pair, consistent with Chapters 18 and 19 of EPA 530/R-09-007. A 1-of-2 retesting strategy will be used for detection monitoring. The 1-of-2 retesting strategy requires a resample be collected if the regularly scheduled sample exceeds the UPL. If both the regularly scheduled sample and its' resample exceed the UPL, then there is statistically significant evidence of a release from the facility. If the resample does not exceed the UPL, then there is no statistically significant evidence of a release and the site will remain in detection monitoring. UPLs may be updated after it has been determined that the data are representative of the baseline/background condition; however, UPLs are not updated at each sampling event…"

Response to A-1-59

Ecology agrees with this comment. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised Section (2.11.1 as updated) to include the suggested text.

Comment A-1-60

Addendum D, Section D.2.10.1, Statistical Methods, p. D.62, line 24 – 29. For monitoring constituents that are not detected in the baseline/background dataset, the Double Quantification rule from EPA 530/R-09-007 will be applied. The Double Quantification rule states that "[a] confirmed exceedance is registered if any well-constituent pair in the '100% non-detect' group exhibits quantified measurements [...] in two consecutive sample and resample events" (pp. 6-11 in EPA 530/R-09-007). A sample result will be identified as detected if the concentration is above the practical quantitation limit.

Response: Add instruction for this evaluation.

Recommendation: After lines 24-29, add the following paragraph and bullets: "If a constituent, which was not previously detected in groundwater, is determined to be present in groundwater through detection in each of the four sample and resample events, the well is considered to have failed the Double Quantification test for that constituent. If the constituent is not detected in the sample or resample, the test is complete and no resample or other action is needed. The sampling sequence is as follows:

- Sample 1 – if constituent is detected; collect Resample 1. If constituent is not detected, the test is complete and end sampling (no further action).
- Resample 1 – if constituent is detected, collect Sample 2. If constituent is not detected, the test is complete and end sampling (no further action).
- Sample 2 – if constituent is detected, collect Resample 2. If constituent is not detected, the test is complete and end sampling (no further action).
- Resample 2 – end of sampling. If detected, the constituent has failed the Double Quantification test for that well. If constituent is not detected, the test is complete (no further action)."

Response to A-1-60

Ecology agrees with this comment. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised Section 2.10.1 (Section 2.11.1 as updated) to include the suggested text.

Comment A-1-61

Addendum D, Section D.2.10.4, Evaluation of Routine Monitoring Sample Data

b. For constituents where a UPL could not be determined during the baseline/background phase because the constituent was not detected in more than 50% of the samples. c. Sample data collected during routine monitoring will be evaluated using the Double Quantification rule (EPA 530/R-09-007). If two consecutive sample and resample events (four data points) show detection of a constituent (above a practical quantitation limit), that constituent will be considered to be present in groundwater.

Response: Items b. and c. should not be separate.

Recommendation: Revise text to make items b and c into a single instruction: “For constituents where a UPL could not be determined during the baseline/background phase because the constituent was not detected in more than 50% of the samples, sample data collected during routine monitoring will be evaluated using the Double Quantification rule (EPA 530/R-09-007). If two consecutive sample and resample events (four data points) show detection of a constituent (above a practical quantitation limit), that constituent will be considered present in groundwater.”

Response to A-1-61

Ecology agrees that Items b and c were not complete. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the descriptions for Items b and c to be consistent with the information submitted from the Permittees for this permit modification.

Comment A-1-62

Addendum D, Section D.3.

The monitoring well network consists of two background (upgradient) wells (299-E24-24) and five point of compliance (downgradient) wells (existing wells 299-E17-22, 299-E24-18, and 299 E24-21, and new wells 299-E17-56 and 299-E24-164).

Response: Sentence states there are two upgradient wells but only one well is identified.

Recommendation: Add 299-E17-57 as the second upgradient well: "The monitoring well network consists of two background (upgradient) wells (299-E17-57 and 299-E24-24) and five point of compliance (downgradient) wells (existing wells 299-E17-22, 299-E24-18, and 299 E24-21, and new wells 299-E17-56 and 299-E24-164)."

Response to A-1-62

Ecology agrees that 299-E17-57 should be included as the second upgradient well. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the sentence, as follows;

"The monitoring well network consists of two background (upgradient) wells (299-E17-57 and 299-E24-24) and five point of compliance (downgradient) wells (299 E17-22, 299-E17-56, 299-E24-18, 299 E24-21, and 299-E24-164)."

Comment A-1-63

Addendum D, Table D-4, Attributes for Wells in the Integrated Disposal Facility Groundwater Monitoring Network.

Response: Table D-4 should be updated to include current information and format. In addition, "Depth of Water in Screen" entries are incorrect due to the update to the 2020 water level information for existing wells and are no longer included in groundwater monitoring plans. Adding updated information for 299-E17-56 will also preclude the need for the footnote regarding proposed well coordinates.

Recommendation: Replace table content in entirety with content from table below, ensuring to remove the column for "Depth of Water in Screen."

Table. Attributes for Wells in the IDF Groundwater Monitoring Network

Well Name	Completion Date	Easting[a] (m)	Northing[a] (m)	Top of Casing Elevation (m [ft]) (NAVD88)	Water Table Elevation (m [ft]) (NAVD88)	~~Depth of Water in Screen (m [ft])~~	~~Water-Level Date~~
299-E17-22	4/16/2002	574841.09	135195.54	221.45 (726.55)	121.53 (398.71)	~~9.1 (31.7)~~	~~9/28/2020~~
299-E17-56 [b]	9/12/2019	574649.83	135370.57	220.75 (724.26)	121.54 (398.74)	~~5.5 (18.2)~~	~~8/14/2020~~
299-E17-57 [b]	7/26/2019	574169.76	135314.80	221.55 (726.88)	121.89 (396.63)	~~5.9 (19.4)~~	~~8/14/2020~~
299-E24-18	9/19/1988	574647.09	135469.76	220.35 (722.93)	121.52 (398.68)	~~1.9 (6.2)~~	~~9/28/2020~~
299-E24-21	3/28/2001	574635.76	135698.20	218.65 (717.34)	121.53 (398.72)	~~4.9 (16.2)~~	~~9/28/2020~~
299-E24-24	5/26/2005	574179.85	135459.79	221.22 (725.79)	121.53 (398.71)	~~9.7 (31.7)~~	~~9/28/2020~~
299-E24-164 [b]	9/24/2019	574637.27	135534.90	219.83 (721.23)	121.43 (398.40)	~~7.3 (24.0)~~	~~8/14/2020~~

Reference: NAVD88, *North American Vertical Datum of 1988*.

a. Coordinates are in Washington State Plane (south zone), NAD83, *North American Datum of 1983*; 1991 adjustment.

b. Water-table elevation in this well has not been corrected for deviation of boreholes from vertical, which may cause the reported head to be less than the actual head.

Response to A-1-63

Ecology agrees with this comment. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the table to be consistent with the information formally submitted from the Permittees for this permit modification.

Comment A-1-64

Addendum D, Table D-5, Monitoring Wells and Sample Schedule for Integrated Disposal Facility.

Response: Footnote f is presented in the table notes but there is no footnote f in the table.

Recommendation: Remove footnote f from the table.

Response to A-1-64

Ecology agrees that Table D-5 was missing footnote f.

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised Table D-5 to be consistent with the information formally submitted from the Permittees for this permit modification.

Comment A-1-65

Appendix DA, Table DA-2, Analytical Methods for Integrated Disposal Facility Constituents, p. Appendix D.A.16:

Response: The entry for cyanide should be changed to have separate entries for cyanide (total) and cyanide (free).

Recommendation: Revise the existing row for "Cyanide" to "Cyanide (free)" as shown below. Add a new row for Cyanide (total) as shown below. Changes are underlined.

CAS Number	Waste Constituent (Alternate Name)	Analytical Method	Practical Quantitation Limit (µg/L)
57-12-5	Cyanide (total)	335.4, 9012, 9014, Standard Method 4500	15.75
57-12-5	Cyanide (free)	9014	4

Response to A-1-65

Ecology agrees that Table DA-2 should have separate entries for cyanide (total) and cyanide (free). For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the table as suggested.

Comment A-1-66

Appendix DA, Table DA-2, Analytical Methods for Integrated Disposal Facility Constituents, p. Appendix D.A.16 - Appendix D.A.23:

Response: Several identified Practical Quantitation Limits are not the most current.

Recommendation: Revise Practical Quantitation Limits:

- Copper: change from 12.6 µg/L to 10 µg/L
- Manganese: change from 5.25 µg/L to 10.5 µg/L
- Selenium: change from 10.5 µg/L to 9.5 µg/L
- Carbon disulfide: change from 10.5 µg/L to 5 µg/L
- Vinyl chloride: change from 2.1 µg/L to 10 µg/L
- 2-Acetylaminofluorene: change from 100 µg/L to 105 µg/L
- 2,4-Dinitrophenol: change from 50 µg/L to 52.5 µg/L
- 3,3'-Dichlorobenzidine: change from 52.5 µg/L to 105 µg/L
- Bis(2-ethylhexyl) phthalate: change from 10.5 µg/L to 15.7 µg/L

Response to A-1-66

Ecology agrees that Table DA-2 didn't contain the most current Practical Quantitation Limits (PQLs) for the above constituents during the previous 45-day public comment period. For the re-

opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the PQLs in Table DA-2 to be consistent with the information formally submitted from the Permittees for this permit modification.

Comment A-1-67

Appendix DA, Table DA-2, Analytical Methods for Integrated Disposal Facility Constituents, p. Appendix D.A.18:

Response: There is no entry for n-butyl alcohol (1-butanol) in Table DA-2.

Recommendation: Add a new entry in "Volatile Organic Compounds" category for n-butyl alcohol (1-butanol):

CAS Number	Waste Constituent (Alternate Name)	Analytical Method	Practical Quantitation Limit (µg/L)
71-36-3	n-Butyl alcohol (1-Butanol)	8260	262.5

Response to A-1-67

Ecology agrees that Table DA-2 didn't include n-butyl alcohol (1-butanol) during the previous 45-day public comment period. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised Table DA-2 to add n-butyl alcohol (1-butanol) to be consistent with the information formally submitted from the Permittees for this permit modification.

Comment A-1-68

Appendix DA, Table DA-3, QC Samples, p. D.A.24, footnote a.:

For portable pumps, equipment blanks are collected (1 for every 10 well trips).

Response: The information in this footnote needs correction.

Recommendation: Revise footnote: "For portable pumps, equipment blanks are collected (1 for every 20 well trips)."

Response to A-1-68

Ecology agrees that the footnote a in Table DA-3 provided for public review during the previous 45-day public comment period was not consistent with the information submitted from the Permittees for this permit modification. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised the footnote, as follows;

"For portable pumps, equipment blanks are collected, 1 for every 20 well trips."

Comment A-1-69

Appendix DB, Section DB.2 Sampling Methods, p. Appendix DB.7, line 19 to Appendix DB.8, line 33:

Response: The information in this section is not the most current.

Recommendation: Revise the text on the subject lines with that provided below: “Groundwater samples will be collected according to the current and applicable field practices. Groundwater samples are collected after field measurements of purged groundwater have stabilized as follows:

- pH – two consecutive measurements agree within 0.2 pH units
- Temperature – two consecutive measurements agree within 0.2°C (0.4°F)
- Conductivity – two consecutive measurements agree within 10% of each other
- Turbidity – less than 5 nephelometric turbidity units prior to sampling (or the recommendation by staff assigned by the Prime Contractor Project Manager at the time of collection)

Dissolved oxygen will also be measured in the field. Dissolved oxygen is not required to be stable prior to sample collection.

Environmental-grade electric submersible pumps will typically be used for well purging and sample collection in existing wells with a flow rate not exceeding 7.6 L/min (2 gal/min). In the event a well exhibits insufficient productivity to support purging and sampling using the environmental-grade electric submersible pumps, adjustable-rate bladder pumps with typical flow rates of 0.1 to 0.5 L/min (0.026 to 0.13 gal/min) may be employed. As environmental-grade electric submersible pumps are replaced when they reach the end of their service lives due to age, normal wear, or failure, they will be replaced with adjustable-rate bladder pumps. The same purge protocol described for environmental-grade electric submersible pumps will be used for the adjustable-rate bladder pumps.

Dedicated pumps (i.e., submersible pumps placed semi-permanently in monitoring wells) may be used for well purging and sampling. In all wells using dedicated pumps, the depth to the water table will be determined at each well, and the placement of the pump intake will be in the upper portion of the unconfined aquifer (e.g., within 3.1 m [10 ft] of the measured water table depth). Pump depths will be confirmed before purging and sample collection. Dedicated pumps will be reset as needed to maintain the pump intake depth within the upper portion of the unconfined aquifer. Groundwater monitoring wells will be purged and sampled using purge and sample techniques and selected pump placement that are representative of groundwater conditions near the observed water table at the time of sampling.

The use of purge and sample techniques with a flow rate not exceeding 7.6 L/min (2 gal/min) allows collection of representative samples of groundwater near the water table in wells that have been constructed using longer screens (e.g., up to 9.1 m [30 ft]) than typically used for water table monitoring. The use of longer screens for RCRA groundwater monitoring wells contributes to a longer service life for wells in areas where declining water table elevations have historically rendered wells unusable after relatively short periods of time. Unless special directions are provided by the staff assigned by the Prime Contractor Project Manager at the time of sample collection, wells are typically purged at a flow rate not to exceed 7.6 L/min (2 gal/min). Purging will continue until stable readings of selected field water quality parameters are achieved (as described above).

Field measurements (except for turbidity) are typically obtained using an instrumented flow-through cell located at the wellhead. Groundwater is pumped directly from the well to the flow-through cell. At the beginning of the sample event, field crews attach a clean stainless steel sampling manifold to the riser discharge. The manifold has two valves and two ports: one port is used only for purgewater, and the other port is used to supply water to the flow through cell. Probes are inserted into the flow-through cell to measure pH, temperature, specific conductance, and dissolved oxygen, if required by the main text. Turbidity is measured by collecting an aliquot of water from the purgewater valve and inserting the sample vial into a turbidimeter. Purge water, including the water passing through the flow through cell, is then discharged to a tank on a purgewater truck.

Collection of the field measurement data will commence when a volume of water equal to the volume of the pump riser pipe has been extracted and discharged to a purgewater truck, field measurements have stabilized, the hose supplying water to the flow-through cell is disconnected, and a clean stainless steel drop leg is attached for sampling collection. The flow rate does not exceed 7.6 L/min (2 gal/min) during sampling to minimize the loss of volatiles (if any) and prevent overfilling the bottles. Sample bottles are filled in a sequence designed to minimize loss of volatiles (if any). If both filtered and unfiltered samples are required (see Table 4-1), filtered samples are collected after collection of the unfiltered samples.

Samples may be filtered in the field, using a 0.45 µm filter, as noted on the chain-of-custody form. Unfiltered samples are collected in conjunction with filtered samples to determine if metal constituents being monitored (excluding hexavalent chromium, if one of the monitored constituents) occur as both suspended and dissolved phases, or in only one state. The evaluation of suspended and dissolved metals provides supporting information for groundwater geochemical characteristics, as well as indication of well integrity such as the presence of dislodged well encrustation, well corrosion products, or failure of the well screen filter pack."

Response to A-1-69

Ecology agrees that the information in Section DB.2 was not the most current during the previous 45-day public comment period. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised Section DB.2, to be consistent with the information submitted from the Permittees for this permit modification.

Additionally, Ecology accepted to add the following new sentence, as suggested;

"Pump depths will be confirmed before purging and sample collection."

Comment A-1-70

Appendix DB, Section DB.5.3 Sample Custody, p. Appendix DB.12, lines 4 - 5

The field sampling team will make a copy of the signed record before sample shipment and transmit the copy to the Sample Management and Reporting group.

Response: The information in this sentence is not the most current.

Recommendation: Remove the entire sentence from Section DB.5.3.

Response to A-1-70

Ecology agrees that the information in Section DB.5.3 was not the most current during the previous 45-day public comment period. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised Section DB.5.3 to delete the above sentence, to be consistent with the information formally submitted from the Permittees for this permit modification.

Comment A-1-71

Appendix DB, Section DB.5.3 Sample Custody, p. Appendix DB.12, end of Section D5.3

Response: The information in this section is not the most current.

Recommendation: Add the sentence below at the end of Section D5.3: “Sample custody will be maintained within subcontract laboratories in accordance with documented protocols.”

Response to A-1-71

Ecology agrees that the information in Section DB.5.3 provided for public review during the previous 45-day public comment period was not the most current. Ecology revised Section DB.5.3 to add the above sentence, to be consistent with the information formally submitted from the Permittees for this permit modification. In addition, Ecology replaced the text "documented protocols" to "laboratory QA plan" for clarity, to follow as;
"Sample custody will be maintained within subcontract laboratories in accordance with laboratory QA plan."

Comment A-1-72

Appendix DB, Section DB.6 Management of Waste, p. Appendix DB.12, lines 30 – 33

Waste materials generated during sample activities, including purgewater and decontamination fluids, will be collected and managed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as authorized under Ecology et al., 1989, Hanford Federal Facility Agreement and Consent Order Action Plan Milestone M-024.

Response: The information in this section is not the most current.

Recommendation: Revise the sentence as follows: “Waste materials generated during sample activities, including purgewater and decontamination fluids, will be collected and managed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as authorized under Ecology et al., 1989, Hanford Federal Facility Agreement and Consent Order Action Plan, Milestone M-024, and the waste control plan or waste management plan associated with the applicable groundwater operable unit.”

Response to A-1-72

Ecology agrees that the information in Section DB.6 provided for public review during the previous 45-day public comment period was not the most current. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised Section DB.6, to be consistent with the information formally submitted from the Permittees for this permit modification.

Comment A-1-73

Appendix DC, Section DC.1 Introduction, p. DC.3, lines 13 – 17, Table DC-2, Sampling Interval Information for Wells Within the IDF Network, and Table DC-3, Planned Locations, Surface Elevations, and Estimated Water Elevations and Depths for Proposed Wells Within the Integrated Disposal Facility Network, pp. Appendix DC.5 - Appendix DC.7.

For proposed wells, the following information is provided in Table C-3:

- Well location
- Surface elevation
- Estimated water elevation
- Estimated water depth

Response: The proposed wells have been drilled.

Recommendation: Remove lines 13-17. Remove Table DC-3. Replace Table DC-2 with the table below that includes the 3 new wells (299-E17-56, 299-E17-57, and 299-E24-164).

Table DC-2. Sampling Interval Information for Wells Within the Integrated Disposal Facility Network

Well Name	Hydrogeologic Unit Monitored	Elevation Top of Open Interval (m [ft] NAVD88)	Elevation Bottom of Open Interval (m [ft] NAVD88)	Open Interval Length (m [ft])	Drilling Method
299-E17-22	TU	122.6 (402.1)	111.9 (367.0)	10.7 (35.1)	Becker hammer
299-E17-56	TU	97.9 (321.2)	104.0 (341.2)	6.1 (20.0)	Dual rotary
299-E17-57	TU	99.7 (327.1)	105.8 (347.2)	6.1 (20.0)	Becker hammer
299-E24-18	TU	126.0 (413.4)	119.0 (390.4)	7.0 (23.0)	Cable tool
299-E24-21	TU	122.7 (402.5)	116.6 (382.5)	6.1 (20.0)	Becker hammer
299-E24-24	TU	122.5 (402.0)	111.9 (367.0)	10.6 (35.0)	Becker hammer
299-E24-164	TU	97.3 (319.2)	105.0 (344.3)	7.7 (25.1)	Cable tool

Reference: NAVD88, *North American Vertical Datum of 1988*.

TU = Top of Unconfined, as described in Table C-1

Response to A-1-73

Ecology agrees with this comment that Section DC.1 should include the updated information. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised Section DC.1 to remove lines 13-17, remove Table DC-3, and update Table DC-2, to be consistent with the information formally submitted from the Permittees for this permit modification.

Comment A-1-74

Appendix DC, Section DC.1, Introduction, p. DC.3, lines 18-19, and Figures, pp. Appendix DC.9 - Appendix DC.15. Figures DC-1, DC-3, and DC-4 provide construction and completion summaries for the existing network wells

Response: The proposed wells have been drilled.

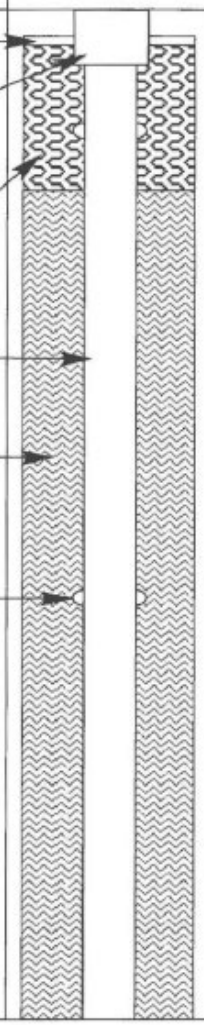
Recommendation: Add construction figures for the 3 new wells (299-E17-56, 299-E17-57, and 299-E24-164). Change lines 18 -19 to appropriately reference the additional construction figures for the 3 new wells. Update table of contents for the construction figures. Construction figures for these 3 wells are provided below.

WELL SUMMARY SHEET

Well ID : D0038	Well Name: 299-E17-56	Start Date: 7/15/2019
Project: Install 6 M-24 Monitoring Wells	Location: 70 ft East of IDF	Finish Date: 9/12/2019

CONSTRUCTION DATA

Description	Diagram
Concrete Pad: 0.5 ft above ground surface (ags)	
6-in. Protective Casing: 3.07 ft ags - 1.93 ft below ground surface (bgs)	
Type I/II Portland Cement Grout: 0.0 - 10.0 ft bgs	
4-in. I.D. Schedule 10, Type 304/304L, Stainless Steel Blank Casing: 2.06 ft ags - 321.15 ft bgs	
3/8" Bentonite Crumbles: 10.0 - 314.2 ft bgs	
Stainless steel centralizer installed above and below screen and every 40 ft	



GEOLOGIC/HYDROLOGIC DATA

Depth in Feet	Graphic Log	Lithologic Description (ft bgs)
0		0.0 - 10.0 Silty Sand (mS)
10		10.0 - 50.0 Sand (S)
20		
30		
40		
50		50.0 - 55.0 Slightly Silty Sand ((m)S)
		55.0 - 65.0 Sand (S)
60		
		65.0 - 70.0 Slightly Silty Sand ((m)S)

Reported By:	Print Name	Title	Signature	Date
	Tracy Mallgren	Geologist		9/25/2019
Reviewed By:	Jennifer Richart	Well Coordinator		10/1/19

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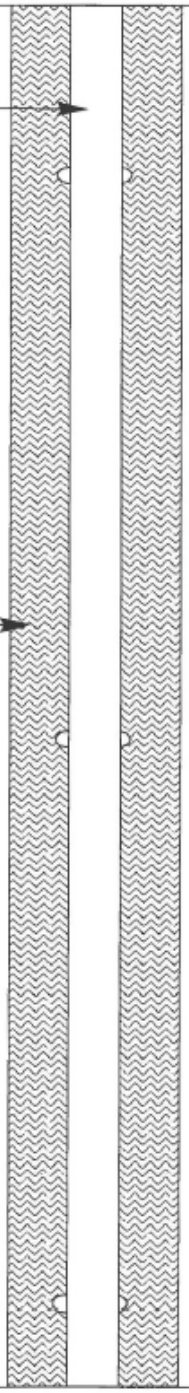
Well 299-E17-56 Construction and Completion Summary (1 of 4)

WELL SUMMARY CONTINUATION SHEET

Page 2 of 4

Well ID: D0038 | Well Name: 299-E17-56 | Project: Install 6 M-24 Monitoring Wells

CONSTRUCTION DATA

Description	Diagram
4-in. I.D. Schedule 10, Type 304/304L, Stainless Steel Blank Casing: 2.06 ft ags - 321.15 ft bgs	
3/8" Bentonite Crumbles: 10.0 - 314.2 ft bgs	

GEOLOGIC/HYDROLOGIC DATA

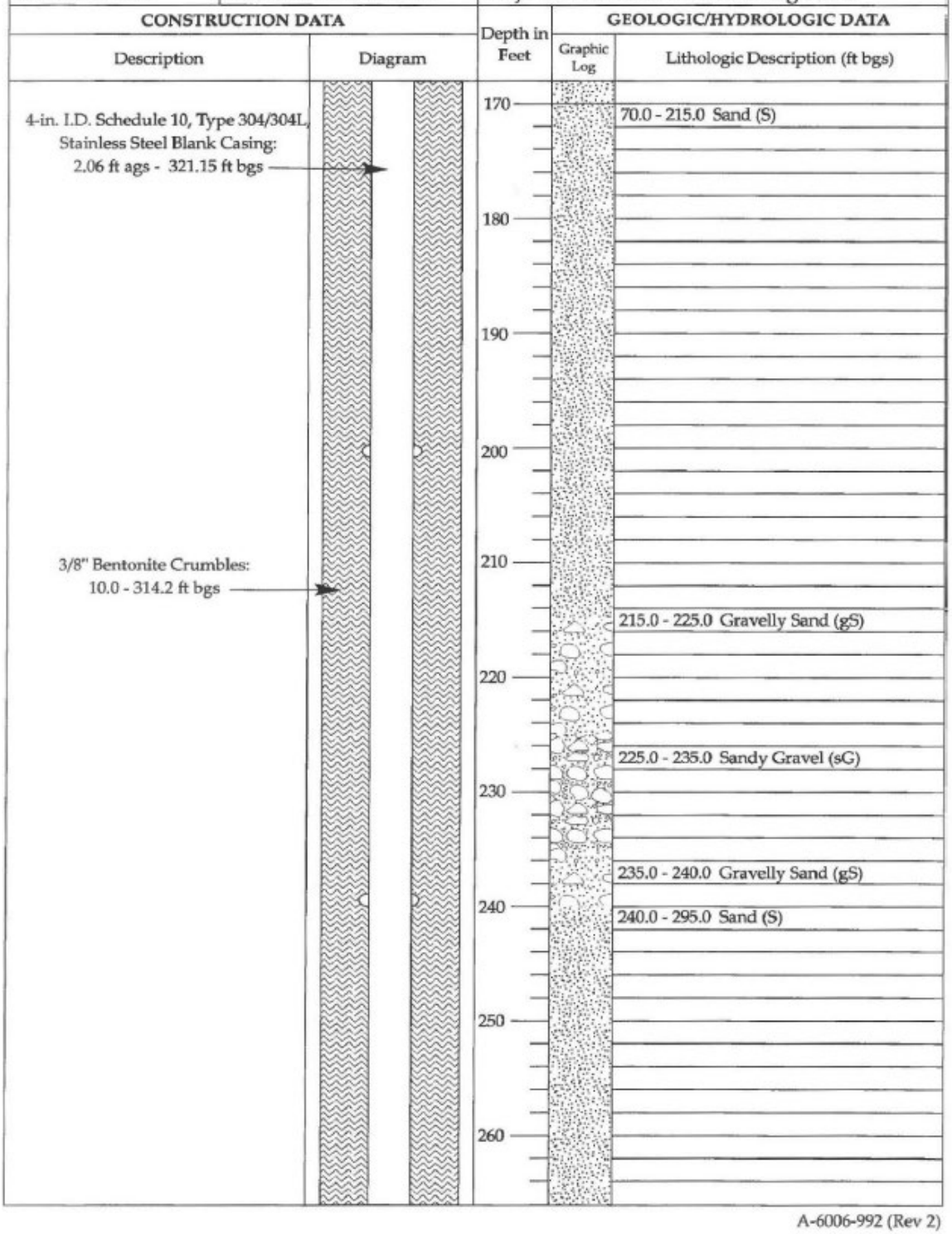
Depth in Feet	Graphic Log	Lithologic Description (ft bgs)
70		65.0 - 70.0 Slightly Silty Sandy ((m)S)
		70.0 - 215.0 Sand (S)
80		
90		
100		
110		
120		
130		
140		
150		
160		

A-6006-992 (Rev 2)

Well 299-E17-56 Construction and Completion Summary (2 of 4)

WELL SUMMARY CONTINUATION SHEET

Well ID: D0038 | Well Name: 299-E17-56 | Project: Install 6 M-24 Monitoring Wells



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Well 299-E17-56 Construction and Completion Summary (3 of 4)

WELL SUMMARY CONTINUATION SHEET

Page 4 of 4

Well ID: D0038 | Well Name: 299-E17-56 | Project: Install 6 M-24 Monitoring Wells

CONSTRUCTION DATA

Description	Diagram
4-in. I.D. Schedule 10, Type 304/304L, Stainless Steel Blank Casing: 2.06 ft ags - 321.15 ft bgs	
3/8" Bentonite Crumbles: 10.0 - 314.2 ft bgs	
1/4" Bentonite Pellets: 314.2 - 317.1 ft bgs	
12-20 mesh Filter Pack Sand: 317.1 - 345.6 ft bgs	
4-in. I.D. Schedule 10, Type 304/304L, 20-slot (0.020 in.) Stainless Steel Screen: 321.15 - 341.15 ft bgs	
4-in. I.D. Schedule 10, Type 304/304L, Stainless Steel Sump: 341.15 - 344.15 ft bgs	
1/4" Bentonite Pellets: 345.6 - 364.4 ft bgs	

Straightness Test: Pass, 09/05/2019
Depths are in ft below ground surface.
Borehole drilled with 16-in. O.D. casing from 0.0 - 82.3 ft bgs and drilled with 12-7/8-in. O.D. casing from 82.3 - 364.8 ft bgs.

All temporary drill casing was removed from the ground.

GEOLOGIC/HYDROLOGIC DATA

Depth in Feet	Graphic Log	Lithologic Description (ft bgs)
270		240.0 - 295.0 Sand (S)
280		
290		
		295.0 - 300.0 Sandy Gravel (sG)
300		300.0 - 305.0 Gravel (G)
		305.0 - 310.0 Sandy Gravel (sG)
310		310.0 - 315.0 Gravel (G)
		315.0 - 364.8 Sandy Gravel (sG)
320		Water Level: 322.40 (09/07/2019)
330		
340		
350		Total Depth: 364.8 ft bgs (07/24/2019)
360		

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Well 299-E17-56 Construction and Completion Summary (4 of 4)

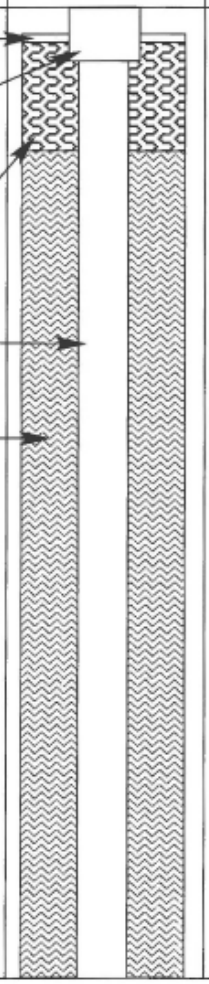
WELL SUMMARY SHEET

Page 1 of 4

Well ID : D0041	Well Name: 299-E17-57	Start Date: 5/20/2019
Project: Install 6 M-24 Monitoring Wells	Location: 85ft West of IDF	Finish Date: 7/26/2019

CONSTRUCTION DATA

Description	Diagram
Concrete pad: 0.5 ft above ground surface (ags)	
6-in. Protective Casing: 3.02 ft ags - 1.98 ft below ground surface (bgs)	
Type I/II Portland Cement Grout: 0.0 - 8.6 ft bgs	
4-in. I.D. Schedule 10, Type 304/304L, Stainless Steel Blank Casing: 1.99 ft ags - 327.13 ft bgs	
Bentonite Crumbles: 8.6 - 322.7 ft bgs	



GEOLOGIC/HYDROLOGIC DATA

Depth in Feet	Graphic Log	Lithologic Description (ft bgs)
0		0.0 - 10.0 Sand (S)
10		10.0 - 25.0 Gravelly Sand (gS)
20		25.0 - 46.0 Sand (S)
30		
40		
		46.0 - 50.0 Sandy Gravel (sG)
50		50.0 - 60.0 Sand (S)
60		60.0 - 85.0 Slightly Silty Sand ((m)S)

Reported By:	Print Name	Title	Signature	Date
	Tracy Mallgren	Geologist		7/29/2019

Reviewed By:	Print Name	Title	Signature	Date
	Jennifer Richart	Well Coordinator	Jennifer Richart	8/7/19

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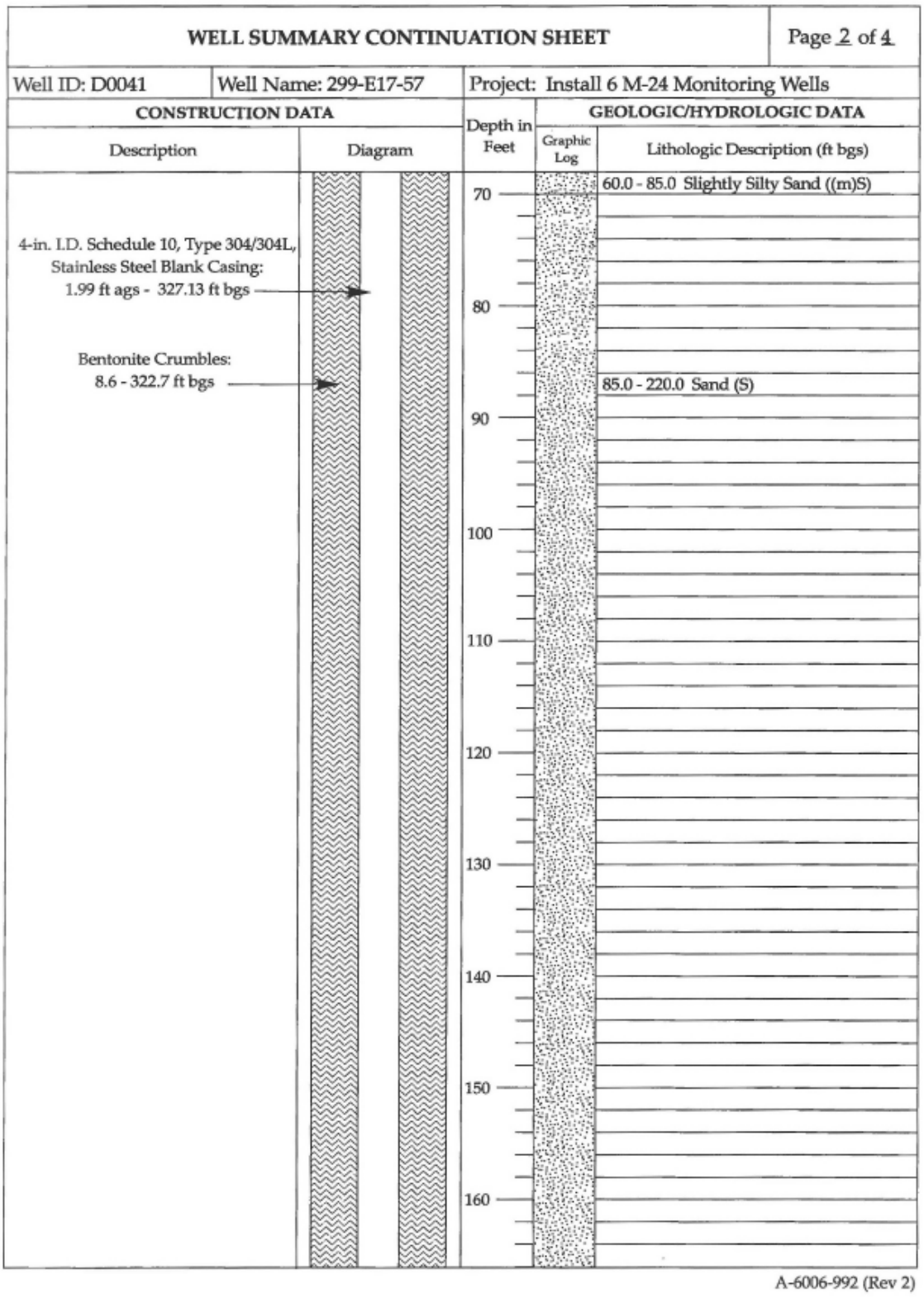
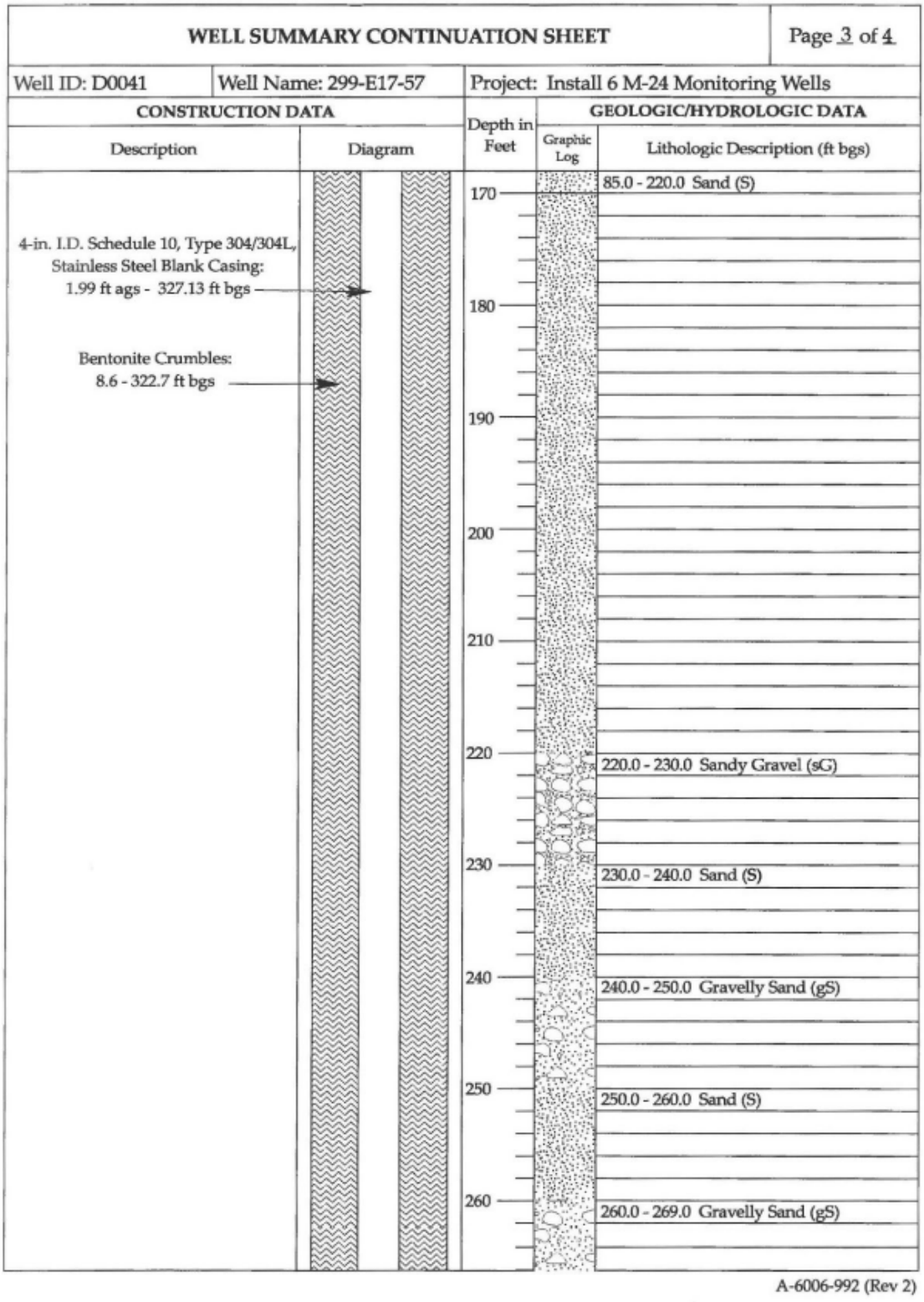
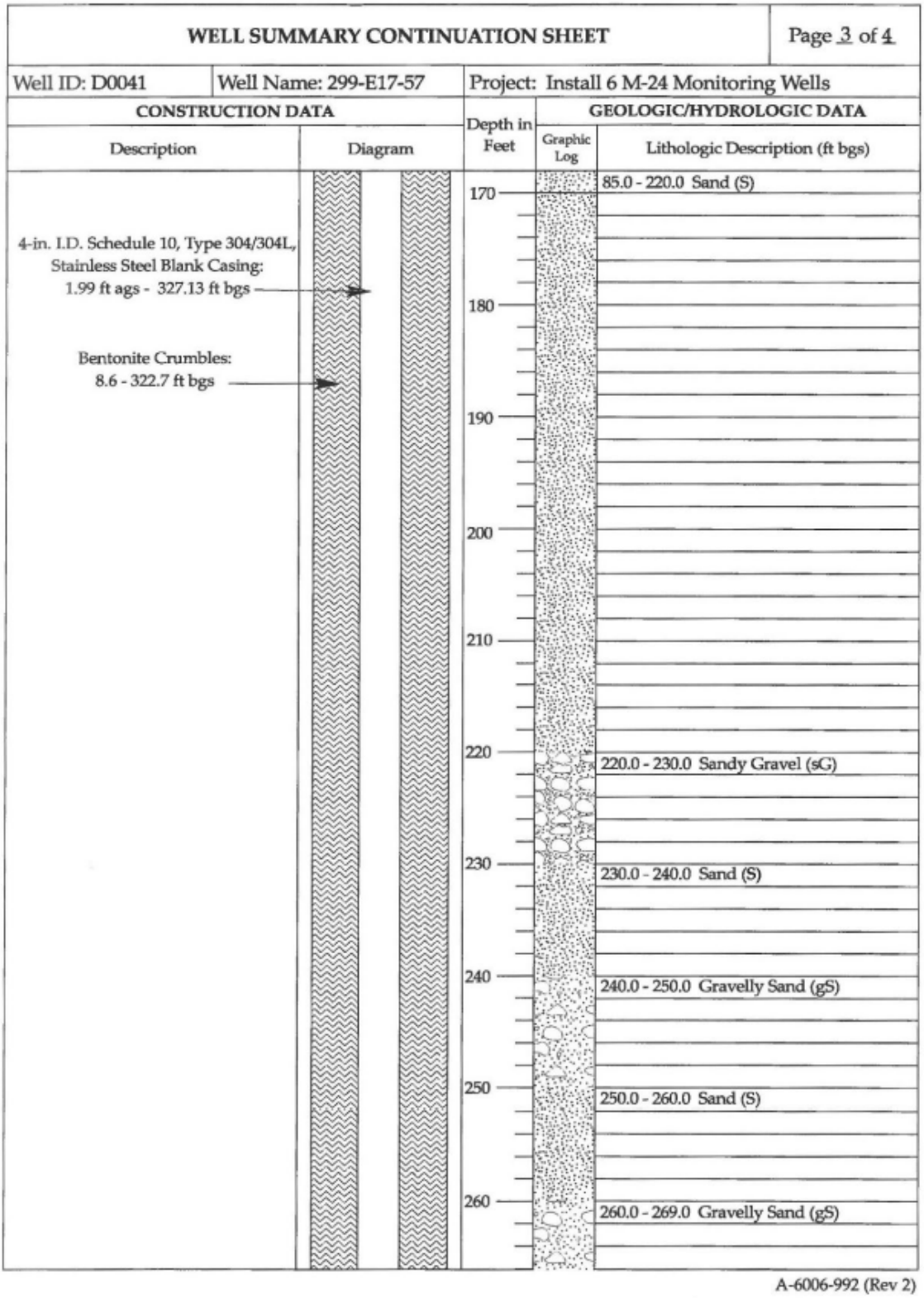
Well 299-E17-57 Construction and Completion Summary (1 of 4)



Well 299-E17-57 Construction and Completion Summary (2 of 4)



Well 299-E17-57 Construction and Completion Summary (3 of 4)



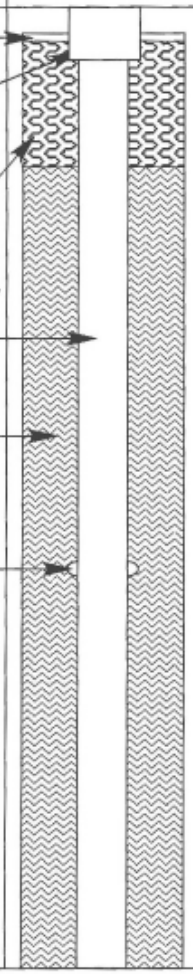
Well 299-E17-57 Construction and Completion Summary (4 of 4)

WELL SUMMARY SHEET

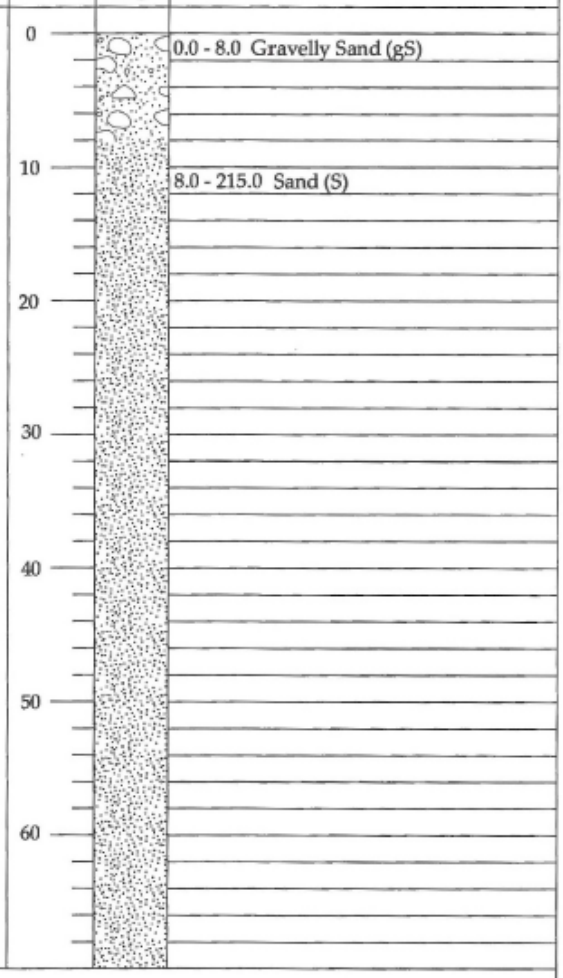
Page 1 of 4

Well ID : D0040	Well Name: 299-E24-164	Start Date: 7/22/2019
Project: Install 6 M-24 Monitoring Wells	Location: 400ft North of IDF	Finish Date: 9/19/2019

CONSTRUCTION DATA

Description	Diagram
Concrete pad: 0.5 ft above ground surface (ags) 6-in. Protective Casing: 3.10 ft ags - 1.90 ft below ground surface (bgs) Type I/II Portland Cement Grout: 0.0 - 10.3 ft bgs 4-in. I.D. Schedule 10, Type 304/304L, Stainless Steel Blank Casing: 2.13 ft ags - 319.18 ft bgs 8-20 Mesh Bentonite Crumbles: 10.3 - 310.5 ft bgs Stainless steel centralizer installed above and below screen and every 40 ft	

GEOLOGIC/HYDROLOGIC DATA



Reported By:

Nicole Combs	Geologist		8/30/2019
Print Name	*Title*	*Signature*	*Date*

Reviewed By:

Jennifer Richart	Well Coordinator		10/9/19
Print Name	*Title*	*Signature*	*Date*

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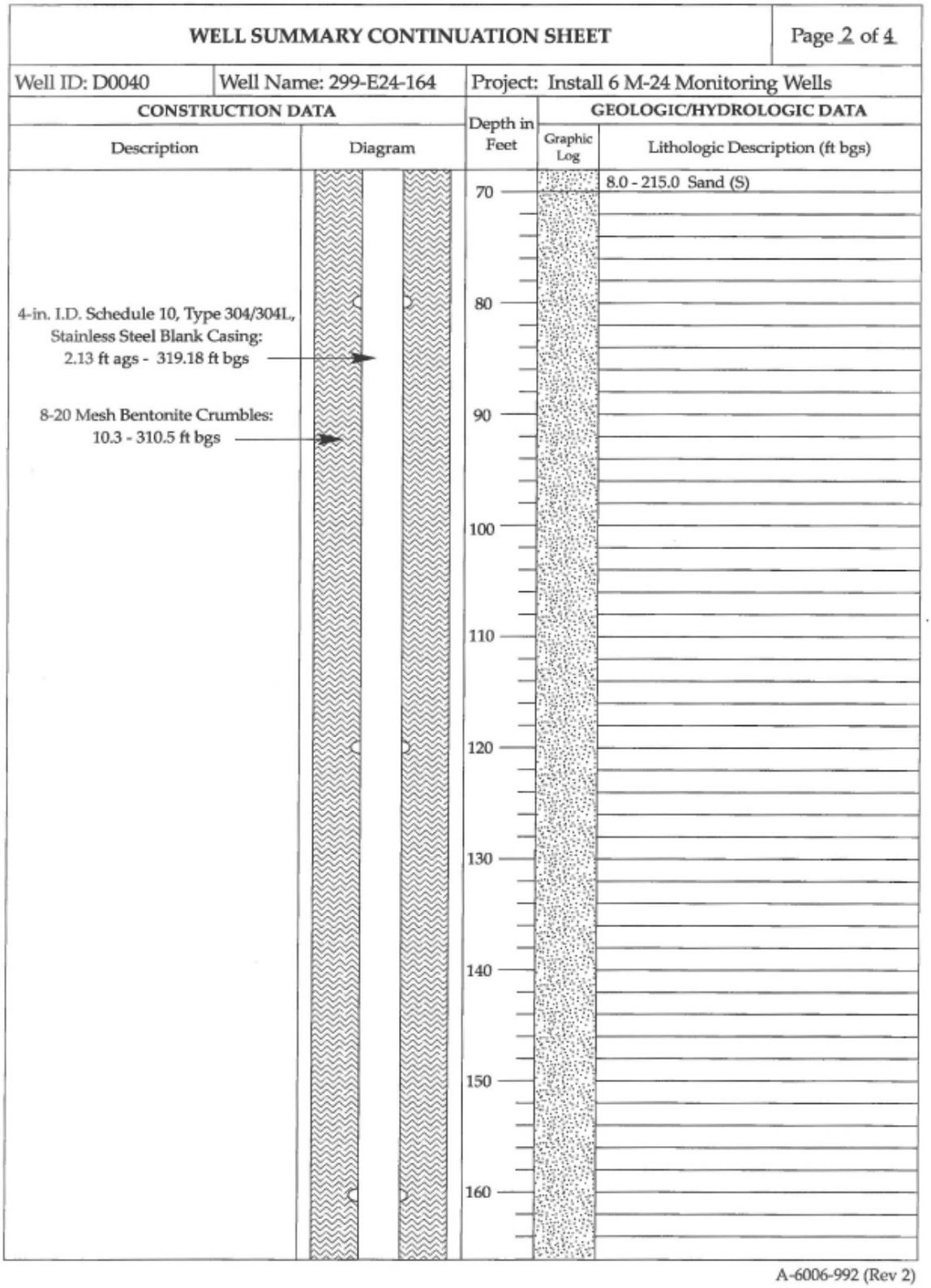
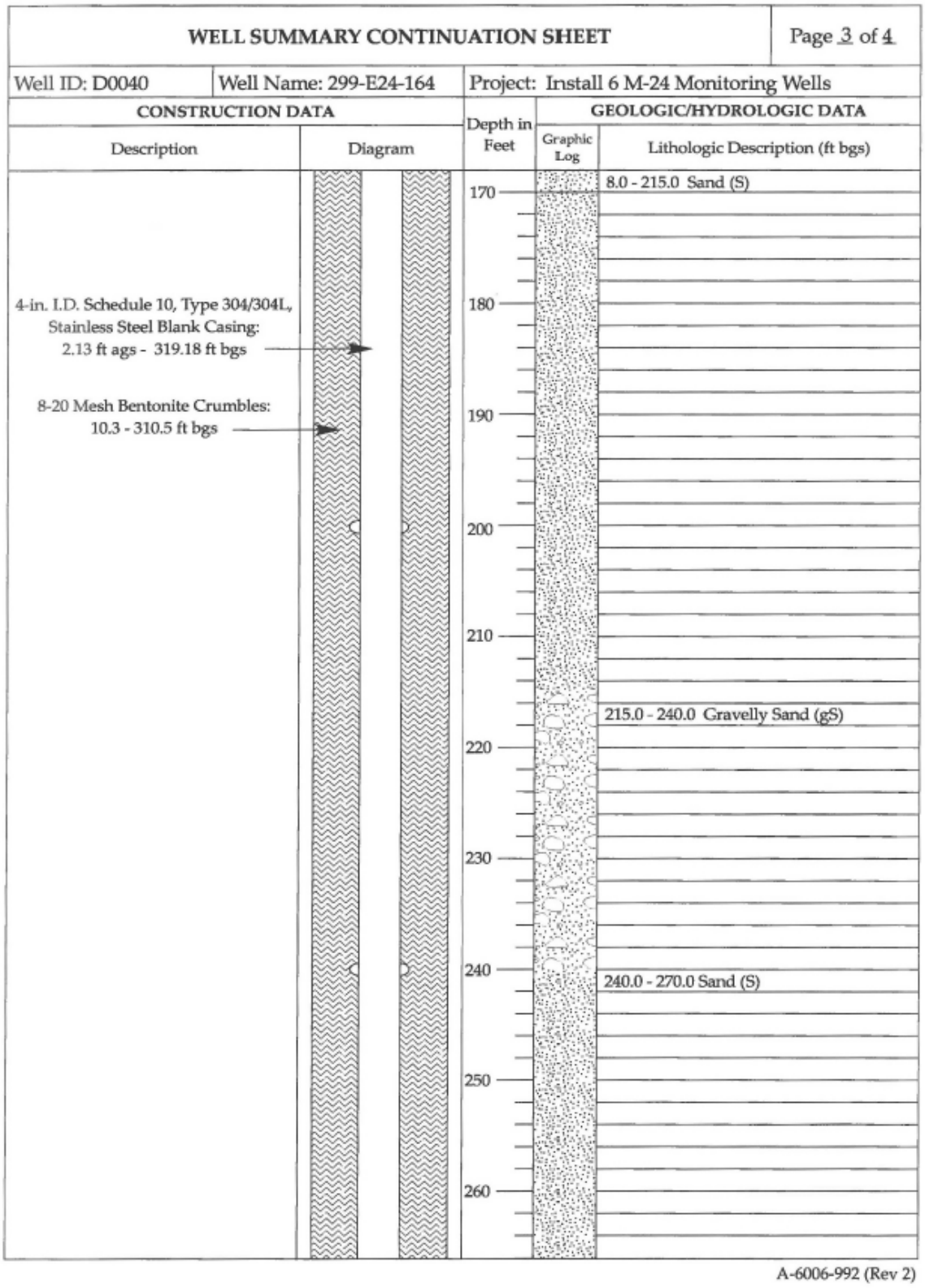
A-6003-643 (REV 2)

Well 299-E24-164 Construction and Completion Summary (1 of 4)



Well 299-E24-164 Construction and Completion Summary (2 of 4)



Well 299-E24-164 Construction and Completion Summary (3 of 4)

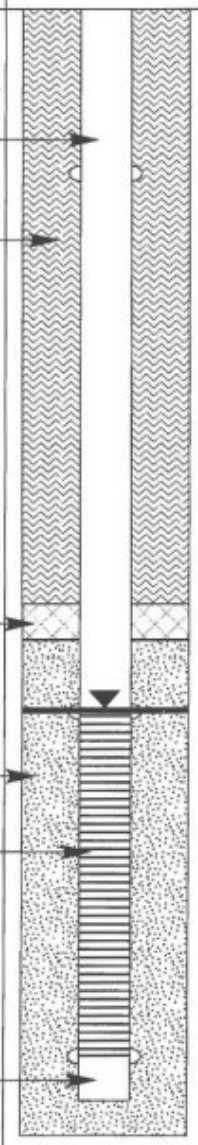
WELL SUMMARY CONTINUATION SHEET

Page 4 of 4

Well ID: D0040 | Well Name: 299-E24-164 | Project: Install 6 M-24 Monitoring Wells

CONSTRUCTION DATA

Description	Diagram
4-in. I.D. Schedule 10, Type 304/304L, Stainless Steel Blank Casing: 2.13 ft ags - 319.18 ft bgs	
8-20 Mesh Bentonite Crumbles: 10.3 - 310.5 ft bgs	
3/8-in. Coated Bentonite Pellet Seal: 310.5 - 314.0 ft bgs	
12-20 Mesh Silica Filter Pack Sand: 314.0 - 350.0 ft bgs	
4-in. I.D. Schedule 10, Type 304/304L, 20-slot (0.020 in.) Stainless Steel Screen: 319.18 - 344.33 ft bgs	
4-in. I.D. Schedule 10, Type 304/304L, Stainless Steel Sump: 344.33 - 347.33 ft bgs	



Straightness Test: Pass, 09/05/2019

Depths are in ft below ground surface. Borehole drilled with 10 3/4-in. O.D. casing from 0.0 - 350.0 ft bgs

All temporary drill casing was removed from the ground.

GEOLOGIC/HYDROLOGIC DATA

Depth in Feet	Graphic Log	Lithologic Description (ft bgs)
270		240.0 - 270.0 Sand (S)
		270.0 - 295.0 Gravelly Sand (gS)
280		
290		
		295.0 - 350.0 Sandy Gravel (sG)
300		
310		
		Water Level: 319.3 ft bgs (09/05/19)
320		
330		
340		
		Total Depth: 350.0 ft bgs (8/29/2019)
350		
360		

A-6006-992 (Rev 2)

Well 299-E24-164 Construction and Completion Summary (4 of 4)

Response to A-1-74

Ecology agrees that the 3 new wells (299-E17-56, 299-E17-57, and 299-E24-164) have been already constructed. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised Section DC.1, added figures for the 3 wells, and updated table of contents for the construction figures, to be consistent with the information formally submitted from the Permittees for this permit modification.

Comment A-1-75

Addendum HA, Sampling and Analysis Plan: Table HA-1 Data Quality Indicators. Table HA-3 (should be Table HA-4) Field and Laboratory Quality Control Requirements. Section 2.2.3.2. Laboratory Quality Control Samples.

Carrier: A known quantity of nonradioactive isotope that is expected to behave similarly and is added to an aliquot of sample. Sample results are generally corrected based on carrier recovery.

Response: The Permittees requested the carrier sample type be deleted from this document. This sample type is for collection of radioactive samples and there are no radioactive constituents listed in the document. It is incorrect and may cause confusion to leave this sample type in the document.

Recommendation: Delete all references to the “carrier” sample type.

Response to A-1-75

Ecology agrees that the Permittees requested the carrier sample type be deleted from Addendum HA. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology deleted the information about the "carrier" sample type to be consistent with the information formally submitted from the Permittees for this permit modification.

Additionally, Ecology removed the following languages and reference from Appendix HA;

- *Ecology removed the third sentence of the first paragraph in Section HA.3.6.4, Sample Transportation; "Carrier-specific requirements, defined in the current edition of International Air Transport Association (IATA), Dangerous Goods Regulations, will also be used when preparing sample shipments conveyed by air freight providers."*
- *Ecology removed the text "/IATA" from the first sentence of the second paragraph in Section HA.3.6.4; "Samples containing hazardous constituents above regulated amounts will be considered hazardous material in transportation and transported according to DOT/IATA requirements."*
- *Ecology removed the following reference: "IATA, 2017, Dangerous Goods Regulations, 57th edition, International Air Transport Association, Montreal, Quebec, Canada. Available at: https://www.labelmaster.com/shop/iata/?gclid=EAIaIQobChMIso-esvXZ1QIVTmp-Ch3YUgjWEAAYASAAEgLxofD_BwE*

Comment A-1-76

Addendum HA, Sampling and Analysis Plan, Table HA-5 (should be Table HA-6)

Sample Preservation and Holding Time Requirements EPA Method 9056 Anions

Response: The Permittees removed EPA Method 9056 from the table since it is no longer used for any of the analytes listed in the document. It is incorrect and may cause confusion to leave this method in the table.

Recommendation: Delete EPA Method 9056.

Response to A-1-76

Ecology agrees that the Permittees removed EPA Method 9056 from Table (Table HA-6) of Addendum HA in the information formally submitted for this permit modification. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology revised Table HA-6 to delete EPA Method 9056.

Comment A-1-77

Addendum HA, Sampling and Analysis Plan, Section HA.4

Each month, the laboratory will provide the SMR a list of samples that must be disposed of in the following month. These samples are more than 90 days post-data delivery. The laboratory will also provide monthly a list of samples disposed in the preceding month that includes disposal date and method or other relevant information. Signed chain-of-custody forms indicating sample disposal will be retained in laboratory case files pending return of case files to the contractor.

Response: The Permittees requested this language be deleted from the original submittal. It was inadvertently added to the permit and is not a RCRA requirement. It is contractual language between the company and the lab and does not belong in a Sampling and Analysis Plan.

Recommendation: Delete language, as previously requested by the Permittees.

Response to A-1-77

Ecology agrees with this comment. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology deleted the subject language from Section HA.4 in Appendix HA, to be consistent with the information formally submitted from the Permittees for this permit modification.

Comment A-1-78

Addendum HA.a, Visual Sample Plan, MARSSIM Sign Test figures HA.a-2 and HA.a-4.

Response: The Permittees submitted the Visual Sample Plan information, which included MARSSIM Sign Test figures. The version out for public comment does not include the figures.

Recommendation: Ensure figures of MARSSIM Sign Test are included in final permit.

Response to A-1-78

Ecology agrees that figures HA.a-2 and HA.a-4 were not available for public review due to a technical issue during the previous 45-day public comment period. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology made both figures included in Appendix HA.a so they were available to the public.

Comment A-1-79

Addendum I, Inspection Plan, Section I.4.

Examples of problems that warrant immediate action include spills, as a result of the transfer of leachate to tanker trailers…

Response: Ecology added the following language, which was not requested by the Permittees: "…as a result of the transfer of leachate to tanker trailers..." This permit modification does not include the leachate collection tanks as permitted units, thus transfer of leachate to tanker trailers would not be a permitted action. Ecology did not provide justification in the fact sheet for added language.

Recommendation: Delete language "as a result of the transfer of leachate to tanker trailers."

Response to A-1-79

Ecology agrees that this permit modification is not the appropriate modification to add the subject language. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology deleted the language "as a result of the transfer of leachate to tanker trailers" from Section I.4 in Addendum I, to be consistent with the information formally submitted from the Permittees for this permit modification.

Comment A-1-80

Addendum I, Inspection Plan, Section I.4.

For problems identified during Hanford Fire Department inspection, the Job Control System (JCS) is used.

Response: The Permittees requested this language be deleted. As there are no sprinkler systems in the disposal cells or on the pads, there are no inspections in Addendum I completed by the Hanford Fire Department. It is incorrect and confusing to leave this sentence in the document.

The process used for documenting inspections was provided to Ecology during the comment resolution process, and is described in Section I.4: "Inspections are completed either by using inspection logs or through a job control database. Problems identified using an inspection log are noted on the inspection log and either corrected during the time of the inspection or tracked on each subsequent inspection log until corrected. Problems identified using the job control database are noted on the inspection form and either corrected during the time of the inspection or the problem is added to the job control database to be addressed according to a remedy schedule."

Recommendation: Delete added sentence: “For problems identified during Hanford Fire Department inspection, the Job Control System (JCS) is used.”

Response to A-1-80

Ecology agrees with this comment. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology deleted the following sentence, to be consistent with the information formally submitted from the Permittees for this permit modification;
"For problems identified during Hanford Fire Department inspection, the Job Control System (JCS) is used."

Comment A-1-81

Addendum I, Inspection Plan, Section I.4.

Information from the inspection problem resolution process, including the log sheet and action tracking list will be maintained in the Hanford Facility Operating Record (IDF portion)…

Response: Ecology added the following language, which was not requested by the Permittees: “…problem resolution process, including the…” The problem resolution process is a vague term and does not provide clear compliance direction. The Permittees provided a clear description of the inspection problem resolution process, which Ecology has subsequently deleted from Section I.4: “Inspections are completed either by using inspection logs or through a job control database. Problems identified using an inspection log are noted on the inspection log and either corrected during the time of the inspection or tracked on each subsequent inspection log until corrected. Problems identified using the job control database are noted on the inspection form and either corrected during the time of the inspection or the problem is added to the job control database to be addressed according to a remedy schedule.”

Recommendation: Reinstate deleted language which describes the process: “Inspections are completed either by using inspection logs or through a job control database. Problems identified using an inspection log are noted on the inspection log and either corrected during the time of the inspection or tracked on each subsequent inspection log until corrected. Problems identified using the job control database are noted on the inspection form and either corrected during the time of the inspection or the problem is added to the job control database to be addressed according to a remedy schedule.”

Response to A-1-81

Ecology agrees with this comment. For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology added the following paragraph, to be consistent with the information formally submitted from the Permittees for this permit modification;

"Inspections are completed either by using inspection logs or through a job control database. Problems identified using an inspection log are noted on the inspection log and either corrected during the time of the inspection or tracked on each subsequent inspection log until corrected. Problems identified using the job control database are noted on the inspection form and either corrected during the time of the inspection, or the problem is added to the job control database to be addressed according to a remedy schedule."

Additionally, Ecology removed the added language "problem resolution process, including the" from the last paragraph of Section I.4.

Comment A-1-82

Addendum I, Inspection Plan, Section I.5.3.3.

During the active life, the LCRS and LDS are inspected weekly during normal work operations to support determining the action leakage rate, as defined in WAC 173-303- 665(8), and described in Addendum C, is not exceeded and the systems are inspected per Table I-2. In addition, flow meter readings are observed to verify proper function of the leachate sump pumps.

Response: Ecology added the following language, which was not requested by the Permittees: "In addition, flow meter readings are observed to verify proper function of the leachate sump pumps." This is incorrect. As described in Table I-2, the flow meter readings are taken to "monitor and record the totalizer readings from flow meters." Proper function of the sump pumps is verified in accordance with Addendum C, "Process Information," Section C.4.5.2, which states "All pumps and motors will be started or bumped monthly or at intervals suggested by the manufacturer, first, to demonstrate that the pumps and motors are functional and second, to move the bearing(s) so that the bearing surfaces do not seize or become distorted."

Recommendation: Delete added language: "In addition, flow meter readings are observed to verify proper function of the leachate sump pumps."

Response to A-1-82

The Permittees proposed the last sentence to read, "In addition, flow meter readings are recorded for total flow." (Letter 21-ECD-001740, Attachment 2)

Ecology revised the last sentence, "In addition, flow meter readings are observed to verify proper function of the leachate sump pumps." to "In addition, flow meter readings are recorded for total flow".

Comment A-1-83

Addendum I, Inspection Plan, Table I-1

Ecology revised the active life inspection frequency of fencing from annual to weekly.

Response: The Permittees requested change of a weekly inspection to an annual inspection during the comment resolution process. The change was based on the rate of possible deterioration of the fencing in accordance with WAC 173-303-320(2)(c). The Permittees indicated the gradual degradation and low rate of failure of fencing would warrant an annual inspection. Ecology provided no indication of disagreement and no refuting justification for more frequent inspections.

Recommendation: Change active life inspection frequency to annual.

Response to A-1-83

Ecology does not agree that annual frequency would be adequate for fence inspection.

According to Table I-1 of Addendum I, inspection is required to "verify fence is intact with no unexpected openings, including animal burrows below the fence (see Addendum E, "Security"), and check for accumulated debris (e.g., tumbleweeds)". The frequency should be based on the rate of possible deterioration of equipment, and the probability of an environmental or human health incident per WAC 173-303-320 (2)(c). The sun and wind are brutal on fences and signs in the Hanford Site.

For the re-opened public comment period (7/25/2022 to 9/9/2022), Ecology changed the frequency of inspections on fencing for IDF to "quarterly". Additionally, Ecology changed the frequency of inspections on "posted warning signs" to quarterly, as well, since the warning signs are located on the fence.

A-2: DUANE CARTER

Comment A-2-1

Response to Comments, Attachment 2. Ecology accepted comments from May 1, 2012, to Oct 22, 2012, on the Hanford Facility Dangerous Waste Permit, Rev. 9. 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).

Response: Consistent with Washington State Department of Ecology's official position, comments provided for the 2012 Rev. 9 Hanford Facility Dangerous Waste Permit Renewal will not be included in this permit modification request. The Permittees and the Washington State Department of Ecology have a separate forum to address Rev. 9 comments, thus the Permittees will address Ecology's responses outside of this public comment period. Further, Ecology's official position is that Ecology will reopen the comment period to address the Rev. 9 public comments. While comments are not being made on Ecology's responses to Rev. 9 comments, this is not an indication of agreement.

Response to A-2-1

Thank you for your comment. This comment provided is the same as Comment # A-1-1. See Ecology's response to Comments # A-1-1.

Comment A-2-2

Fact Sheet, Section 2.0, Basis for Permit Conditions. Ecology worked with the Permittees to develop permit conditions that apply to the operation and maintenance of the DWMUs and associated ancillary equipment. As a result, Ecology has written conditions that require compliance with the regulations in WAC 173- 303.

Response: Meetings were initiated between Ecology and the Permittees to negotiate Ecology-drafted permit conditions. However, the parties did not reach resolution on all of the permit conditions. The Permittees apprised Ecology of the Permittees' intent to submit comments in response to draft permit conditions that remain unresolved in response to comments submitted by the Permittees during the draft permit modification's first public comment period which ended on October 28, 2021.

Response to A-2-2

Thank you for your comment. Ecology's responses to the specific comments about the drafted permit conditions are provided in this Response to Comments document.

Comment A-2-3

Fact Sheet, Section 4.0, Draft Permit Conditions TC&WM EIS indicated that the SSW (SW from WTP) must be immobilized carefully or impacts could occur from the SW above acceptable standards making it not disposable at the IDF. As a mitigation to protect vadose zone and groundwater, Ecology developed new permit conditions to address the impact from SSW. These SSW proposed permit conditions address issues like: addition of a Secondary Waste Technical Requirements Document, inclusion of SW in the Risk Budget Tool, waste performance modeling, waste form performance criteria, and protection of groundwater. Proposed permit conditions also address a certification from USDOE that the SSW is not High Level Waste. These permit conditions reflect Ecology's expectation that the SSW stream, to be disposed at the IDF, will be evaluated using the similar requirements that are used for the evaluation of the ILAW glass.

Response: Permit conditions under the heading of Secondary Waste Technical Requirements Document do not address requirements found in applicable Dangerous Waste regulations. These conditions would require administrative development under Omnibus provisions of 40 CFR 270.32 and WAC 173-303-815(2). Use of Omnibus authority requires a clear and understandable justification for imposing permit conditions where existing regulatory requirements require supplementation to ensure that human health and the environment are adequately protected. Per RCRA Online (RO) Number 12553, additional standards can be justified by basing the standards on sources such as documented studies, expert opinions, and published articles. As published, the Fact Sheet does not support the use of Omnibus permitting authority to impose these conditions.

EPA created the RCRA regulations in 40 CFR and Ecology has promulgated regulations for their authorized program in WAC 173-303, based on the state's Hazardous Waste Management Act (RCW 70.105). These rules and regulations are based on a premise that dangerous waste (including mixed waste) disposal activities are protective of human health and the environment by complying with the land disposal restriction program in WAC 173- 303-140 which incorporates by reference 40 CFR 268.

Per draft Permit Condition III.11.E.1, "The Permittees will not dispose of any waste that does not comply with all appropriate and applicable treatment standards, including all applicable Land Disposal Restrictions (LDR)." Prior to disposal of waste at IDF, the waste must be certified to meet the applicable LDR treatment standard. Permittees will ensure that all waste meets

LDR requirements as described in Addendum B, Waste Analysis Plan. Specifically, waste destined for IDF disposal is evaluated as acceptable by IDF waste personnel during the pre-acceptance process, and again by IDF waste personnel during acceptance.

The State is now requiring eight additional permit conditions under III.11.E.5 Secondary Waste Technical Requirements Document be added to the IDF permit. The State has not provided current facts based on sources such as documented studies, expert opinions, and published articles which are required per RO 12553. The EIS suggesting that the Secondary Solid Waste (SSW) from Waste Treatment and Immobilization Plant (WTP) should be “immobilized carefully” does not imply that the RCRA regulations will not be protective of human health and the environment. In such, Ecology is trying to inappropriately extend both their regulatory authority and omnibus power that are outside of the regulatory authority of Washington Administrative Code (WAC) and preempted by the Atomic Energy Act (AEA). As it stands, the IDF permit adheres to all RCRA requirements for the safe disposal of hazardous waste.

Both the WTP and IDF permits require SSW be treated to meet all appropriate and applicable treatment standards, including all LDR requirements prior to acceptance. The need for additional permit conditions for WTP SSW are not needed as there are no deficiencies in the regulations that pertain to IDF and WTP. Therefore, the Permittees maintain that all permit conditions associated with the Secondary Waste Technical Requirements Document should be deleted.

Response to A-2-3

Ecology disagrees with this comment. Ecology did not add the draft SWTRD permit conditions by a use of omnibus authority.

Ecology revised Section 4.0 in Fact Sheet to add justification for the added permit conditions for the SSW for the re-opened public comment period (7/25/2022 to 9/9/2022). Ecology's justification for the added conditions for the secondary solid waste is as follows;

"As detailed in Section 6.0, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS). TC&WM EIS indicated that the SSW (SW from WTP) must be immobilized carefully or impacts could occur from the SW above acceptable standards making it not disposable at the IDF. As a mitigation to protect vadose zone and groundwater, Ecology developed new permit conditions to address the impact from SSW. These SSW proposed permit conditions address issues like: addition of a Secondary Waste Technical Requirements Document, inclusion of SW in the RBT, waste performance modeling, waste form performance criteria, and protection of groundwater. Proposed permit conditions also address a certification from USDOE that the SSW is not High Level Waste. These permit conditions reflect Ecology's expectation that the SSW stream, to be disposed at the IDF, will be evaluated using the similar requirements that are used for the evaluation of the ILAW glass."

During both public comment periods, Ecology received a number of public comments for the draft SWTRD conditions including those from the Permittees. For final issuance, Ecology decided to revise the SWTRD permit conditions (III.11.E.5) in light of comments received. Pursuant to SEPA Substantive Authority, WAC 197-11-660, Ecology added these permit conditions as a mitigation to protect vadose zone and groundwater.

The revised final conditions (III.11.E.5) require, in addition to SWTRD as a forward-looking document (III.11.E.5.b), SSW Verification Document as a verification document (III.11.E.5.c). Ecology added SSW Verification Document requirement as we believe that the combination of SWTRD and SSW Verification Document should be used as a tool for both Ecology and the Permittees to verify the successful performance of SSW disposed at IDF to protect human health and the environment.

Through both documents, we should be able to identify any gap that may exist between what was assumed and evaluated in PA/RBT and the actual, real-world disposal of SSW at the IDF. If such gaps are identified, the path forward may include revising PA/RBT and SWTRD and/or an alternative disposal pathway or a different waste formulation for certain SSW stream.

Comment A-2-4

Permit Condition III.11.A Definitions. Supplemental ILAW Treatment: Additional treatment processes that would be used specifically to supplement the WTP's treatment of Low-Activity Waste (LAW). Because the WTP as currently designed does not have the capacity to treat the entire volume of LAW in a reasonable timeframe, additional LAW treatment capacity is needed. Supplemental ILAW is neither identified nor permitted for disposal at the IDF.

Response: Supplemental ILAW treatment does not appear in any of the IDF permitting documentation. On July 11, 2022, Ecology agreed via email to delete this definition from the permit.

Recommendation: Delete definition as agreed via email.

Response to A-2-4

Ecology agrees with this comment. See Ecology's response to Comment # A-1-19.

Comment A-2-5

Permit Condition III.11.E.4.c. New waste forms could include ILAW glass not previously described and, supplemental ILAW treatment.

Response: Supplemental ILAW treatment is not addressed in this permit modification. The path forward for supplemental treatment selection is being tracked via Tri-Party Agreement (Hanford Federal Facility Agreement and Consent Order) milestone M-062-45. A decision on supplemental treatment will be made by an environmental impact statement (EIS) record of decision if the decision is to do something other than vitrification. Therefore, it should not be included in the existing permit condition concerning the ILAW Waste Form Technical Requirements Document (IWTRD). On July 11, 2022, Ecology agreed via email to delete supplemental ILAW treatment from the permit condition.

Recommendation: Delete supplemental ILAW treatment as agreed via email.

Response to A-2-5

Ecology agrees with this comment. See Ecology's response to Comment # A-1-19.

Comment A-2-6

Permit Condition III.11.E.5. Secondary Waste Form Technical Requirements Document

Response: The Permittees retain their position to delete these permit conditions for the Secondary Waste Form Technical Requirements Document (SWTRD). In addition to the reasons cited in the Permittees' original comment, Ecology has not provided a defensible argument that the SWTRD is needed. The State has not articulated specific facts supporting the contention that these conditions are necessary to achieve compliance with the Hazardous Waste Management Act (HWMA), nor is there any specific provision in WAC 173-303 that necessitates the additional requirement. See response to comment #3.

Recommendation: Delete all Secondary Waste Form Technical Requirements Document permit conditions.

Response to A-2-6

See Ecology's response to Comment # A-1-22.

Comment A-2-7

Permit Condition III.11.E.5.a. Secondary Waste (SW) includes, but is not limited to, 1) WTP waste – equipment, carbon beds, high-efficiency particulate air filters, encapsulate other debris, silver mordenite media, melters; and 2) Effluent Management Facility (EMF) - grouted ETF brines from WTP EMF overheads. For any SSW forms produced in conjunction with producing ILAW glass, that the Permittees dispose in the IDF, the Permittees will provide to Ecology for review, a Secondary Waste Form Technical Requirements Document (SWTRD). The SWTRD will contain:

Response: The Permittees retain their position to delete this permit condition. In addition to the reasons cited in the Permittees' original comment, Ecology has not provided a defensible argument that the SWTRD is needed. See response to comment #3.

Recommendation: Delete permit condition.

Response to A-2-7

See Ecology's response to Comment # A-1-23.

Comment A-2-8

Permit Condition III.11.E.5.a.i. A description of each SW form and the mechanisms of immobilization that the Permittees intend to use on these forms. In addition, this description will include SW waste form formulations for each waste form and the characteristics of key parameters (such as coefficient of diffusion) necessary to establish satisfactory performance after disposal that will protect human health and the environment. The description must include information which will demonstrate the cumulative impact from the disposed waste forms will not exceed 75% of state and federal performance standards for drinking water.

Response: The Permittees retain their position to delete this permit condition. In addition to the reasons cited in the Permittees' original comment, Ecology has not provided a defensible argument that the SWTRD is needed. See response to comment #3. Additionally, this seems to

be a duplication of an existing requirement. Permit Condition III.11.E.10 requires a demonstration of the cumulative impacts from the disposed waste forms through the use of the Risk Budget Tool. Permit Condition III.11.E.10.a states: “This RBT will be conducted in manner that is consistent with state and federal requirements, and represents a risk analysis of all waste previously disposed in all IDF landfill cells and those wastes expected to be disposed in the future for the entire IDF to determine cumulative impacts. The groundwater impact will be modeled to evaluate fate and transport in the groundwater aquifer(s)in a concentration basis and should be compared against various performance standards including but not limited to drinking water standards (40 CFR 141 and 40 CFR 143). Permit Condition III.11.E.10.a.ii:states: “If these modeling efforts indicate results within 75% of a performance standard (including but not limited to federal drinking water standards [40 CFR 141 and 40 CFR 143]), Ecology and the Permittees will meet to discuss mitigation measures or modified waste acceptance criteria for specific waste forms.” This condition is not needed since Permit Condition E.10 already requires a demonstration of cumulative impacts.

Recommendation: Delete permit condition.

Response to A-2-8

See Ecology's response to Comment # A-1-24.

Comment A-2-9

Permit Condition III.11.E.5.a.ii. A PA that provides a reasonable basis for assurance that each SW formulation will, once disposed in the IDF in combination with the other waste volumes and waste forms planned for disposal at the entire IDF, be adequately protective of human health and the environment; and will not violate or be projected to violate, any or all applicable state and federal laws, regulations, and environmental standards. Cumulative impact will not exceed 75% of the performance standard.

Response: The Permittees retain their position to delete this permit condition. In addition to the reasons cited in the Permittees’ original comment, Ecology has not provided a defensible argument that the SWTRD is needed. See response to comment #3. Additionally, this seems to be a duplication of an existing requirement. Permit Condition III.11.E.10 already requires an assessment for the cumulative impact from the disposed waste forms through the use of the Risk Budget Tool. Permit Condition III.11.E.10.a states: “This RBT will be conducted in manner that is consistent with state and federal requirements, and represents a risk analysis of all waste previously disposed in all IDF landfill cells and those wastes expected to be disposed in the future for the entire IDF to determine cumulative impacts. The groundwater impact will be modeled to evaluate fate and transport in the groundwater aquifer(s)in a concentration basis and should be compared against various performance standards including but not limited to drinking water standards (40 CFR 141 and 40 CFR 143). Permit Condition III.11.E.10.a.ii states: “If these modeling efforts indicate results within 75% of a performance standard (including but not limited to federal drinking water standards [40 CFR 141 and 40 CFR 143]), Ecology and the Permittees will meet to discuss mitigation measures or modified waste acceptance criteria for specific waste forms.” This condition is not needed since Permit Condition E.10 already requires an assessment of the cumulative impact from the disposed waste forms.

Recommendation: Delete permit condition.

Response to A-2-9

See Ecology's response to Comment # A-1-25.

Comment A-2-10

Permit Condition III.11.E.5.a.iii. A description of production processes including management controls and QA/QC requirements which demonstrate that SW produced for each formulation will perform in a reasonably similar manner to the SW formulation assumed in the PA.

Response: The Permittees retain their position to delete this permit condition. In addition to the reasons cited in the Permittees' original comment, Ecology has not provided a defensible argument that the SWTRD is needed. See response to comment #3.

Recommendation: Delete permit condition.

Response to A-2-10

See Ecology's response to Comment # A-1-26.

Comment A-2-11

Permit Condition III.11.E.5.b. For SW forms which demonstrate acceptable performance in the PA and in the modelingrisk budget tool, the waste must be treated and confirmed to be treated to meet a range of 10-9 cm2 /sec-10-13cm2 /sec diffusion coefficient (EPA1315). The Permittees will provide to Ecology a report every five years to demonstrate confirmation.

Response: The Permittees retain their position to delete this permit condition. In addition to the reasons cited in the Permittees' original comment, Ecology has not provided a defensible argument that the SWTRD is needed. See response to comment #3.

Recommendation: Delete permit condition.

Response to A-2-11

See Ecology's response to Comment # A-1-27.

Comment A-2-12

Permit Condition III.11.E.5.c. For SW forms which demonstrate unacceptable performance in the PA and in the modeling-risk budget tool, the Permittees must meet with Ecology to discuss a path forward on these waste streams to be protective of the groundwater beneath the IDF prior to the disposal of the questionable waste form. If needed, the waste forms final treatment may need to be modified or an alternative disposal pathway may be identified.

Response: The Permittees retain their position to delete this permit condition. In addition to the reasons cited in the Permittees' original comment, Ecology has not provided a defensible argument that the SWTRD is needed. See response to comment #3. This proposed condition also contradicts other conditions in the permit and does not provide clear direction for Permittee action. Permit Condition III.11.E.10.a.ii outlines the performance criteria that must be met, stating: "If these modeling efforts indicate results within 75% of a performance standard (including but not limited to federal drinking water standards [40 CFR 141 and 40 CFR

143]), Ecology and the Permittees will meet to discuss mitigation measures or modified waste acceptance criteria for specific waste forms." Permit Condition III.11.E.10.a clearly defines the requirements while PC III.11.E.5.c does not.

Recommendation: Delete permit condition.

Response to A-2-12

See Ecology's response to Comment # A-1-28.

Comment A-2-13

Permit Condition III.11.E.5.e. At a minimum, the Permittees will submit updates to the SWTRD to Ecology every five (5) years or more frequently if any of the following conditions exist: · The Permittees submits a permit modification request allowing additional SW forms to be disposed of at IDF. New waste forms could include additional secondary solid waste.

Response: The Permittees retain their position to delete this permit condition. In addition to the reasons cited in the Permittees' original comment, Ecology has not provided a defensible argument that the SWTRD is needed. See response to comment #3.

Recommendation: Delete permit condition.

Response to A-2-13

See Ecology's response to Comment # A-1-30.

Comment A-2-14

Permit Condition III.11.E.5.f. The Permittees will not dispose of any SW or other waste streams not described and evaluated in the SWTRD.

Response: The Permittees retain their position to delete this permit condition. In addition to the reasons cited in the Permittees' original comment, Ecology has not provided a defensible argument that the SWTRD is needed. See response to comment #3.

Recommendation: Delete permit condition.

Response to A-2-14

See Ecology's response to Comment # A-1-31.

Comment A-2-15

Permit Condition III.11.F.4. During the active life of the IDF, the Permittees will maintain and update all design drawings contained in Appendix C3. The Permittees will submit to Ecology a permit modification request for changes in design drawings (Appendix C3) that are beyond in-kind replacement/repair.

Response: This language should be consistent with the Hanford Site-Wide Permit Condition II.R. Replacement would not require a permit modification request if the replacement is equivalent or superior to the original design specifications.

Recommendation: Revise permit condition to align with Permit Condition II.R, "During the active life of the IDF, the Permittees will maintain and update all design drawings contained in

Appendix C3. The Permittees will submit to Ecology a permit modification request for changes in design drawings (Appendix C3) that are beyond an equivalent or superior replacement as specified by Permit Condition II.R."

Response to A-2-15

See Ecology's response to Comment # A-1-38.

Comment A-2-16

Permit Condition III.11.H.6 For wells subject to this Permit, the Permittees will comply with WAC 173-160 and Chapter 18.104 RCW by replacing non-compliant wells subject to the permit with new wells under the schedule in Hanford Federal Facility Agreement and Consent Order (HFFACO) Milestone M-24, as amended, incorporated by reference into this Permit.

Response: The Permittees agree to comply with WAC 173-160 and Chapter 18.104 RCW and agree to use the Tri-Party Agreement (Hanford Federal Facility Agreement and Consent Order) milestone M-024 process to maintain a schedule of well installation as needed.

However, the Permittees disagree with incorporating M-024 by reference. By incorporation of the M-024 milestone, this condition seems to also allow for creation of an alternative schedule through the permit modification process. The language should not infer an expectation that the permit modification process could be used as a separate scheduling process. The schedule for well decommissioning is determined through the M-024 milestone.

Recommendation: Remove Milestone M-024 language, and revise permit condition to the following: "For wells subject to this Permit, the Permittees will comply with WAC 173-160 and Chapter 18.104 RCW by replacing non-compliant wells subject to the permit with new wells."

Response to A-2-16

See Ecology's response to Comment # A-1-48.

Comment A-2-17

Permit Condition III.11.H.8 Groundwater Monitoring The Permittees will annually determine the groundwater flow rate and direction beneath the IDF and qualify any uncertainties to comply with WAC 173-303-645(9)(e).

Response: The requirement to "qualify any uncertainties" is ambiguous. There is no requirement to "qualify any uncertainties" in either WAC 173-303-645(9)(e) or Section D.2.6 of Addendum D. WAC 173-303-645(9)(e) states: "The owner or operator must determine the groundwater flow rate and direction in the uppermost aquifer at least annually." Addendum D, Section D.2.6 states, "Per WAC 173-303-645(9)(e), an evaluation of groundwater flow direction and rate in the uppermost aquifer will be conducted annually to interpret changes in the groundwater flow regime."

Recommendation: Remove "and qualify any uncertainties" from this permit condition.

Response to A-2-17

Ecology agrees this comment. There is no requirement to "qualify any uncertainties" in either WAC 173-303-645(9)(e) or Section D.2.6 of Addendum D. Therefore, Ecology removed "and qualify any uncertainties" from this permit condition.

Comment A-2-18

Permit Condition III.11.H.9 Groundwater Monitoring Groundwater monitoring data will be reported to Ecology annually in the Hanford Site Groundwater Monitoring Report. The annual report will include monitoring results for the 12-month period from January 1 through December 31.

Response: The first sentence, “Groundwater monitoring data will be reported to Ecology annually in the Hanford Site Groundwater Monitoring Report,” infers that data is included in annual reports. A summary of the data is included, but the actual sample data are not included in annual reports. Sample data are available through an electronic interface provided by DOE (e.g., Environmental Dashboard Application). This language should be consistent with the language in the Groundwater Monitoring Plan to avoid confusion, suggest revising this language to align with Addendum G.

Recommendation: Revise sentence to: “A summary of the groundwater monitoring data will be reported to Ecology annually. The report will include a summary of the monitoring results for the 12-month period from January 1 through December 31.”

Response to A-2-18

Ecology agrees with this comment. Ecology revised the subject permit condition as follows;

"A summary of the groundwater monitoring data will be reported to Ecology annually in the Hanford Site Groundwater Monitoring Report. The annual report will include a summary of the monitoring results for the 12-month period from January 1 through December 31."

Comment A-2-19

Addendum D, Section D.2.11.3, p. D.65, lines 3-4: Any constituents from Table D-6 with 50% or fewer detections (four or fewer detection out of eight samples)…

Response: Table D-6 is “Monitoring Wells and Sample Schedule for Integrated Disposal Facility.” The subject text is addressing site-specific monitoring constituents only, which are in Table D-7 (Site-Specific Groundwater Monitoring Constituents for Integrated Disposal Facility)

Recommendation: Change text to: “Any constituents from Table D-7 with 50% or fewer detections (four or fewer detection out of eight samples)…”

Response to A-2-19

Ecology agrees with this comment. Ecology changed the subject text to refer to Table D-7, to follow as;

"Any constituents from Table D-7 with 50% or fewer detections (four or fewer detection out of eight samples)..."

Comment A-2-20

Appendix DA, Table DA-1 Analytical Methods for Integrated Disposal Facility Constituents, p. DA.21: Entries 108-39-4 d and 106-44-5 d

Response: CAS number 108-39-4 is 3-methylphenol. CAS number 106-44-5 is 4- methylphenol. The appropriate footnote for both entries is “c”, not “d”. Footnote c is “Analyzed and reported as 3- & 4-methylphenol (CAS Number 65794-96-9). PQL for 3- & 4- methylphenol is 20 µg/L.”

Recommendation: Change footnote “c” to “d” for both entries.

Response to A-2-20

Ecology believes that this comment refers to Table DA-2, however we agrees with this comment. Ecology changed footnote "c" to "d" for both entries 108-39-4 and 106-44-5 in Table DA-2.

Comment A-2-21

Appendix DB, Section DB.5.3, Sample Custody, p. DA.38, lines 8-9: Sample custody will be maintained within subcontract laboratories in accordance with laboratory QA plan.

Response: Specifying laboratory controls for subcontracted laboratories is outside the scope of the contractor’s sampling protocols.

Recommendation: Change “laboratory QA plan” to “their documented protocols” to align with contractor’s sampling protocols: “Sample custody will be maintained within subcontract laboratories in accordance with their documented protocols”

Response to A-2-21

Ecology disagrees with this comment. Ecology finds "their documented protocols" too vague. See Ecology's response to Comment # A-1-71.

B-1: CENTRAL PLATEAU CLEANUP COMPANY

Comment B-1-1

Comments for the IDF draft permit are attached in both PDF and Word format.

Response to B-1-1

The comments provided are the same as Comment # A-1-1 through #A-1-83. See Ecology's responses to Comments # A-1-1 through #A-1-83.

O-1: HANFORD CHALLENGE

Comment O-1-1

At the time of this writing there continue to be holistic negotiations between the State of Washington and the U.S. Department of Energy that concern the management, treatment and disposal of Hanford's tank waste. These negotiations are closed to encourage open and transparent conversation between the parties. While we appreciate the need for open conversation, we believe effective and meaningful engagement with the public and open and

transparent government to government negotiation with the tribes is an essential part of driving the collective towards a safe and effective cleanup. We are concerned about the lack of open and transparent communication with the broader Hanford community. We would like to see a process that engages the broader Hanford community before any formal agreement is reached during the holistic negotiations.

Response to O-1-1

Thank you for your comment.

Ecology has acknowledged (e.g., in forums like the Oregon Hanford Cleanup Board and the Hanford Advisory Board) the need for a robust public involvement process following completion of a tentative agreement and draft milestone changes. Ecology compared the current negotiations to the 2010 Tank Waste Settlement. The latter included regional public meetings. We anticipate that public involvement for the current negotiations may differ from the 2010 activities considering the current COVID-19 related restrictions on travel and public meetings. Also, technology has advanced since 2010 to the point that virtual public meetings are a relatively routine and accepted tool.

Comment O-1-2

The future use of IDF is both known and unknown. A concern previously noted by Hanford Challenge and others is an integrated mass balance flow as a single secondary document. A concern for IDF is the uncertainty about what contaminants will ultimately end up in this landfill. We appreciate Ecology's specificity in the permit conditions about the types of waste that are allowed for disposal. We would like to see additional clarity included to prohibit disposal in IDF of any future tank waste treated at Perma-Fix NW. For the record, Perma-Fix NW should not be used to treat Hanford's tank waste.

Hanford Challenge published an investigative report on Perma-Fix NW in Dec 2020[1] revealing many concerns about safety, lack of worker protections, and lack of compliance. We believe that Hanford waste should be treated on the Hanford site.

The increasing interest in finding ways to grout Hanford's tank waste is concerning to Hanford Challenge. In our opinion, any relabeling of Hanford's tank waste requires NRC's authorization and approval under the Nuclear Waste Policy Act, which is not being sought. We have also documented our grave concerns with the use of grout to immobilize tank waste[2].

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[1] Risky Business at Perma-Fix Northwest: The Inside Story on Hanford's Off-Site Radioactive Treatment Facility , Robert Alvarez and Hanford Challenge, December 4, 2020. https://static1.squarespace.com/static/568adf4125981deb769d96b2/t/5fce533274a40730fbc928bf/1607357241336/2020+12.04+PermaFix+Report+updated.pdf

[2] Relabeling and Grouting Tank Waste at Hanford: Frequently Asked Questions , Hanford Challenge, April 2021. https://static1.squarespace.com/static/568adf4125981deb769d96b2/t/608c8d11cf966f0ac2885e2f/1619823889391/2021+04.30+FINAL+FAQ+on+reclassification+of+HLW.pdf

Why Grout Failed at Hanford: Chronology of the Failed Grout Program , Hanford Challenge, June 2021. https://static1.squarespace.com/static/568adf4125981deb769d96b2/t/60f9b2bdb9480b7aeb6cbe15/1626976958173/2021+06.15+Why+Grout+Failed+at+Hanford.pdf

Response to O-1-2

Thank you for your comment. Ecology agrees that Perma-Fix NW is not permitted to treat tank waste (LAW).

Under RCRA, LDR treatment standards attach to wastes when generated, and remain attached until the treatment standard is met. The treatment standard for the Hanford tank waste is HLVIT. Disposal of WTP ILAW glass at the IDF has been approved for a LDR Treatability Variance, which allows waste vitrification to satisfy LDR treatment requirements (19-NWP-165). Therefore, grouted tank waste will not be able to meet the waste acceptance criteria for any landfill disposal facility in the state of Washington, including the IDF. In other words, Perma-Fix NW is not permitted to treat tank waste (LAW) to ship for disposal at the IDF. Waste verification for waste acceptance is the responsibility of IDF as a receiving facility. Therefore, IDF is not approved to accept any tank waste treated at Perma-Fix NW.

The grouting of SSW (ETF brine or other tank waste derived liquids) offsite at Perma-Fix NW requires NEPA coverage.

Comment O-1-3

The response to comments document shares an exchange between an anonymous commenter and Ecology in Publication 21-05-21. In the responses, Ecology stated:

"Based on the current process flow, there are no plans to dispose EMF bottoms at IDF. This waste stream is planned to be recycled back into the processes at WTP or sent back to the DSTs. Ecology agrees that grouting of ETF brine or other tank waste derived liquids offsite at Permafix requires NEPA coverage."

We appreciate Ecology's stance, however we share a concern that nothing in the proposed permit prevents transfer of non-approved or non-NEPA covered waste from Permafix to IDF. For example, permit condition III.11.P.2.b refers to "documentation accompanying wastes accepted at the IDF from other on-site DWMUs or any off-site facility. This condition does not restrict receipts to NEPA covered waste. Brine, bottoms, or other tank waste processed at PFNW could escape detection until disposed.

Response to O-1-3

Thank you for your comment.

IDF Permit condition III.11.P.2.b is a record keeping requirement for all waste forms disposed at the IDF; and therefore, it is not intended to allow disposal of non-approved waste from off-site facility. The IDF facility is responsible for establishing requirements for acceptance of wastes to be disposed at the IDF, and then performs confirmation to ensure that wastes do meet these requirements. This permit does not establish requirements for PFNW to accept and treat only NEPA covered waste, which should be addressed through the Dangerous Waste Regulations (DWR) Permit for the Mixed Waste Facility (MWF) Operation at the PFNW, if applicable.

Additionally, IDF Permit Condition III.11.E.6 and III.11.E.7 requires DOE to certify to the State of Washington that it has determined that ILAW and WTP SSW are not HLW prior to disposing of

such waste. These permit conditions were established to give the State of Washington assurance that all waste to be disposed in the IDF would be LLW, not HLW.

Furthermore, Permit Condition III.11.E.1 reads;
"The Permittees will not dispose of any waste that does not comply with all appropriate and applicable treatment standards, including all applicable land disposal restrictions (LDR)."

Under RCRA, LDR treatment standards attach to wastes when generated, and remain attached until the treatment standard is met. The treatment standard for the Hanford tank waste (LAW) is HLVIT. Disposal of WTP ILAW glass at the IDF has been approved for a LDR Treatability Variance, which allows waste vitrification to satisfy LDR treatment requirements (19-NWP-165). Therefore, grouted tank waste will not be able to meet the waste acceptance criteria for any landfill disposal facility in the state of Washington, including the IDF.

In other words, Perma-Fix NW is not permitted to treat tank waste (LAW) to ship for eventual disposal at the IDF. Waste verification for waste acceptance is the responsibility of IDF as a receiving facility. Therefore, IDF is not approved to accept any tank waste treated at Perma-Fix NW.

The grouting of SSW (ETF brine or other tank waste derived liquids) offsite at Perma-Fix requires NEPA coverage. In January 2023, DOE issued a supplement analysis (SA) - "Supplement Analysis: Offsite Treatment and/or Disposal of Hanford Liquid and Solid Secondary Waste". The SA covers LSW, such as the ETF brine and acetonitrile distillate. However, a comment specific to PFNW's operation should be addressed through the PFNW's permit; therefore, it is outside the scope for this permit modification.

Ecology believes that EMF Concentrate (EMF bottoms) is a primary waste. To address several public comments with a concern for the disposition of EMF Concentrate, for final issuance, Ecology added the following sentence to the IDF Condition III.11.E.5.a:

"EMF Concentrate is not approved for disposal at the IDF."

Comment O-1-4

Addendum A for the updated Part A permit application form states that “shipments of Hanford waste containers from an offsite treatment facility may be temporarily stored on the storage pad before placement in the IDF disposal cells.” This Part A allowed scope is also not specific enough to provide clarity that, at present, there are numerous wastes that will not be accepted at IDF, and particularly several that have been proposed for treatment at the PFNW Facility, which is a Non-DOE facility.

Please make a clarification in the permit conditions that tank waste treated at PFNW is not permitted for disposal at IDF.

Response to O-1-4

Thank you for your comment.

The above referenced sentence from Part A is a general description about the use of storage pad, and it is not intended to allow disposal of any waste from off-site facility.

The IDF facility is responsible for establishing requirements for acceptance of wastes to be disposed at the IDF, and then performs confirmation to ensure that wastes do meet these requirements. This permit does not establish requirements for PFNW to accept and treat waste, which should be addressed through the MWF Permit for PFNW. However, Ecology agrees that Perma-Fix NW is not permitted to treat tank waste (LAW) or SSW (ETF brine or other tank waste derived liquids). The grouting of ETF brine or other tank waste derived liquids offsite at Perma-Fix NW requires NEPA coverage.

O-2: HANFORD CHALLENGE

Comment O-2-1

At the time of this writing, holistic negotiations concerning the management, treatment, and disposal of Hanford's tank waste continue between the State of Washington (State) and the U.S. Department of Energy (U.S. DOE). The lack of open and transparent communications with the broader Hanford community is concerning. We ask that, before any formal agreement is reached during holistic negotiations, the State and U.S. DOE develop a process that provides meaningful engagement with the public and effective government to government negotiations with the tribal nations.

Response to O-2-1

Thank you for your comment.

Ecology has acknowledged (e.g., in forums like the Oregon Hanford Cleanup Board and the Hanford Advisory Board) the need for a robust public involvement process following completion of a tentative agreement and draft milestone changes. Ecology compared the current negotiations to the 2010 Tank Waste Settlement. The latter included regional public meetings. We anticipate that public involvement for the current negotiations may differ from the 2010 activities considering the current COVID-19 related restrictions on travel and public meetings. Also, technology has advanced since 2010 to the point that virtual public meetings are a relatively routine and accepted tool.

Comment O-2-2

The public's accessibility to engage in meaningful comment is vital for Hanford cleanup. The difficulty accessing information is an issue that must be addressed. Regardless of our vast experience navigating the State's public comment system, we had difficulties with the red-lined documents because they include multiple revisions in five colors: red, blue, pink, purple, and green. This not only made reading the documents burdensome, but also made knowing which color represented the most recent revision impossible. Ultimately, we had to reach out to the State for an explanation. We ask the State to provide a process that ensures revisions are more clearly presented to the public. We suggest providing the public two versions of the red-lined documents: one with only the most recent revisions open for comment and a second with all the revisions and a color matching key.

Response to O-2-2

Thank you for your comment.

Ecology agrees with this comment and appreciate your effort in reviewing the draft permit modification. Changes made in the draft permit were all done in the current revision up for public comment. The changes appear in different colors because they were done by multiple Ecology staff. Ecology is committed to continue improving the accessibility and transparency for the public review.

Comment O-2-3

We appreciate Ecology's specificity in the permit conditions about the types of waste that are prohibited for disposal (Addendum B, B.1.4). We have previously commented our position that IDF is not an appropriate place to store acetonitrile and that acetonitrile should be destroyed rather than stored. Although acetonitrile is not explicitly listed, we believe it may fall under a prohibited category. We ask the State for clarity on whether acetonitrile is prohibited and if not, then we ask for an explanation as to why acetonitrile is allowed to be stored in IDF rather than destroyed.

Response to O-2-3

This Class 3 modification is to incorporate new and modified information in the IDF Permit that includes the additions of three dangerous waste management units (operation of an additional disposal cell, storage pad, and treatment pad). This comment specific to treatment of acetonitrile should be addressed through a permit for the treatment facility; therefore, it is outside the scope for this permit modification.

TC&WM EIS indicated that the SSW from WTP must be immobilized carefully, or impacts could occur from the SW above acceptable standards and, thus, make such SW not disposable at IDF. As a mitigation to protect vadose zone and groundwater, Ecology developed new permit conditions to address the impact from disposal of SSW at the IDF (IDF Conditions III.11.E.5). Through SWTRD and SSW Verification Document, Ecology intends to ensure that disposal of SSW which may or may not contain acetonitrile at the IDF would be protective of vadose zone and groundwater.

At the ETF, Acetonitrile will be concentrated through the Steam Stripper and the resulting vapors will be sent through the Vessel Off Gas System. The system includes a moisture separator, duct heater, pre-filter, high-efficiency particulate air filters, carbon absorber (when required to reduce organic emissions), exhaust fans, and ductwork. The concentrated Acetonitrile will be grouted for disposal at IDF, not being discharged from the ETF stack.

WTP's current certified waste profile to LERF/ETF is the basis for waste codes and LDR requirements tracked through LERF/ETF. The certified waste profile information documents waste codes F001-F005. No "D" waste codes are applied to the certified WTP waste profile, and therefore no Underlying hazardous constituent (UHC) evaluation applies to the waste stream.

Normally, assignment of a "D" waste code is required to trigger the UHC evaluation. Acetonitrile is not identified as an LDR organic in this waste stream, and is not subject to LDR treatment standards when received at LERF/ETF. To meet the waste acceptance criteria for IDF, the acetonitrile distillate is solidified in grout so it can be disposed at IDF.

The grouting of SSW (ETF brine or other tank waste derived liquids) offsite at Perma-Fix requires NEPA coverage. In January 2023, DOE issued a supplement analysis (SA) - "Supplement Analysis: Offsite Treatment and/or Disposal of Hanford Liquid and Solid Secondary Waste". The SA covers LSW, such as the ETF brine and acetonitrile distillate. However, a comment specific to PFNW's operation should be addressed through the PFNW's permit; therefore, it is outside the scope for this permit modification.

Comment O-2-4

Worker health and safety is a cornerstone of Hanford Challenge's work. We ask the State to protect workers in the permit by adding inspections of safety showers (see Addendum I, Table I-1 IDF Inspection Schedule) and more necessary trainings (see Addendum G, Table G-1 Personnel Training).

Response to O-2-4

Thank you for your comment. Ecology agrees with this comment that worker health and safety should be the priority for any works done at Hanford.

For final issuance, Ecology decided to add the decontamination shower requirement through a new permit condition (III.11.N.2), which reads:

"No later than three (3) months prior to any leachate being transferred from disposal cells to the LCUs or three (3) months prior to the commencement of waste management operations at the IDF Treatment Pad, whichever is earlier, the Permittees will submit a permit modification request to Ecology to modify Addendum J as needed to add a decontamination shower near the LCUs, add a decontamination shower near the Treatment Pad, and identify specific locations for all emergency equipment associated with IDF.

a. The Permittees' permit modification request will update the inspection plan in Addendum I for all emergency equipment identified in Addendum J and update Addendum F for emergency equipment and personnel exposure.

b. In lieu of modifying Addendum J to add a decontamination shower near the LCUs and/ or near the Treatment Pad, the Permittees may provide information as needed to demonstrate to Ecology that none of the hazards posed by waste handled at the LCUs and the Treatment Pad, respectively, could require a decontamination shower. If Ecology determines the information provided fails to adequately demonstrate that a decontamination shower is not required near the LCUs and/or near the Treatment Pad, within three (3) months of Ecology's determination the Permittees will submit a permit modification request to Ecology to modify Addendum J as needed to add a decontamination shower near the LCUs and/or near the Treatment Pad, as applicable."

Ecology has the authority to include a permit condition requiring decontamination showers pursuant to WAC 173-303-340(1)(c), WAC 173-303-283(3)(i), WAC 173-303-800(8), and WAC 173-303-815(2)(b)(ii). We have determined that decontamination showers are needed for both the IDF Leachate Collection Units and the IDF Treatment Pad. Our technical basis is due to the nature of the waste management activities that will occur in the two identified locations—i.e.,

transferring liquid dangerous waste (DW) from an overhead loading connection pipe into trucks, and performing treatment of DW via micro-encapsulation on a treatment pad. Such activities inherently pose an increased risk of worker exposure to DW constituents.

- *WAC 173-303-340(1)(c) requires a DW facility to be equipped with decontamination equipment "unless it can be demonstrated to the department that none of the hazards posed by waste handled at the facility could require" the "particular kind of equipment specified."*
- *WAC 173-303-283(3)(i) requires the owner/operator of a DW facility to operate and maintain the facility in a manner that prevents "endangerment of the health of employees, or the public near the facility."*
- *Both WAC 173-303-800(8) and -815(2)(b)(ii) give Ecology authority to include permit conditions that it determines are "necessary to protect human health and the environment." Ecology believes it is appropriate to characterize an increased risk of worker exposure to DW constituents as a "hazard" within the meaning of -340(1)(c) or an "endangerment of the health of employees" within the meaning of -283(3)(i). Accordingly, there is a reasonable basis for Ecology to determine that inclusion of a permit condition requiring decontamination showers in these two locations is "necessary to protect human health" pursuant to -800(8) and -815(2)(b)(ii).*

Comment O-2-5

Response to I-1-1 provides that, “Ecology documented in the Class 3 modification request completeness determination that the leachate collection system does not meet the regulatory definition of WAC 173-303-140 for tanks. [...] The Leachate Collection System will be permitted as miscellaneous units in the IDF RCRA Permit.” We ask the State to provide greater explanation on this determination and the decision that followed to classify the tanks as miscellaneous units.

Response to O-2-5

Thank you for your comment.

Apart from this modification, there is a separate Class 3 permit modification, which is proposed to add to the IDF Permit two Leachate Collection System (LCS) Dangerous Waste Management Units (DWMUs).

The LCS DWMUs were constructed in accordance with WAC 173-303-640, Tank Systems, and were originally designed to operate as central accumulation areas under the generator requirements of WAC 173-303-200. The LCS DWMUs were later determined to be best managed as RCRA-permitted storage units.

The LCS DWMUs look like and function similar to tank units. However, the system bottom was designed as a geomembrane liner system instead of a solid bottom, which does not meet the regulatory definition of a tank per WAC 173-303-040. Additionally, the liner system does not provide structural integrity independently; therefore, the system cannot pass a structural integrity test as a tank system. Since the LCS DWMUs do not meet the necessary design requirements for a tank system, Ecology determined these LCS DWMUs should be permitted as miscellaneous units in accordance with WAC 173-303-680, Miscellaneous Units. Per WAC 173-303-680(2), permit terms and provisions from both WAC 173-303-640, Tank Systems, and WAC 173-303-650, Surface Impoundments, are used for these miscellaneous units, as applicable.

The public comment period for this draft permit will be December 5, 2022 through January 20, 2023.

Comment O-2-6

The lack of protection of the air within the permit is concerning. We ask the State to add these protections, perhaps as an amendment to part III.11.E.5.c (groundwater protections).

Response to O-2-6

Thank you for your comment. Ecology agrees in importance of air protection. It is Ecology's mission to protect human health and the environment, and we are ensuring the IDF permit includes complete and enforceable information for safe operations.

Section C.8 in Addendum C discusses applicability of air emission standards (40 CFR 264, Subpart AA through CC standards). This section explains the reasoning for why the IDF operation would not be applicable to the air emission standards.

Furthermore, Section F.5 in Addendum F discusses prevention of releases to the atmosphere from the IDF operation.

"Reasonable precautions are taken at the IDF to prevent releases to the atmosphere. Waste at the IDF is containerized and disposed in closed containers. Containers may contain vents, if required, and potential emissions will be managed in accordance with applicable air permits. Particulate matter emissions at IDF will be managed via dust control, such as periodic watering or use of soil stabilization products. Periodic watering may be used for excavations, backfill, haul roads, and other disturbed areas that show signs of blowing dust. Soil stabilization products may be used to mitigate wind and water erosion of areas disturbed by operations. Waste covering activities and storage pile work will be curtailed during high winds."

Comment O-2-7

The removal of III.11.E.5.d, which provides in part that “the uncertainty analysis must be included in all future performance assessments and modeling,” is concerning. An uncertainty analysis is an important tool used in the performance assessment to recognize and attempt to account for uncertainties in the future of the facility, site, models, data, and parameters that affect the results of the performance assessment. We ask the State for clarification on this removal and to ensure an uncertainty analysis is required.

Response to O-2-7

"Ecology agrees that an uncertainty analysis is an important tool used in PA to recognize and attempt to account for uncertainties in the future of the facility, site, models, data, and parameters that affect the results of PA.

Ecology removed the subject condition as Ecology recognizes that PA is not under the authority of Ecology or WAC 173-303. RBT is not required by WAC 173-303, either; therefore it is not required to be included in the IDF Permit. RBT and SWTRD are requirement set forth by Ecology through a permit conditions (III.11.E.10 and III.11.E.5). Nevertheless, Ecology sees both RBT and PA as supporting documents for the SWTRD set under IDF Condition III.11.E.5. It is Ecology's

expectation that PA include accurate information including the up-to-date uncertainty analysis per IDF Conditions III.11.E.4.C.

See also Ecology's response to Comment # A-1-29."

Comment O-2-8

We question the removal of parts from III.11.E.8, which generally provided an explanation of how disposal of Waste Treatment Plant Secondary Solid Waste can become authorized via Final Permit 3 modification decision. We were expecting to find this process elsewhere, but did not. We ask the State for clarity on this removal.

Response to O-2-8

Thank you for your comment.

Ecology deleted the part of IDF Permit Condition III.11.E.8 because this Class 3 permit modification, if approved, will approve disposal of specific waste types including the WTP SSW. Ecology determined that additional permit modification is not necessary prior to disposal of the already approved waste.

Comment O-2-9

The removal of parts from III.11.E.10 (Modeling–Risk Budgeting Tool) are concerning. The removed parts from III.11.E.10.a and III.11.E.10.a.iv required that Permittees provide to Ecology (1) updated modeling runs; (2) responses on comments and explanations on how those comments will be reflected in further modeling within 120 days; and (3) access to Performance Assessment modeling for the RBT reports. We ask the State for clarification on these removals and to ensure sufficient RBT checks and balances are required.

Relatedly, the removal of the parts discussed in the previous paragraph from III.11.E.10 is further concerning as it is referenced as part of the proviso added to III.11.F.5.d (bolded for emphasis): "grouted waste forms should not be disposed above vitrified waste forms unless the Permittees can demonstrate in the Risk Budget Tool that commingling of waste types will not impact underlying vadose or groundwater as outlined in Permit Condition III.11.E.10." Further, the increasing interest in finding ways to grout Hanford's tank waste is concerning. We have documented our concerns with the use of grout to immobilize tank waste [1]. We ask the State to remove this addition from the permit and continue to use its authority to ensure the focus of Hanford tank waste cleanup remains on vitrifying Hanford's tank waste.

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 Hanford's tank waste are a top concern of Hanford Challenge. We appreciate the work the State of Washington is doing to hold the Department of Energy to its commitments and can see that reflected in the permit conditions for the Integrated Disposal Facility.

Response to O-2-9

PA, as a source document to RBT, is not under the authority of Ecology or WAC 173-303. RBT is not required by WAC 173-303, either; therefore it is not required to be included in the IDF Permit. RBT is a requirement set forth by Ecology through a permit conditions (III.11.E.10).

For the re-opened public comment period (7/25/22- 9/9/2022), Ecology removed the added language as we determined that added language was not necessary for the following reasons:

- *Ecology's expectation for future PA revisions (updates) are ongoing as noted in Condition III.11.E.4.c.*
- *RBT will be updated at least every 5 years per the existing condition III.11.E.10.a.*
- *The existing Condition III.11.E.10.a already requires RBT be reviewed by Ecology and Ecology's comments will be reflected in the revised RBT.*

O-3: CENTRAL PLATEAU CLEANUP COMPANY

Comment O-3-1

Comments for the IDF Active Life permit are attached in both .docx and .pdf format.

Response to O-3-1

The comments provided are the same as Comment # A-2-1 through #A-2-21. See Ecology's responses to Comments # A-2-1 through #A-2-21.

O-4: HEART OF AMERICA NORTHWEST

Comment O-4-1

USDOE refuses to acknowledge that the State's permitting authority extends to all waste disposed in all cells of IDF. Unless all cells are subject to permitting and health based standards are applied to limit the total quantities and forms of waste disposed, Ecology should not permit a second massive "cell" to be opened at the IDF landfill.

Response to O-4-1

Thank you for your comment.

Ecology has the authority to regulate dangerous waste and the dangerous waste components of mixed (radioactive and dangerous) waste, under 70.105 RCW and WAC 173-303. The Hanford Site-wide Permit has requirements for the treatment, storage, and disposal of dangerous and mixed waste at Hanford. Ecology does not regulate waste that is solely radioactive. USDOE has the exclusive authority to regulate radioactive materials and radioactive waste at Hanford.

This Class 3 modification is to incorporate new and modified information in the IDF Permit that includes the additions of three dangerous waste management units (operation of an additional disposal cell, storage pad, and treatment pad). If this modification become approved and effective, both IDF disposal cells will receive mixed waste and become subject to WAC 173-303 requirements.

Comment O-4-2

Ecology has not considered the health effects and environmental impacts from the quantities and new waste forms that USDOE may seek to bury in shallow IDF landfill cells. The State Environmental Policy Act (SEPA) requires that Ecology have a new, supplemental Environmental Impact Statement (EIS) for the public and Ecology's own decision makers before it can permit new cells at IDF. Ecology can not rely on an EIS that is 16 years old and does not consider independent new analyses of risks, such as the Nuclear Regulatory Commission's review of USDOE's plans to dispose of wastes in IDF.

Response to O-4-2

For this permit modification, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS) Alternative 2 for tank waste treatment, Implement the Tank Waste Remediation System EIS Record of Decision with Modifications. Ecology is also adopting TC&WM EIS Waste Management Alternative 2: Disposal in IDF, 200-East Area Only. Title of Document Being Adopted: Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, WA, USDOE/EIS-0391, prepared December 5, 2012. This is available at: http://www.hanford.gov/page.cfm/FinalTCWMEIS.

Ecology made a SEPA determination # 202004362 for the IDF on August 24, 2020. Additional SEPA review is not required for this permit modification to support the operations of the IDF.

The above information was available in Fact Sheet during the public comment period.

Comment O-4-3

The permit for IDF must cover all wastes disposed in all cells and include the combined cancer risks from radionuclides and chemicals in limiting how much waste may be disposed and in what form. Ecology must not allow USDOE to claim any of the wastes or landfill cells are not subject to Ecology's authority. The performance assessment for the Waste Incidental to Reprocessing (WIR) determination for Vitrified Low Activity Waste disposal is limited to radionuclides and ignores chemical releases. However, in permitting and for SEPA analysis, Ecology MUST consider the cumulative impacts to groundwater and health from all hazardous substances (Hazardous substances under CERCCLA and MTCA includes radionuclides released to the environment. While RCRA permitting may not extend to radionuclides, SEPA requires Ecology to consider the impacts to groundwater and effects to health of radionuclide releases along with chemical releases. The standards applicable for the risk budget tool include total carcinogenic risk – from all hazardous substances, regardless of whether the release is a radionuclide or chemical). If Ecology is fearful of asserting that it has RCRA mixed waste authority over all of the wastes and cells, then Ecology should turn over permitting of the landfill to EPA.

Response to O-4-3

Ecology has the authority to regulate dangerous waste and the dangerous waste components of mixed (radioactive and dangerous) waste, under 70.105 RCW and WAC 173-303. The Hanford Site-wide Permit has requirements for the treatment, storage, and disposal of dangerous and

mixed waste at Hanford. Ecology does not regulate waste that is solely radioactive. USDOE has the exclusive authority to regulate radioactive materials and radioactive waste at Hanford.

For this permit modification, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS) Alternative 2 for tank waste treatment, Implement the Tank Waste Remediation System EIS Record of Decision with Modifications. Ecology is also adopting TC&WM EIS Waste Management Alternative 2: Disposal in IDF, 200-East Area Only. Title of Document Being Adopted: Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, WA, USDOE/EIS-0391, prepared December 5, 2012. This is available at: http://www.hanford.gov/page.cfm/FinalTCWMEIS.

Ecology made a SEPA determination # 202004362 for the IDF on August 24, 2020. Additional SEPA review is not required for this permit modification to support the operations of the IDF.

RBT is not required by WAC 173-303, and therefore it is not required to be included in the IDF Permit. RBT and SWTRD are requirements set forth by Ecology through a permit condition (III.11.E.10 and III.11.E.5).

The RBT uses the PA model results, including both radionuclide and chemical releases, to forecast future impacts to groundwater under different inventory and waste form performance assumptions and provides comparisons to groundwater protection standards. PA input parameters and assumptions will be used in the modeling RBT.

In PA, Radionuclides are evaluated with respect to DOE's All-Pathways dose limits specified in DOE M 435.1-1. Releases of radionuclides and select chemicals are computed using a PA system model. For the select list of chemicals evaluated with the PA model, the IDF PA has a plot of peak groundwater concentration in 10,000 years divided by the applicable groundwater protection standard for that chemical. None of the simulated chemicals exceeded their limiting concentrations. The Risk Budget Tool calculates groundwater concentrations 100 meters downgradient of the IDF and displays those concentrations along with a user-specific concentration standard. The standard is the groundwater protection standard concentration or the drinking water standard for radionuclides.

TC&WM EIS indicated that the SSW from WTP must be immobilized carefully or impacts could occur from the SW above acceptable standards and, thus, make such SW not disposable at IDF. For final issuance, pursuant to SEPA Substantive Authority, WAC 197-11-660, Ecology added permit conditions to require SWTRD and SSW Verification Document to address the impact from SSW (III.11.E.5).

Comment O-4-4

Ecology and USDOE have failed to estimate and consider the impacts of the new proposed waste forms and quantities on the health of Native Americans exercising their Treaty rights to resources on the Hanford Central Plateau and the impacts on groundwater, plants and other resources (“New” being since the original two decade old proposal and environmental analysis). Without the Supplemental EIS required by SEPA, and without use of a tribal exposure scenario, Ecology cannot say it has considered these impacts.

Response to O-4-4

For this permit modification, Ecology is adopting Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS) Alternative 2 for tank waste treatment, Implement the Tank Waste Remediation System EIS Record of Decision with Modifications. Ecology is also adopting TC&WM EIS Waste Management Alternative 2: Disposal in IDF, 200-East Area Only. Title of Document Being Adopted: Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, WA, USDOE/EIS-0391, prepared December 5, 2012. This is available at: http://www.hanford.gov/page.cfm/FinalTCWMEIS.

Ecology made a SEPA determination # 202004362 for the IDF on August 24, 2020. Additional SEPA review is not required for this permit modification to support the operations of the IDF.

The above information was available in Fact Sheet during the public comment period.

Comment O-4-5

Mitigation is not the same as preventing all releases. The risk budget tool in the permit is designed to limit releases from disposal to 75% of the current DWS (Drinking Water Standards). Thus, releases will occur. Those releases may be significant, even if below today's standards. Remember, those standards are not based, for example, on preventing significant health risks to children utilizing Treaty protected resources on the Central Plateau. The performance assessment does not include use of a Tribal Exposure Scenario for the Central Plateau. Ecology must show in the record that it has considered these potential health effects, even if the projected releases will not exceed numeric groundwater or MCL standards.

Response to O-4-5

TC&WM EIS indicated that the SSW from WTP must be immobilized carefully or impacts could occur from the SW above acceptable standards, and, thus, make such SW not disposable at IDF. For final issuance, pursuant to SEPA Substantive Authority, WAC 197-11-660, Ecology require SWTRD and SSW Verification Document to address the impact from from SSW disposal at IDF (III.11.E.5). Additionally, all waste to be disposed at IDF must be proven through the modeling-RBT to not exceed 75% of the state and federal drinking water standards per IDF condition III.11.E.10.a.ii.

Comment O-4-6

High Level Waste is barred from shallow land disposal pursuant to the Nuclear Waste Policy and Atomic Energy Acts.

Ecology cannot allow High-Level Waste to be disposed in IDF. Use of Waste Incidental to Reprocessing (WIR) determinations is planned for Vitrified LAW (glass matrices holding waste from High Level Waste tanks) in order to reclassify those wastes from High Level Waste. However, the permit specifically calls for disposal of High Level Wastes for which no WIR Determination has been made, or is even underway, in the shallow landfill IDF cells:

- Secondary wastes which fail to be incorporated into the vitrified glass in the LAW vitrification plant;

- Huge quantities of secondary wastes which will be grouted and never proposed for vitrification, including wastes directly removed from tanks such as evaporator wastes, LERF and ETF wastes
- HEPA filters which trapped radionuclides from High Level Waste air emissions or processing
- FFTF reactor dismantling;
- Soils into which HLW has been released – dilution in soil does not change the waste from being HLW

The permit must be modified to remove approval of all wastes which originate in High Level Waste tanks or are contaminated with High Level Wastes until specific waste streams are fully approved using WIR processes and any court challenges are resolved. Ecology can not permit these wastes based on a claim by USDOE that the wastes are not HLW when USDOE has not performed the evaluations required to formally redesignate / reclassify wastes as not being HLW. This requires a formal Waste Incidental to Reprocessing (WIR) process. USDOE may not succeed in demonstrating that any one, or all, of the secondary waste streams (SW) may be redesignated. Ecology can not permit based on a certification that is speculative.

Ecology would be able to specify in the permit that each waste stream must be certified and proceed to be approved for disposal pursuant to a WIR determination. This is very different than accepting "a certification from USDOE that the SSW is not High Level Waste." Ecology, RCRA Permit Fact Sheet at Page 8.

As we discussed above, the WIR determination is based solely on USDOE's own inadequate radionuclide release standards. These allow for releases and health effects that are magnitudes higher in regard to cancer risk than Ecology's MTCA and federal CERCLA standards. USDOE's WIR determination also fails to consider any chemical release risks. Thus, Ecology can not rely on USDOE's WIR determination for any purpose relating to mitigation or prevention of impacts to environment or health.

Response to O-4-6

Ecology agrees that HLW is not permitted for disposal at the IDF. Under RCRA, Land Disposal Restriction (LDR) treatment standards attach to wastes when generated, and remain attached until the treatment standard is met. The treatment standard for the Hanford tank waste is HLVIT. Disposal of WTP ILAW glass at the IDF has been approved for a LDR Treatability Variance, which allows waste vitrification to satisfy LDR treatment requirements (19-NWP-165).

Waste verification for waste acceptance is the responsibility of IDF as a receiving facility. IDF is not approved to accept HLW per IDF conditions III.11.E.6, III.11.E.7, and III.11.E.8.

In January 2023, USDOE published the final WIR evaluation for Vitrified Low-Activity Waste, which includes secondary waste generated by DFLAW facilities. Per the resultant WIR determination, DOE determined that secondary waste (SW) generated by DFLAW facilities are wastes incidental to the reprocessing of spent nuclear fuel. As such, the SW are not HLW, and can be disposed in a near surface landfill and can be managed as LLW.

Comment O-4-7

The risk budget tool modeling must be available to the public for review as part of the permitting process, as part of the administrative record for the facility permit, and as a public record. It is not appropriate for the permit to specify that USDOE will maintain and run the risk budget tool model without it being available for public inspection.

Response to O-4-7

Thank you for your comment.

The Permittees submitted the original version of RBT (RPP-CALC-63176, Rev. 00) through letter 19-ECD-0083. Ecology reviewed the RBT and provided the review comments with letter 20-NWP-103. Both original version of RBT and Ecology's review comments are available to the public through Hanford Administrative Records, available online at https://pdw.hanford.gov/

Ecology's review comments had been discussed between the Permittees and Ecology, and the RBT was updated in September 2020. Ecology realized that the updated RBT, RPP-CALC-63176, Rev. 00A was not made available to the public. Ecology requested the Permittees to make RPP-CALC-63176, Rev. 00A available to the public through Hanford Administrative Records. The public can also request this document through Ecology's Nuclear Waste Program. When there are revisions in the RBT in the future, we strive to make them accessible to the public.

Thank you again for your comment.

T-1: YAKAMA NATION ERWM

Comment T-1-1

General Comments: Secondary Solid Waste – We have concerns that Secondary Solid Waste (IDF) is not defined fully within the permit. In addition, the permit does not fully describe the criteria and process DOE will use to certify that that the SSW is not high-level waste before disposal into IDF. This has to the potential for certain media such as ion-exchange resin and HEPA filters containing highly radioactive constituents to be wrongly disposed of within IDF. More specifically permit condition IIII.11.E.7. states "...DOE will certify to the State of Washington that it has determined that such SSW is not HLW and meets the criteria and requirements outlined in DOE's consultation with the USNRC beginning in 1993 (Letter from R.M. Bernero, USNRC to J. Lytle, DOE, dated March 2, 1993; Letter from J. Kinzer, DOE, to C. J. Paperiello, USNRC, "Classification of Hanford Low-Activity Tank Waste Fraction," dated March 7, 1996; and Letter from C.J. Paperiello, USNRC, to J. Kinzer, DOE, "Classification of Hanford Low-Activity Tank Waste Fraction," dated June 9, 1997)." Since what those criteria are not stated in the permit we have no idea how the SSW will be evaluated. However, if the criteria includes the citation methodology of DOE Order 435.1-1 it is very likely the certification will be given without consideration of the actually constituents that are within the media like ion-exchange resin and what land disposal requirements are associated with that. Ecology needs to rework the SSW certification requirements in the permit to ensure radioactive wastes are disposed of properly. This would include stating exactly what methodology or process will be used by DOE so it is clear how this will be done.

Response to T-1-1

Thank you for your comment.

Ion exchange columns are not among the approved waste for disposal at the IDF. The spent ion exchange columns would be stored on-site on the Column Storage Pad, located in the east of 241-AP tank Farm in the 200 East Area, then either vitrified in the High Level Vitrification Facility prior to disposal off-site, or direct-disposed off-site in a national high level waste repository.

Ecology has the authority to regulate dangerous waste and the dangerous waste components of mixed (radioactive and dangerous) waste, under 70.105 RCW and WAC 173-303. The Hanford Site-wide Permit has requirements for the treatment, storage, and disposal of dangerous and mixed waste at Hanford. Ecology does not regulate waste that is solely radioactive. USDOE has the exclusive authority to regulate radioactive materials and radioactive waste at Hanford. It is Ecology's mission to protect human health and the environment, and we are ensuring the IDF permit includes complete and enforceable information for safe operations.

To ensure SSW will be certified not to be HLW by the Permittees, Ecology added IDF condition III.11.E.7 to restrict disposal of any mixed SSW prior to certification that it is not high level waste. However, as stated earlier, Ecology does not regulate waste that is solely radioactive. And therefore, we don't regulate the DOE's certification methodology whether it is the citation methodology of DOE Order 435.1-1 or Waste Incidental to Reprocessing (WIR) evaluation. Nevertheless, Ecology's position is that mixed SSW must be included in WIR evaluation. In January 2023, USDOE published the final WIR evaluation for Vitrified Low-Activity Waste, which includes secondary waste generated by DFLAW facilities. Per the resultant WIR determination, DOE determined that secondary waste (SW) generated by DFLAW facilities are wastes incidental to the reprocessing of spent nuclear fuel. As such, the SW are not HLW, and can be disposed in a near surface landfill and can be managed as LLW.

Comment T-1-2

Addendum D Groundwater Monitoring Plan (Ecology, 2022) 1. Page Addendum D.58, Lines 21–22 and Page Addendum D.59, Table D-3: (i) The use of "may be" in the sentence, "Sampling for ionic charge balancing constituents may be performed by DOE in order to assess the general chemistry of groundwater", is confusing and should be changed. Based on Page Addendum D.77, Section D.4.3, these constituents "will be" sampled. (ii) The major anions data cannot be found for the three new wells (Wells 299-E17-56, 299-E17-57, and 299-E24-164 that were installed in 2019) in the Hanford Environmental Information System (HEIS) database (Figure 1, accessed 8/25/2022). Please clarify whether these ionic charge balancing anions are sampled.

Figure 1. Screenshots of HEIS Data Search, accessed 8/25/2022. (a) Selection of Monitoring Wells and Constituents. (b) Search Results.

Response to T-1-2

Thank you for your comment. Ecology agrees with this comment.

For final issuance, Ecology revised the subject sentence, as follows;

"Sampling for ionic charge balancing constituents will be performed by DOE in order to assess the general chemistry of groundwater."

Ecology ran the HEIS database, and as of November 2022, Ecology agrees that the major anions (i.e., alkalinity, chloride, nitrate, and sulfate) data are not available for the three new wells (Wells 299-E17-56, 299-E17-57, and 299-E24-164). To be consistent with the above change made in Section D.2.8 in Addendum D, Ecology believes that those new wells should be sampled and the results for the major anions (i.e., alkalinity, chloride, nitrate, and sulfate) data should be available in HEIS from the next sampling activity.

Comment T-1-3

2. Page Addendum D.60, Lines 16–21: “As detailed in Section D.1.3, groundwater flow and constituent migration rates are variable in the vicinity of IDF due to a combination of very low hydraulic gradients and contrasting hydraulic properties of the HSUs encountered at the facility. A result of these widely varying migration rates and the large size of IDF is that the time required for groundwater to travel from an upgradient well to a downgradient well could range from several years to tens or hundreds of years depending on the HSU within which travel takes place.” The hydraulic gradient mentioned here is the horizontal gradient. If the horizontal migration is so slow, the vertical migration might be significant. If a horizontally downgradient well is screened at the upper portion of the top unconfined aquifer, it might miss potential IDF releases. Please add a figure 3 similar to Figure D-5 (horizontal particle pathlines) to show the particle pathlines in a cross-section view to aid in downgradient well screen depth design.

Response to T-1-3

Thank you for your comment.

An assessment of the vertical component of contaminant migration of the IDF monitoring wells was performed to support the Engineering Evaluation Report (SGW-62007, Engineering Evaluation Report for the Integrated Disposal Facility Groundwater Monitoring). As provided in Section 5.2 of SGW-62007, methods described by the American Petroleum Institute (API), referred to as the "API calculator," were used to verify the appropriateness of the depths of the well screens for monitoring wells and ensure that vertical migration would not cause contaminant plumes to travel undetected beneath the downgradient monitoring well screens. The API calculator estimates the slope of the migration pathway along which dissolved constituents are anticipated to migrate based on the ratio of the specific discharge rate and the groundwater recharge rate.

The outputs of the vertical migration calculations completed using the API calculator for IDF wells indicate that the depths of the well screens proposed for downgradient monitoring wells are appropriate, because local vertical migration due to the accrual of recharge is not expected to result in contaminants traveling undetected beneath the downgradient monitoring well screens.

Comment T-1-4

3. Page Addendum D.68, Section D.3 Monitoring Well Network: The monitoring well network for the Integrated Disposal Facility (IDF) was designed based on groundwater elevation maps for 2013–2016 (SGW-62007, 2019, Figures 7-1–7-4). The groundwater flow direction has changed since 2016, e.g., (i) Figure D-4 (of this permit addendum) shows that Well 299-E24-24 was a side-gradient, not an upgradient well of IDF, in 2018. (ii) Well 299-E17-57 almost became a side-gradient well in 2021, and was only upgradient of the northwest corner of IDF (DOE/RL-2021-50, Rev. 0, 2022, Figure 2-5). An additional upgradient well (e.g., E17-21 or a new well) is needed at the south or southwest of IDF.

Response to T-1-4

Thank you for your comment.

In general, please note that the groundwater flow direction changes due to changes observed in the water level dynamics, recent interpretation, etc. USDOE does those analysis on an annual basis, and Ecology review those information. The map(s) and the interpretation presented in our permit dates back to 2017-18 or so and at that time , these were the latest information. Any subsequent changes will be made and if required will be implemented as per regulation to meet the network requirements (installation of new/replacement of well, etc.) through permit mod, etc.

Comment T-1-5

4. Page Addendum D.71 (the first D.71), Table D-5, footnote “b” for Wells 299-E17-56, 299-E17-57, and 299-E24-164: “Water-table elevation in this well has not been corrected for deviation of boreholes from vertical, which may cause the reported head to be less than the actual head.” (i) When will the elevation for these wells be corrected? (ii) The elevation for the upgradient well 299-E17-57 is listed as 121.89 m (NAVD88) for 8/14/2020 in the table. This value is 1.00 m greater than that in the HEIS database (Figure 2, HEIS data accessed 8/23/2022). Which one is correct?

Response to T-1-5

Thank you for your comment.

(i) A network of wells was developed specifically for low-gradient water table mapping in the 200 East Area. All of the wells in that network had gyroscopic surveys, which are used to calculate corrections that are automatically applied to water level data. It is not necessary or required to apply corrections for deviation of borehole from vertical to all wells. The footnote in the table simply alerts the reader to the fact that hydraulic head in the IDF wells cannot necessarily be compared with one another because not all wells have had corrections applied.

(ii) The water table elevation value (in meters) for 299-W17-57 in Table D-5 is correct. It should be 121.89 m (8/14/2020). The elevation in feet is correct.

Appendix A. Copies of All Public Notices

Public notices for this comment period:

- Focus sheets
- Classified notice 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

Integrated Disposal Facility

Class 3 permit modification

- Public comment period Sept. 13 – Oct. 28, 2021
- The proposed permit modifications will allow disposal of specific wastes to support tank waste treatment and the DFLAW mission.
- Includes the addition of three dangerous waste management units.

Public comment invited

The Washington State Department of Ecology (Ecology) is proposing a change to the Hanford Facility Resource Conservation and Recovery Act Permit, Revision 8C.

This change affects the Dangerous Waste Portion for the Treatment, Storage, and Disposal of Dangerous Waste for the Integrated Dispoal Facility located in Part III, Operating Unit Group 11.

The Permittees requested a Class 3 modification to the Integrated Disposal Facility (IDF) chapter of the Hanford Dangerous Waste Permit in accordance with Washington Administrative Code 173-303-830(4)(c).

The permittees are:

U.S. Department of Energy
Richland Office
P.O Box 550
Richland, WA 99352

Central Plateau Cleanup Company LLC
P.O. Box 1464
Richland, WA 99352

Background

The Hanford Site occupies 580 square miles in southeastern Washington State. Beginning in 1943, the site produced plutonium for the nation's defense program. Plutonium production ceased in the late 1980s. Today, waste management and environmental cleanup are the primary missions at Hanford.

The IDF will provide disposal for 19,000 metric tons of dangerous radioactive and chemical waste annually.

Overview of changes

This draft permit modification for the existing IDF Operating Unit Group incorporates new and modified information that includes the addition of three dangerous waste management units:

- Operation of an additional disposal cell
- Storage area
- Treatment area

The draft permit also provides detailed information to support the operation of IDF.

The modification describes operations and updates or modifies the following:

- Addendum A, Part A Form
- Addendum B, Waste Analysis Plan
  - Addendum B, Appendix BA, Quality Assurance Project Plan for IDF Waste Analysis
  - Addendum B, Appendix BB, Waste Stream Descriptions
- Addendum C, Process Information
  - Addendum C, Appendix C1, Phase I Critical Systems Design Report
  - Addendum C, Appendix C2, Critical Systems Table
  - Addendum C, Appendix C3, Critical Systems Design Drawings

- Addendum C, Appendix C4, Detailed Design Cell 1 Construction Quality Assurance Plan
- Addendum C, Appendix C5, Facility Response Action Plan

- Addendum D, Groundwater Monitoring Plan, DOE/RL-2019-29, Rev. 1
  - Addendum D, Appendix A, Quality Assurance Project Plan
  - Addendum D, Appendix B, Sampling Protocol
  - Addendum D, Appendix C, Well As-Built Diagrams and Proposed Well Locations
- Addendum E, Security
- Addendum F, Preparedness and Prevention
- Addendum G, Personnel Training
- Addendum H, Closure Plan
  - Addendum H, Appendix HA, Sampling and Analysis Plan
  - Addendum HA.a, Visual Sample Plan Report Documentation
- Addendum I, Inspection Plan
- Addendum J, Facility Response Plan for the Integrated Disposal Facility
- Addendum K, Post-Closure Plan

Why this permit change matters

The IDF plays a vital role in supporting Hanford's Direct-Feed Low-Activity Waste program (DFLAW), which is an important part of the Hanford cleanup process.

The proposed permit modifications will allow the Permittees to provide disposal of Immobilized Low-Activity Waste and other secondary waste to support tank waste treatment and the DFLAW mission.

Reviewing the proposed changes

Ecology invites to you to review and comment on this proposed IDF Class 3 permit modification. See the last page for comment period dates and information on how to submit comments.

Copies of the application for the proposed permit and supporting documentation will be available during the public comment period online at Ecology's website[1] . The documents will also be available at the Hanford Public Information Repositories listed on the next page.

Ecology will consider and respond to all significant comments received during the public comment period. We will document our responses and issue a response to comments document when we make our final permitting decision.

[1] Ecology.wa.gov/Waste-Toxics/Nuclear-waste/Public-comment-periods

Hanford's Information Repositories

Ecology Nuclear Waste Program
Resource Center
3100 Port of Benton Blvd.
Richland, WA 99354
509-372-7950

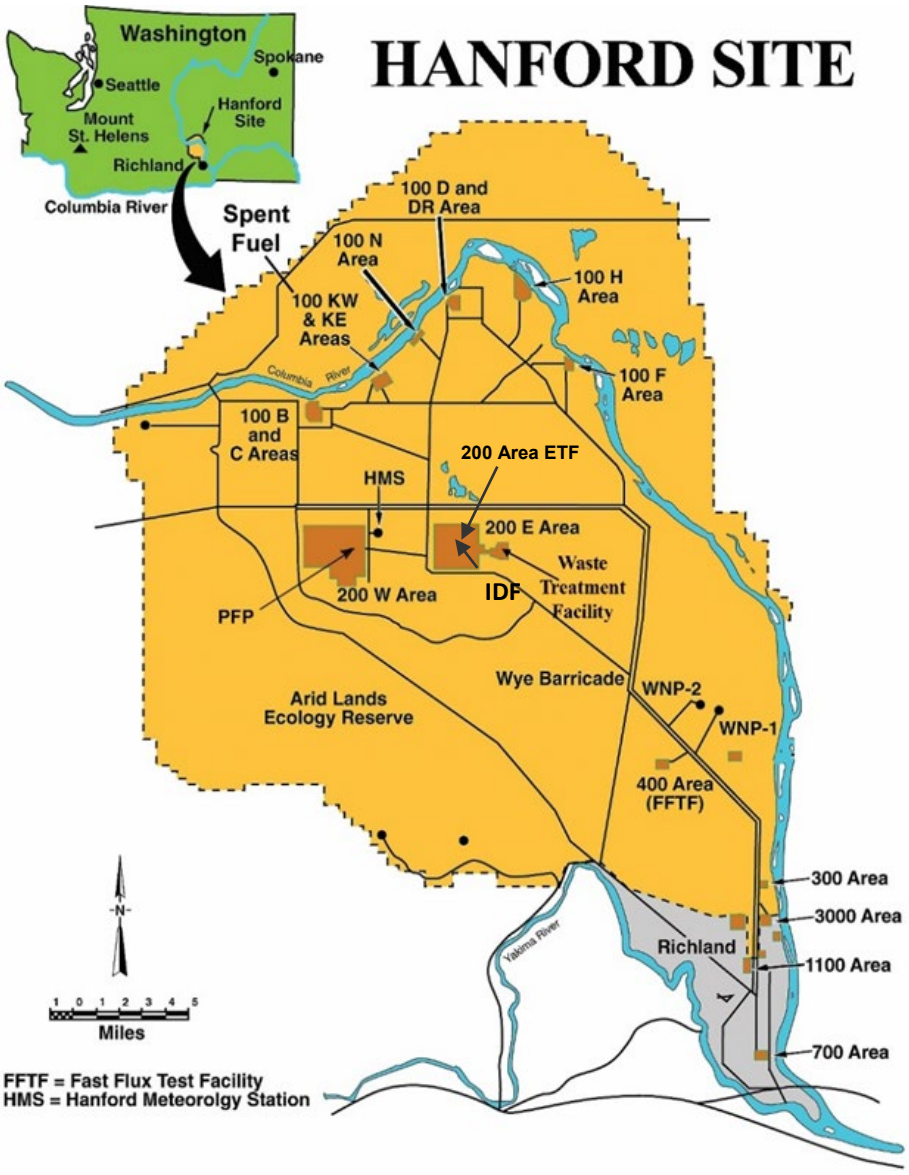
U.S. Department of Energy
Administrative Record
2440 Stevens Drive, Room 1101
Richland, WA 99354
509-376-2530

Washington State University Tri-Cities
Department of Energy Reading Room
2770 Crimson Way, Room 101L
Richland WA 99354

Suzzallo Library
P.O. Box 352900
Seattle, WA 98195
206-543-5597

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

Portland State University
Millar Library
1875 SW Park Avenue
Portland, OR 97207
503-725-4542



University of Washington

DEPARTMENT OF ECOLOGY
State of Washington

3100 Port of Benton Blvd
Richland WA 99354

IDF Class 3 permit modification

Public comment period
Sept. 13 – Oct. 28, 2021

Electronic submission (preferred):
https://nw.ecology.commentinput.com/?id=7FcUQ

Mail or hand delivery

Daina McFadden
3100 Port of Benton Blvd
Richland, WA 99354

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

Daina McFadden
509 372 7950
Hanford@ecy.wa.gov

To request an ADA accommodation, contact Ecology by phone at 509 372 7950, email at Daina.McFadden@ecy.wa.gov, or visit https://ecology.wa.gov/accessibility. For Relay Service or TTY call 711 or 877 833 6341.

Integrated Disposal Facility

Class 3 permit modification

Figure 1. Columbia River looking at the Hanford site

- Reopening public comment period
  July 25 – Sept. 9, 2022
- Will allow disposal of specific wastes to support tank waste treatment and the DFLAW mission.
- Includes the addition of three dangerous waste management units.

Public comment invited

The Washington State Department of Ecology (Ecology) is proposing a change to the Hanford Facility Resource Conservation and Recovery Act Permit, Revision 8C.

This change affects the Dangerous Waste Portion for the Treatment, Storage, and Disposal of Dangerous Waste for the Integrated Dispoal Facility located in Part III, Operating Unit Group 11.

The permittees requested a Class 3 modification to the Integrated Disposal Facility (IDF) chapter of the Hanford Dangerous Waste Permit in accordance with Washington Administrative Code 173-303-830(4)(c).

The permittees are:

U.S. Department of Energy
Richland Office
P.O Box 550
Richland, WA 99352

Central Plateau Cleanup Company LLC
P.O. Box 1464
Richland, WA 99352

Background

The Hanford Site occupies 580 square miles in southeastern Washington State. Beginning in 1943, the site produced plutonium for the nation's defense program. Plutonium production ceased in the late 1980s. Today, waste management and environmental cleanup are the primary missions at Hanford.

The IDF is located on 202 acres of land within the south-central portion of the 200 East Area of the Hanford Site. The IDF will provide disposal for 19,000 metric tons of dangerous radioactive and chemical waste annually.

Overview & Changes

This draft permit modification for the existing IDF Operating Unit Group adds new and modified information for three dangerous waste management units:

- An additional disposal cell
- Storage area
- Treatment area

The draft permit also provides detailed information to support the operation of IDF. The modification describes operations, and updates or modifies the following:

- Unit Specific Permit Conditions*
- Addendum A, Part A Form
- Addendum B, Waste Analysis Plan
  - Addendum B, Appendix BA, Quality Assurance Project Plan for IDF Waste Analysis
  - Addendum B, Appendix BB, Waste Stream Descriptions
- Addendum C, Process Information*
  - Addendum C, Appendix C1, Phase I Critical Systems Design Report*
  - Addendum C, Appendix C2, Critical Systems Table
  - Addendum C, Appendix C3, Design Drawings*
  - Addendum C, Appendix C4, Construction Quality Assurance Plan
  - Addendum C, Appendix C5, Facility Response Action Plan
    - Addendum C, Appendix C6, Construction Specifications*
- Addendum D, Groundwater Monitoring Plan*
  - Addendum D, Appendix DA, Quality Assurance Project Plan*
  - Addendum D, Appendix DB, Sampling Protocol*
  - Addendum D, Appendix DC, Well Construction*
- Addendum E, Security*
- Addendum F, Preparedness and Prevention
- Addendum G, Personnel Training*
- Addendum H, Closure Plan
  - Addendum H, Appendix HA, Sampling and Analysis Plan*
  - Addendum H, Appendix HA.a, Visual Sampling Plan Report Documentation
- Addendum I, Inspection Plan*
- Addendum J, Contingency Plan
- Addendum K, Post-Closure Plan

Note: The draft permit files identified by an * are either new or updated and are open for public comments.

Why this permit change matters

The IDF plays a vital role in supporting Hanford's Direct-Feed Low-Activity Waste program (DFLAW), which is an important part of the Hanford cleanup process.

The proposed permit modifications will allow the permittees to provide disposal of Immobilized Low-Activity Waste and other secondary waste to support tank waste treatment and the DFLAW mission.

Reviewing the proposed changes

Ecology invites to you to review and comment on the reopening of the proposed IDF permit modification. During the previous 45-day public comment period (Sept. 13 through Oct. 28, 2021), Ecology received public comments that required Ecology to update several draft permit files necessary to support this draft permit.

As detailed in WAC 173-303-840(7), comments filed during the reopened comment period will be limited to the substantial new questions that caused its reopening. Any public comment received between July 25 and Sept. 9, 2022, should remain focused on newly added draft permit files and updated draft permit files, identified by an *.

Copies of the draft permit, fact sheet, and supporting documentation will be available during the public comment period on Ecology's website[1]. The documents will also be available electronically at the Hanford Public Information Repositories listed below.

Ecology will consider and respond to all significant comments received during the public comment period. We will document our responses and issue a response to comments document when we make our final permitting decision. See the last page for comment period dates and information on how to submit comments.

Hanford's Information Repositories

Ecology Nuclear Waste Program
Resource Center
3100 Port of Benton Blvd.
Richland, WA 99354
509-372-7950

U.S. Department of Energy
Administrative Record
2440 Stevens Drive, Room 1101
Richland, WA 99354
509-376-2530

Washington State University Tri-Cities
Department of Energy Reading Room
2770 Crimson Way, Room 101L
Richland, WA 99354

University of Washington
Suzzallo Library
Box 352900
Seattle, WA 98195
206-543-5597

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

Portland State University
Millar Library
1875 SW Park Avenue
Portland, OR 97207
503-725-4542

For information on other comment periods or ways to get involved, go to ecology.wa.gov/Hanford and click "Public comment periods" on the left bar or visit Hanford.gov "public involvement opportunities."

You can also follow us on social media.

@EcologyWAHanford

@ecyHanford

Figure 2. Integrated Disposal Facility

[1] Ecology.wa.gov/NWP-comment-periods

DEPARTMENT OF ECOLOGY
State of Washington

Nuclear Waste Program
3100 Port of Benton Blvd
Richland, WA 99354

IDF Class 3 permit modification

July 25 – Sept. 9, 2022

Electronic submission (preferred):
https://nw.ecology.commentinput.com/?id_fKhkj

Mail or hand delivery

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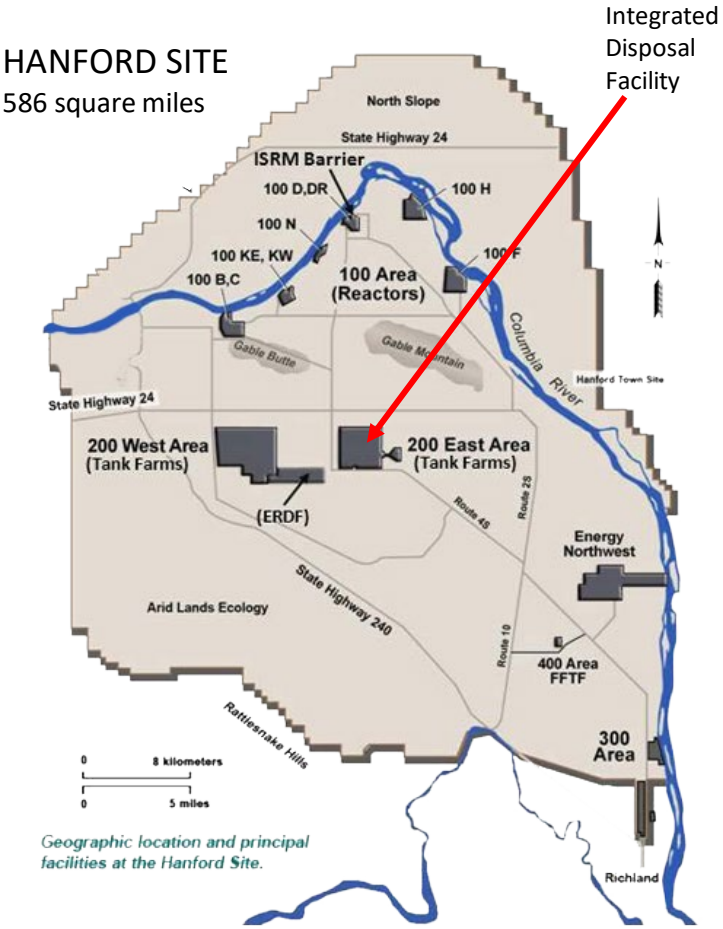
509 372 7950
Hanford@ecy.wa.gov

HANFORD SITE
586 square miles



Geographic location and principal facilities at the Hanford Site.

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Obituaries

Patricia Ann Gilbert
June 13, 1936 - August 30, 2021

Richland, **Washington** - Patricia (Pat) Gilbert, an amazing lady, passed away on August 30, 2021, at Kadlec Hospital. She was surrounded by her loving family. At her passing, we lost a caring, quietly generous, devoted mother and grandmother. Pat's heart and character guided her through the loss of her husband (Ed Gilbert) due to a boating accident in 2008. She emerged from the event as devoted and loving as ever.

Ed and Pat had three children – Kim, Monty, and Shelly. All three were at her bedside as she passed away. Pat was grandmother to five grandkids. Dale, Logan, and Scott all reside in the Tri-Cities, Angie lives in Olympia, while Josh resides in Tennessee. Pat is also survived by nine great grandkids. They are Brycen, Aaron, Hannah, Calder, Rowan, Gideon, Xavier, Alexander, and Zeke. The entire family has been richly blessed by mom's kindness, love, and generosity.

Pat was born to Dennis and Ruby Posey, in Laken, Kansas. She was the youngest of three children, having two older brothers – Jack and Allen (of whom she loved deeply). The family moved west and eventually settled in Independence, Oregon where Pat graduated from Central High.

After Ed and Pat were married (1956), they eventually landed in Kennewick, Washington, where they started a new pizza shop called "Hubby's Pizza." After retiring from the business, Ed and Pat spent much time with family and friends. Boating, Golfing, and travel also filled their days. Pat was a longtime member of the Tri-City Country Club and the Clover Island Yacht Club. She will be missed greatly by her friends in both clubs.

Although Ed's family was not blood related to Pat, she felt as if they were. She often spoke of her love and appreciation for the "Gilbert" side of the family. Another relationship in her life that was not blood related but was one of the heart, was with Patti Monteith. She was a daughter of the heart to Pat and to the rest of the family.

Pat was never one to turn away from adventure. She went parasailing at age 80, was still going on motorcycle rides with her son, Monty, and took regular trips to visit family in central Oregon. Despite losing Ed, she never stopped loving or caring. Several years after losing Ed, she (by God's grace and design) was blessed with a new love. Jim Peterson came into her life, and they were so happy together. It is amazing and beautiful how you can love someone for 52 years, as Pat and Ed loved each other, and then by God's grace, discover companionship and love anew.

A memorial service will be held in Pat's honor on Friday, October 8th, at 1:30 pm. The event will take place at Temple Baptist Church (4555 Arena Road, Richland, WA). Pat's Son-in Law, Pastor Randy Barnes, will preside over the memorial service. There will be a reception, with light snacks and fellowship, following the service.

The family invites you to sign their online guest book at www.muellersfuneralhomes.com.

David G. Martini
March 23, 1953 - July 6, 2021

Kennewick, **Washington** - Dave passed away after a long battle with cancer on July 6, 2021. He is survived by his daughter, Brigette A. Martini (Vancouver, BC), his wife Terri Hansen (Benton City, WA), his mother Elaine M. Martini (Richland, WA) and his younger sisters, (Liz Martini, Seattle, WA; Robin Johansen, Cleveland, OH; Jan Martini-Neish, ID). He is preceded in death by his first wife, Shirley L. Martini, his father, William R. Martini and his brother, Mark W. Martini.

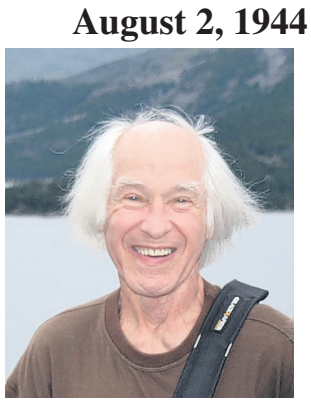
Born March 23rd, 1953, Dave (that 'magnificent Aries'!) spent his early years in Los Angeles where both his parents had also been raised. Moving various places around the US with his father's career in the nuclear industry, Dave and his four siblings eventually arrived at the Tri-Cities in 1967. The deserts of eastern WA gave birth to Dave's love of dirt bikes which rolled into a life-long love of motorcycles and Chevys; he was a master mechanic and could fix just about anything. After graduating high school (Bombers, '71), Dave became a carpenter and travelled where the jobs took him – which eventually took him out to Colorado where he met his first wife, Shirley. Moving back to the Tri-Cities, Dave and Shirley married and had their daughter Brigette. Over the next decades, Dave worked as a master carpenter in many different fields and all across the western US, from building houses, to working on dams and of course, in the Hanford works. Dave was also an avid outdoorsman, enjoying skiing, scuba, hiking and camping; there was always a next adventure.

Moving back to the Tri-Cities after Shirley's passing, Dave was lucky enough to reconnect with a high school sweetheart, Terri Hansen (Bombers, '71). Some of Dave's best years were the years he spent with Terri, out on the farm, dog-parenting, single-handedly feeding all of the birds in Benton City, reading two or three books a day, texting with all of his friends all over the West and loving and being loved by his family.

Dave was a seeker. His mind never quit and while being on the receiving end of a Dave-lecture wasn't always easy, it was never boring. He was strong. He was smart. He was kind. And his family and friends will miss him forever.

The family asks that any kind thoughts of flowers, be instead donated as cash to the Lower Columbia Basin Audubon Society in Dave's name.

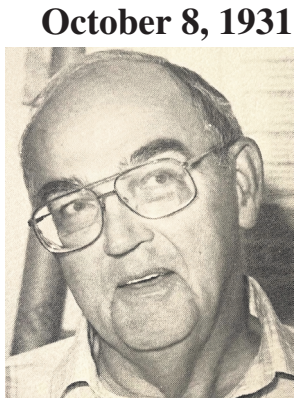
Edwin Quigley
August 2, 1944 - July 12, 2021



Tacoma, **Washington** - Edwin James Quigley Jr.

Edwin James Quigley Jr. was born in Richland, WA in August 1944 and died in Tacoma on July 12, 2021. Ed was the first child of Edwin J. Quigley Sr. and Edith Vaughn Quigley. He was the first baby born in Kadlec hospital which was built for the Manhattan Project. The hospital didn't have any cribs so Ed slept in a drawer the first few days of his life. Ed graduated from Columbia High School (now Richland High School) in 1962. He attended WSU for one year and then transferred to the University of Puget Sound. In 1964 he bought a small cabin on Salmon Beach in Tacoma; he fell in love with the beach and lived there until the time of his death. The original bill of sale was on a napkin, which he still had. When Ed moved to Salmon Beach there were only two or three other people living there full time, most of the cabins were weekend and summer get-a-ways. One reason for that was that there were (and still are) over 200 steps down from the parking lot to the houses on the beach. Ed was very active in the Salmon Beach community and had many good friends there. Ed loved playing guitars and his vocation was teaching guitar. He taught for many years at Ted Brown Music in Tacoma and many of his students and fellow workers became lifelong friends. In the early 2000's Ed became interested in digital photography and became an excellent photographer. He took many photographic safaris to Hawaii, Alaska, the Oregon coast, Glacier National Park and Arizona & Utah. Several of these trips were with his sister and brother-in-law. At the time of his passing Ed has trips to Iceland and Yosemite scheduled. Ed married and divorced twice. Ed was preceded in death by his parents. Ed is survived by his sister, Elaine Davis (Charles) of Richland, WA, his Godson Craig Maxwell (Cayenne and son William) and many friends and co-workers. Because of the resurgence of COVID a celebration of Ed's life will be held at a later date.

Alon Graybeal
October 8, 1931 - August 15, 2021

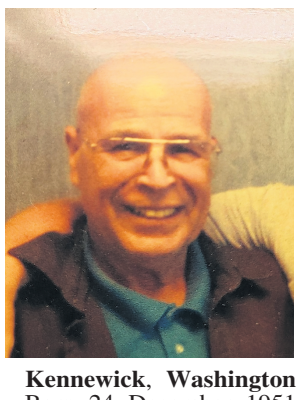


Richland, **Washington** - Alon Gordon Graybeal of Richland, Washington passed away on Sunday, August 15, 2021, at the age of 89. After several months of declining health culminating in a tragic fall at home, Alon died peacefully with his family by his side.

Alon was born in Merna, Nebraska October 8, 1931, to father Glenn Graybeal and mother Dollie (Read) Graybeal. Alon's youth was spent under the shadow of the Great depression and WWII. The family grocery store he spent much of his youth working in was key to the survival of the community during those hard times. A hard worker, he still found time to play the trumpet and captain Merna High School's football team. After graduation he left home to attend Chillicothe Business College in Chillicothe, Missouri. He returned home to marry his high school sweetheart, Lois Maxine Delay, on May 21, 1950. Together, Alon and Lois, tended the family farm until 1956 when they relocated to Richland to join his brother, Bob, working at Hanford. A loving husband and father, Alon proudly referred to himself as "a Cold War Warrior", he worked for General Electric and Battelle performing a variety of work during his 38 year career retiring as a technical specialist in the Materials Sciences Department. After retirement Alon spent his time traveling, golfing, and assisting his children with their many home improvement projects.

Alon was preceded in death by his parents, his brother Earl, his sister Shirley, and his beloved spouse, Lois Maxine (Delay) Graybeal. He is survived by his brother, Robert (Bob); children Terry Graybeal, Pamela Brouns, and Gregory Graybeal; grandchildren Shaunda Brouns, Kylene Brouns, Elizabeth Mitchell, Caroline Spott, Kevin Graybeal, Kristin Wieringa, Jamie Bermudez, and Justin Graybeal; greatgrandchildren Lillian Mitchell, Maxton Mitchell, Elizabeth India Spott, Keawa Brouns-Prince, Makana Brouns-Prince, Kainoa Brouns-Prince, Brandon Brouns, Harper Wieringa, James Wieringa, and Emerson Bermudez.

Daniel Rogers
December 24, 1951 - September 7, 2021



Kennewick, **Washington** - Born 24 December 1951 in Dodge City, Kansas. He passed away on 7 September 2021 at the age of 69. Dan married his High School sweetheart, Ruth, in 1969 and was married for 52 years.

Dan worked as a Cross Connect Specialist at the City of Kennewick, WA in the Water Department for 27 years, and retired in 2015. He was a lifelong lover of racing cars (of which he did for approximately 20 years), playing music on his guitars, fishing, and traveling to Belize and Cabo (with Ruth). He loved his miniature dachshund, Rocky, and would always say he couldn't do things, such as get him a beer, because he didn't have thumbs. He portrayed a tough exterior however his heart was always in a good place. The outpouring of condolences and love from friends and neighbors shows how much he was cared for. Dan's son and daughter want to thank family, friends, and neighbors that took the time to look after him, bring him meals, and keep him company over the years.

He is survived by his wife Ruth, their children Marc Rogers and Shellie Murphy, his 3 grandchildren, Ty Murphy, Tyler Mills, and Madison Murphy. His brothers Doug Rogers (Laura), Jerry Rogers (Julie), and Glen Rogers (Kim), his sisters Sandy Perez (Mario), Sally Rogers, and Kathy Pruitt and many nieces and nephews.

A celebration of life, potluck, will be held on 18 September from 1100AM – 3:00PM, at the Eagles Lodge, 115 N Fruitland St, Kennewick, WA.

Tom Crosier
October 24, 1939 - September 2, 2021

Kennewick, **Washington** - Thomas Leroy Crosier, beloved husband, father, and grandfather passed away early morning, September 2, 2021. He is survived by his wife Mary, daughter Jill, son Thomas and his wife Wendy, and his three granddaughters Sydney, Samantha, and Sasha Crosier. His life tribute can be found at www.lifetributescenter.com

Claude Jr Sutton
January 7, 1933 - September 3, 2021

Kennewick, **Washington** - Claude (Willie) Sutton of Kennewick, WA died September 3, 2021. He was born January 7, 1933 in Sumter, South Carolina to Georgia and Claude Sutton. Claude graduated from Sumter High School in 1951 then served in the National Guard from 1949 to 1951. He then joined the U.S. Air Force and served in Korea in 1953. He was stationed at the Othello Air Base November 1953 to April 1956. Claude married Barbara in June of 1954. He worked at Pepsi Cola from 1957 until February 1995 and was a manager from 1965 to 1995. He was a security guard at Columbia Basin College from 1997 to 2019. Claude's passion was goose hunting (The Dirty Dozen Pepsi Boys) and fishing with son, Scott and friends Bruce, and Jim.

Claude is survived by his wife Barbara of 67 years, daughters, Wendy Bennett and Cynthia Cecil, son Scott Sutton (Michelle), grandson Christopher Sutton (Sara), granddaughter Andria Vivian and 4 great-grandchildren, brother Robert Sutton and wife Linda, nephew Rob Sutton and wife Julie.

He is preceded in death by his parents Georgia and Claude.

Our tears are filling a river, so Willie can fish forever.

Claude will be laid to rest at the Medical Lake VA Cemetery in Medical Lake, WA.

In leu of flowers donations may be made to Chaplaincy Hospice.

Legals

ATTENTION CONSULTANTS
Request for qualifications (RFQ)
Civil Engineering Services for Sylvester Street Safety Improvements
Federal Aid No. HSIP-HLP-3528(030)

The City of Pasco, Washington, (City) Department of Public Works – CIP Engineering is soliciting a Statements of Qualifications (SOQ) from qualified Consultants registered in the State of Washington to perform Civil Engineering Services for the Sylvester Street Safety Improvements Project.

The proposed project will design improvements consisting of road reconfiguration for Sylvester Street between Road 54 and N 3rd Avenue. The existing four-lane roadway segment will be converted to a three-lane segment. Other improvements will include signal upgrades and modification, bicycles lanes, parallel parking, and pedestrian enhancements including new street crossings, rapid flashing beacons, sidewalk, and ADA curb ramp retrofits. This project is estimated to begin November 2021 and both the design and right-of-way (ROW) phases are anticipated to be completed by January 2023.

The selected Consultant shall provide services such as: topographic surveying, preparation of plans, specifications, and estimate (PS&E), public outreach, right-of-way (ROW) acquisition and certification services, preparation and processing of all necessary environmental documents to achieve environmental compliance, and construction administration services.

The selected Consultant will be responsible for following all processes and completing all documentation required to comply with Washington Department of Transportation (WSDOT) and/or Federal Highway Administration (FHWA) requirements.

The selected Consultant's submittals will be evaluated and ranked based on the following criteria: Experience & Qualifications, Scope Understanding & Approach, and Presentation, Organization & Clarity of SOQ Submittal.

The Scope of Work may include the following elements:

Project Management:
- Invoices, team coordination, meetings, tracking budget and schedule, etc.
- Support the City's public outreach services

Design Services:
- Provide topographic surveying.
- Prepare all design documentation including: Plans, Specifications, and Estimate (PS&E) required to conform to FHWA/WSDOT standards.

Environmental Services:
- Prepare and process environmental documentation including but not limited to NEPA and SEPA to achieve complete environmental compliance.

Right-of-Way Services:
- Prepare a Project Funding Estimate (PFE), right-of-way plans, and acquire right-of-way from private properties.
- Assist with acquiring Right-of-Way Certification.

Construction Support:
- Provide bidding support services by assisting in the bidding process and answering bid questions.
- Provide construction support and/or management services, as requested by the City.

The City was awarded funding from the Federal Highway Administration (FHWA) through the Washington State Department of Transportation (WSDOT) as part of the Federal Highway Safety Improvement Program (HSIP). Additional federal funding was also awarded from WSDOT through the State Ped/Bike Program. The selection and award for the contract must comply with all state and federal requirements.

This project has a mandatory Disadvantaged Business Enterprise (DBE) goal of thirteen percent (13%). This goal was established by WSDOT on August 24th, 2021. This project does not have a voluntary Small Business Enterprise (SBE) goal. There is no training hour requirement on this project.

The complete RFQ may be obtained via the City website – http://www.pasco-wa.gov/Bids.aspx . It is the sole responsibility of the Consultant to obtain any RFQ updates or addenda from the City website.

For consideration, Consultants are required to submit either an electronic or hard copy of their SOQ up to the hour of **11:00am, Monday, October 4th, 2021**. Hard copy responses shall be addressed to the City of Pasco – Public Works Department and will be received at the office of the City Clerk, City Hall, 525 North 3rd Avenue, Pasco, Washington. Electronic responses shall be transmitted to wittmand@pasco-wa.gov with a maximum size of 20mb.

Technical questions regarding the scope of this project should be put in writing and directed to Jacob Sevigny, Engineer II, City of Pasco, Public Works, 525 N. 3rd Avenue, PO Box 293, Pasco, WA 99301; email: sevignyj@pasco-wa.gov.

The City of Pasco, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252,42 U.S.C. 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Projects funded wholly or in part by Federal appropriations must comply with Code of Federal Regulations; 24 CFR 570.502, 24 CFR 85.36, 2 CFR 200. All federally-funded projects will be held to federal Equal Employment Opportunity (EEO) requirements. The City of Pasco is an equal opportunity and affirmative action employer. Small, minority, and women-owned businesses are encouraged to submit bids. The City of Pasco in accordance with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act (ADA), commits to nondiscrimination on the basis of disability, in all of its programs and activities. This material can be made available in an alternate format by e-mailing Dustin Wittman at wittmand@pasco-wa.gov or calling (509) 545-3447.

Those submitting Firms determined to be best qualified to undertake the services required under this Request for Qualifications (RFQ) may be invited to make a presentation to the City's interview team.

The City reserves the right to reject any and all responses and to waive technicalities or irregularities, and after careful consideration of all submissions and factors involved make the award to best serve the interests of the City of Pasco.

DATED: September 9, 2021
Publish: September 12, 2021
September 19, 2021
Jacob Sevigny, PE
Engineer II
IPL0040710
Sep 12,19 2021

Integrated Disposal Facility public comment period notification

The Washington State Department of Ecology is providing notification of a 45-day public comment period starting Sept. 13 to Oct. 28, 2021. This comment period will address proposed modifications to the Dangerous Waste Portion for the Treatment, Storage, and Disposal of Dangerous Waste Integrated Disposal Facility (IDF). The Permittees are the U.S Department of Energy, Richland Office and the Central Plateau Cleanup Company LLC. IDF is located on the Hanford Site in southeastern Washington.

What changes are being proposed?

This draft permit modification for the existing IDF Operating Unit Group incorporates new and modified information that includes the addition of three dangerous waste management units:
- Operation of an additional disposal cell
- Storage area
- Treatment area

The draft permit also provides detailed information to support the operation of IDF.

How to comment

Ecology invites you to review and comment on this proposed IDF permit modification. The proposed modification is online at the Nuclear Waste Program's (NWP) public comment page at https://ecology.wa.gov/Waste-Toxics/Nuclear-waste/Public-comment-periods. Copies of the proposed modification are located on the Administrative Record at https://pdw.hanford.gov/ and at the Information Repositories listed on the NWP public comment page.

Please submit comments by **Oct. 28, 2021**. Electronic submission (preferred):
https://nw.ecology.commentinput.com/?id=7FcUQ%20
Mail or hand-deliver to:
Daina McFadden
3100 Port of Benton Blvd
Richland WA 99354
Fax 509-372-7971

Public hearing

A public hearing is not scheduled, but if there is enough interest, we will consider holding one. To request a hearing or for more information, contact:
Daina McFadden
Hanford@ecy.wa.gov
509-372-7950
IPL0040210
Sep 12 2021

FROM PAGE 1B

KRAKEN

offseason has signed Stanley Cup-winning winger Andre Burakovsky, defenseman Justin Schultz and goaltenders Martin Jones and Magnus Hellberg.

"It was a difficult decision to trade Oliver, who has given so much to our organization over the past seven years," Kekalainen said. "However, a move like this needed to be made in order for us to be salary cap compliant after the Johnny Gaudreau and Patrik Laine signings. We are thankful for Oliver's many contributions to our club, on and off the ice."

Also Friday, the Blue Jackets signed Patrik Laine to a long-term deal. The winger re-signed for four years and $34.8 million, a contract that carries an $8.7 million salary cap hit through 2026. The deal allows Columbus to keep the high-scoring winger even after adding top free agent Johnny Gaudreau.

Laine was a point-a-game player last season in his first full year with Columbus. The 24-year-old Finn has 184 goals and 158 assists for 342 points in 431 games NHL regular-season and playoff games with the Blue Jackets and Winnipeg Jets.

FROM PAGE 1B

STORM

Sue Bird, the WNBA's all-time leaders in points and assists, respectively, and gave Taurasi 500 career games, second-most in league history – behind Bird.

Bird – who has announced that she'll retire at the end of the season – and Taurasi (who will become a free agent) played together at UConn before being picked No. 1 overall in the 2002 (Bird) and 2004 (Taurasi) drafts, won seven combined WNBA titles and won five Olympic gold medals together.

Phoenix (12-16) swept the three-game regular-season series with the Storm 3-0 and, with 10 regular season games remaining, moved into a virtual tie with Dallas for the eighth and final playoff spot.

The Mercury set a regular-season record Friday with a reported attendance of 14,162.

Breanna Stewart led Seattle (17-10) with 22 points and 14 rebounds but did most of her damage in the first half. Jewell Loyd added 15 points and Tina Charles added 14 points and 11 rebounds.

Taurasi has hit at least six 3-pointers in a single game 12 times since turning age 35, a WNBA record.

GAME STATS

Subscribers can find up-to-date standings and statistics from the previous day's games in our eEdition by using the section list to jump to 'Xtra Stats' in our app or online at tricityherald.com/eedition.

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Legals

CITY OF RICHLAND, WASHINGTON
CALL FOR BIDS
ITB 22-0005 - STEVENS DRIVE PAVEMENT PRESERVATION
BIDS DUE: AUGUST 2, 2022, 10:00 AM, EXACTLY, PACIFIC LOCAL TIME

Public notice is hereby given that bids will be received for the City of Richland's **STEVENS DRIVE PAVEMENT PRESERVATION** Project by the City of Richland Purchasing Division until the date and time specified above, at which time bids will be opened and read publicly. This project includes improvement of Stevens Drive between Jadwin and University via application of Type 3 microsurfacing for approximately 9000 linear feet (1.7 miles) including crack sealing, removal of striping, installation of new striping, upgrades to street signs, and ADA ramp upgrades and other incidental work in Richland, Washington.
Full notice and complete details of the solicitation are available from www.PublicPurchase.com. There is no charge to register, receive notifications or view and download the documents. All bids shall be submitted electronically using the Public Purchase site. Visit the City of Richland website at www.ci.richland.wa.us under Departments/ Purchasing/Public Purchase for information on how to register. Contact Public Purchase directly if unable to access documents online at support@publicpurchase.com. Online Chat is available from 7:00 a.m. to 4:00 p.m. MT at www.publicpurchase.com top left corner. If unable to reach Public Purchase, contact the City Purchasing Division at 509-942-7710.
The City of Richland in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 200d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, subtitle A, Office of the Secretary, Part 21, nondiscrimination in federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises as defined at 49 CFR Part 26 will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, or sex in consideration for an award.
IPL0080476
Jul 10,17,24 2022

PUBLIC NOTICE

Prosser Memorial Health, 723 Market Street, Prosser, WA 99350, is seeking coverage under the Washington State Department of Ecology's Construction Stormwater NPDES and State Waste Discharge General Permit. The proposed project, Prosser Memorial Health Replacement Hospital, is located at the northeast corner of the intersection of Interstate I-82 and Gap Road in Prosser, Washington, in Benton County.
This project involves approximately 31 acres of soil disturbance for clearing, grubbing, earthwork, constructing utilities, new buildings, and installing pavement and curbs and gutters.
Storm water will discharge to onsite infiltration swales and will be retained onsite. There is a Sunnyside Valley Irrigation District (SVID) ditch which discharges to the Yakima River that traverses through the center of the site.
Any persons desiring to present their views to the Washington State Department of Ecology regarding this application, or interested in Ecology's action on this application, may notify Ecology in writing no later than 30 days of the last date of publication of this notice. Ecology reviews public comments and considers whether discharges from this project would cause a measurable change in receiving water quality, and, if so, whether the project is necessary and in the overriding public interest according to Tier II antidegradation requirements under WAC 173-201A-320.

Comments can be submitted to:
Department of Ecology
Attn: Water Quality Program, Construction Stormwater
P.O. Box 47696
Olympia, WA 98504-7696
IPL0081403
Jul 17,24 2022

ORDINANCE NO. 2022-24,

AN ORDINANCE of the City of Richland, Benton County Washington, Amending Richland Municipal Code Sections 24.14.020, 24.14.040, 24.14.090 and 24.14.100 related to Procedures for Processing Binding Site Plans.
Ordinance available at the City Clerk's Office, 625 Swift Boulevard MS-05, Richland, WA 99352 or 509- 942-7389.
IPL0082378
Jul 24 2022

CITY OF RICHLAND
Public Hearing Regarding Use of 2023
Federal Community Development Block Grant (CDBG) and HOME Investment Partnerships (HOME) Funds

The City of Richland anticipates receiving approximately $297,000 in CDBG and $753,000 in HOME funds for program year 2023 from the U.S. Department of Housing and Urban Development (HUD).
The Planning Commission will hold a public hearing providing an opportunity for citizens to express views and comments on community development and housing needs, benefiting low-and moderate-income persons on the following date and time:
Wednesday, August 24, 2022, at 6:00 P.M.
Richland City Council Chambers
625 Swift Blvd., Richland, WA 99352
The City of Richland 2023 CDBG application will be available on August 8, 2022. Proposals must address a priority need identified in the 2020-2024 Consolidated Plan, be an eligible activity under 24 CFR 570 and meet a national objective as outlined in the application. To receive additional information, an application or technical assistance, contact Toni Lehman, CDBG/HOME Administrator at 509-942-7580 or tlehman@ci.richland.wa.us at least 48 hours before the hearing date.
The application will be available at: www.ci.richland.wa.us/CDBG.
DEADLINE FOR APPLICATIONS: hand or electronically deliver by August 31, 2022, 4:30 P.M. or U.S. Mail - postmarked, August 31, 2022.
The Council Chambers is fully accessible. If you need special accommodations, please contact Toni Lehman, 509-942-7580 or tlehman@ci.richland.wa.us at least 48 hours before the hearing date.
IPL0082525
Jul 24,31 2022

IDF Operating Permit Modification public comment period

Ecology is holding a 45-day public comment period, from July 25 to Sept. 9, 2022, addressing proposed modifications to the *Dangerous Waste Portion for the Treatment, Storage, and Disposal of Dangerous Waste, Integrated Disposal Facility (IDF) Permit*. The permittees are the U.S. Department of Energy (Energy) and the Central Plateau Cleanup Company, LLC, (CPCC). IDF is located on the Hanford Site in southeastern Washington.
Proposed changes
Ecology is reopening our comment period to allow the public to comment on additional changes made based on public comments received during our previous comment period in 2021.
This comment period will address a Class 3 permit modification to the IDF portion of the Dangerous Waste Permit. This modification adds three dangerous waste management units (an additional disposal cell, a storage area, and a treatment area) to the IDF and provides detailed information which supports operation of the IDF.
How to comment
The proposed modification is available for review online at the Nuclear Waste Program's public comment page. https://ecology.wa.gov/Waste-Toxics/Nuclear-waste/Public-comment-periods.
Electronic copies of the proposed modification are also located at the Administrative Record https://pdw.hanford.gov/ and the Information Repositories found on the public comment period page.
Please submit comments by **Sept. 9, 2022**. Electronic submission is preferred.
https://nw.ecology.commentinput.com/?id=fKhkj
Mail or hand-deliver to:
Daina McFadden
3100 Port of Benton Blvd
Richland WA 99354
Fax 509-372-7971
Public hearing
A public hearing is not scheduled, but if there is enough interest, we will consider holding one. To request a hearing or for more information, contact:
Daina McFadden
Hanford@ecy.wa.gov
509-372-7950
IPL0082385
Jul 24 2022

CITY OF RICHLAND
NOTICE OF APPLICATION AND PUBLIC HEARING
(SUP2022-101)

Notice is hereby given Geoff Clark has filed an application on behalf of NorAm Investments, LLC for preliminary plat approval to subdivide a 20.80-acre site into 13 commercial lots referred to as the Preliminary Plat of Veneto Villagio.
Proposal: Develop Gateway Avenue between Ava Way and Trowbridge Blvd to serve the development. The development will also extend Sotto Street to meet the future development of Villa Vista. The plat proposes an average lot size of 61,652 square feet.
Location: The project site is located just west of the Villa Vista preliminary plat and south of Ava Way, Parcel number 1-3298-2BP-4732-022.
Public Hearing: The Richland Hearings Examiner will conduct a public hearing and review of the application on **Thursday, August 18, 2022 at 6:00 p.m.** in the Richland City Hall Council Chambers, 625 Swift Boulevard. All interested parties are invited to attend and present testimony at the public hearing or by visiting the City of Richland website (www.ci.richland.wa.us) and join via Zoom. Copies of the complete application packet, SEPA Checklist and related materials can be obtained by visiting the City of Richland website (www.ci.richland.wa.us).
Environmental Review: The proposal is not subject to specific environmental review. Environmental impacts of Badger Mountain South, a master planned community, has previously been analyzed. The final environmental impact statement and related file information can be viewed at www.ci.richland.wa.us.
Public Comment: Any person desiring to express their views or to be notified of any decisions pertaining to this application should notify Mike Stevens, Planning Manager, 625 Swift Boulevard, MS #35, Richland, WA 99352. Comments may also be emailed to mstevens@ci.richland.wa.us. Written comments should be received no later than 5:00 p.m. on Friday, August 5, 2022, to be incorporated into the staff report. Comments received after that date will be entered into the record at the hearing. Written comment will not be accepted after 6 p.m. on Wednesday, August 17, 2022; however verbal comments may be presented during the public hearing.
Published: Sunday, July 24, 2022
IPL0082452
Jul 24 2022

CITY OF RICHLAND REQUEST FOR QUALIFICATIONS
RFQ No. 22-0065, Horn Rapids Master Plan Update
PROPOSALS DUE: August 18, 2022, 3:00 p.m., EXACTLY, Pacific Local Time

Public notice is hereby given that the City of Richland, Washington is seeking proposals from qualified entities to update the Master Plan for the Horn Rapids Industrial Park, Business Center and Retail Plaza. Detailed information and the proposal documents are available at www.publicpurchase.com, under City of Richland, Washington designated webpage.
Contact Public Purchase directly if unable to access documents online at support@publicpurchase.com. Online Chat is available from 7:00 a.m. to 4:00 p.m. MT at www.publicpurchase.com top left corner. If unable to reach Public Purchase, contact the City Purchasing Division at 509-942-7710.
The City of Richland in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 USC 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally Assisted Programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises as defined at 49 CFR Part 26 will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color national origin, or sex in consideration for an award.
Bidders who are Minority-owned and Women-owned Business Enterprises or Section 3 Business Enterprises are encouraged to submit bids.
Published:
Sunday, July 24, 2022 Tri-City Herald
Purchasing Division
IPL0082478
Jul 24 2022

City of Pasco
NOTICE OF APPLICATION - VARIANCE

Si necesita ayuda para entender este aviso o necesita más información, por favor llame al Departamento de Desarrollo Comunitario y Económico de la Ciudad de Pasco a 509-545-3441.
Proposal: Amanda Lorraine, on behalf of Grace Kitchen, has submitted a Hearing Examiner application for a variance to the Fence design standards to allow barbed wire atop a 6' fence in a C-2 Zoning District at 112 North 2nd Avenue (Parcel #112034192) in Pasco, Washington. The proposal is subject to regulations contained in the Pasco Municipal Code.
Public Comment Period: Written comments submitted to the Community Development Department by 4:00 p.m. on ***10 August 2022*** will be included in the Hearing Examiner's meeting packet. You may also submit comments at the Hearing Examiner meeting advertised below. If you have questions on the proposal, contact the Planning Division at (509) 545-3441 or via e-mail to: adamsj@pasco-wa.gov
Open Record Hearing: The Hearing Examiner will conduct an open record hearing at 6:00 p.m. on ***10 August 2022*** in the Council Chambers in Pasco City Hall at 525 N 3rd Avenue in Pasco, Washington. The Hearing Examiner will consider public testimony concerning the above application at this meeting.
Determination of Completeness: The application has been declared complete for the purpose of processing.
Project Permits Associated with this Proposal: A building permit is associated with this proposal. The building permit will be issued if variance approval is granted.
Estimated Date of the Decision: The Hearing Examiner will make a decision within ten (10) days of the hearing.
Prepared 18 July 2022 by: Jeffrey B. Adams, Associate Planner, PO Box 293 Pasco, WA 99301 (509) 545-3441
To best comply with Governor's Inslee's Emergency Proclamation and Extension regarding Open Public Meetings Act, the City asks all members of the public that would like to comment regarding items on the agenda to fill out a form via the City's website (www.pasco-wa.gov/public-comment) to obtain access information to comment. Requests to comment at the 10 August 2022 Hearing Examiner Meeting, must be received by 4:00 p.m. on the day of the meeting. For further questions, please contact us at the following, Community & Economic Development Department at 509-545-3441, or go to the City of Pasco website @ www.Pasco-WA.gov and click on "Public Notices".
IPL0082587
Jul 24 2022

NOTICE OF APPLICATION AND PUBLIC HEARING
OF THE WALLA WALLA COUNTY
PLANNING COMMISSION

The Walla Walla County Planning Commission will be holding a virtual public hearing to discuss the following application.

- **ZCA21-001 – Yellowhawk Resort WW, LLC, Type III Winery Zoning Code Amendments**

Amend Section 17.16.014 – Permitted Uses Table to make Type III Winery permitted in the Rural Residential 5 (RR-5) district via the conditional use permit process. (*Final Docket Review*)

PUBLIC HEARING INFORMATION
Wednesday, August 3, at 7:00 PM (or as close thereto as possible)
Location (in person): County Public Health and Legislative Building
2nd floor – Commissioners' Chambers
314 West Main Street; Walla Walla, WA
You may also participate in this meeting virtually via Cisco Webex.
Cisco Webex Meeting Link: https://wwco.webex.com/meet/CDD
Call in: 1-408-418-9388
Meeting Number/Access Code: 969 633 053

An agenda, instructions on participating by phone or online, and a staff report, will be available approximately one week prior to the hearing. Contact staff directly for more information about how to participate virtually; if you provide your email address, we can add you to the email distribution list.
The Planning Commission, following the public hearing, will make a recommendation to the Board of County Commissioners (BOCC) at the same meeting or on a date not yet determined. The Planning Commission will be asked to recommend that a proposed amendment be approved, approved with modifications, or denied. The process for review and recommendation of the final docket is described in Walla Walla County Code (WWCC) Section 14.15.070 which outline the criteria for consideration. The BOCC will then review the recommendation at a public hearing, pursuant to WWCC 14.15.070C(2).
Any interested person may comment on this application, receive notice, and participate in any hearings. Persons submitting testimony may participate in the public hearing, request a copy of the final decision, and have rights to appeal the final decision.
Written comments regarding the above-listed applications may be submitted prior to and at the hearing on Wednesday, August 3. Send written comments to the following address:

Walla Walla County Community Development Department
c/o Lauren Prentice, Director
310 W. Poplar Street, Suite 200
Walla Walla, WA 99362
commdev@co.walla-walla.wa.us

FOR MORE INFORMATION: For more information regarding this meeting, please contact the planning staff at 509-524-2610 or commdev@co.walla-walla.wa.us.
Walla Walla County complies with ADA; reasonable accommodation provided with 3 days notice.
IPL0082668
Jul 24 2022

NOTICE OF APPLICATION AND PUBLIC HEARING
OF THE WALLA WALLA COUNTY
PLANNING COMMISSION

The Walla Walla County Planning Commission will be holding a public hearing to discuss the submitted the 2022 Preliminary Docket of Non-County Development Regulations and Comprehensive Plan Amendment Applications which includes one proposal.

- **REZ22-001/CPA22-001 – Landram Hanson Loop Rural Rezone**

Site-specific Rezone and Comprehensive Plan land use map amendment of 10-acres at 3296 Hanson Loop Road (APN 310817510092, 310817510093) from Rural Agriculture 5 (RA-5) to Rural Residential 2 (RR-2). (*Preliminary Docket Review*)

PUBLIC HEARING INFORMATION
Wednesday, August 3, at 7:00 PM (or as close thereto as possible)
Location (in person): County Public Health and Legislative Building
2nd floor – Commissioners' Chambers
314 West Main Street; Walla Walla, WA
You may also participate in this meeting virtually via Cisco Webex.
Cisco Webex Meeting Link: https://wwco.webex.com/meet/CDD
Call in: 1-408-418-9388
Meeting Number/Access Code: 969 633 053

An agenda, instructions on participating by phone or online, and a staff report, will be available approximately one week prior to the hearing. Contact staff directly for more information about how to participate virtually; if you provide your email address, we can add you to the email distribution list.
The Planning Commission, following the public hearing, will make a recommendation to the Board of County Commissioners on whether the above application should be included on the 2022 Final Docket.
The process for establishing the Final Docket is included in Walla Walla County Code (WWCC) Chapters 14.10 and 14.15 which outlines the criteria for consideration. The Board may then adopt the Planning Commission's recommended Final Docket at a regular public meeting without a public hearing pursuant to WWCC Section 14.10.060(E) and 14.15.060(E). Alternatively, if a majority of the Board decides to add or subtract amendments from the recommended Final Docket, another public hearing will be held.
The decision of the Board of County Commissioners to place an amendment on the Final Docket does not constitute a decision that the substance of any proposed amendment should or will be adopted. If placed on the Final Docket by the BOCC, the proposed amendment will be considered at additional public meetings and hearings and reviewed under the State Environmental Policy Act (SEPA).
Written comments regarding the above-listed applications may be submitted prior to and at the hearing on Wednesday, August 3. Send written comments to the following address:

Walla Walla County Community Development Department
c/o Lauren Prentice, Director
310 W. Poplar Street, Suite 200
Walla Walla, WA 99362
commdev@co.walla-walla.wa.us

FOR MORE INFORMATION: For more information regarding this meeting, please contact the planning staff at 509-524-2610 or commdev@co.walla-walla.wa.us.
Walla Walla County complies with ADA; reasonable accommodation provided with 3 days notice.
IPL0082669
Jul 24 2022

CITY OF WEST RICHLAND
NOTICE OF ACCEPTANCE OF WORK
PARADISE WAY EXTENSION PHASE 4 PROJECT

At a regular meeting held on July 19, 2022, the City of West Richland accepted the work completed on the **Paradise Way Extension Phase 4 Project**, under contract entered into August 4, 2021 with Goodman & Mehlenbacher Enterprises, Inc.
Pursuant to RCW 39.08.030, the statutory period for filing of all liens and claims against the retained percentage of payment to the contractor becomes effective on the above date.
IPL0082670
Jul 24 2022

CITY OF WEST RICHLAND
NOTICE OF ACCEPTANCE OF WORK
SR 224 VAN GIESEN IMPROVEMENT PROJECT – PHASE 1

At a regular meeting held on July 19, 2022, the **City of West Richland** accepted the work completed on the **SR 224 Van Giesen Improvement Project - Phase 1**, under contract entered into December 21, 2021 with Ray Poland & Sons, Inc.
Pursuant to RCW 39.08.030, the statutory period for filing of all liens and claims against the retained percentage of payment to the contractor becomes effective on the above date.
IPL0082671
Jul 24 2022

Auctions

Auctions

Abandoned Vehicle Auction Casaday towing 7/28/22 Thursday 9am (10) plus vehicles viewing is 1 hour prior or 1716 w lewis st Pasco wa 99301 Vehicles can be viewed on Craigslist Auctions (Open To Public)

Animals

Dogs

Labradoodle pups vaccinated; potty trained. Price depends on hair type. (509) 392-3393 CottonwoodDoodles@gmail.com

Pet Misc.

Parrot
Parrot 1981/2 Parents moved away from Richland and sold my hand raised Yellow headed parrot Gus. I am searching for him.He was my best friend. Please call or text 302-345-7965 or jendinde@comcast.net

Employment

Employment

Wheat Harvest and Grass Seed Harvest Truck Driver wanted in the Othello Connell area. CDL preferred but not required. Other help around the farm will also be needed.
Email ***Lylekj58@gmail.com*** or call or text 509-347-6033 Lyle Prairie Farms.

Walla Walla Community College (WWCC) is accepting applications to fill a full-time **Administrative Assistant to the Vice President of Instruction** position on the Walla Walla campus. This position's primary responsibility is to provide comprehensive and effective administrative, secretarial, and coordination support to the VPI and ensures administrative tasks and projects are completed with a positive attitude and a high level of efficiency, confidentiality, accuracy, and flexibility. **Qualifications:** Associate degree in Business Administration or closely related field, three years of administrative or supervisory experience and proficiency with Microsoft Office 365 and Zoom. Professional experience may substitute for education requirement at the discretion of the College. Annual salary range: $56,000-$59,000. This position will remain open until filled. For priority consideration, applications should be received by August 1st, 2022. For detailed position description and application procedure please visit the WWCC website at ***https://apptrkr.com/3206135***. WWCC is an equal opportunity employer.

Walla Walla Community College (WWCC) is seeking applicants for a full-time **Fiscal Analyst 1** position at the Walla Walla campus. Employees allocated to this position perform clerical accounting duties in the Business Services department. Qualifications: Associate's Degree in Accounting or related field, two years' Accounts Payable experience, experience in computerized fiscal accounting system and financial data reconcilement, and intermediate skills in Microsoft Office. Professional experience may substitute for education requirement at the discretion of the College. Salary Range: $3,246.00- $4,216/monthly. This position will remain open until filled. For priority consideration, applications should be received by July 24, 2022. For detailed position description, salary information, and application procedure please visit the WWCC website at ***https://apptrkr.com/3252390.*** WWCC is an equal opportunity employer.

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Cleanups, flowerbeds, shrub trimming and hauling. "We aim to Please" 509-851-0318 or 509205-5598

From: McFadden, Daina (ECY)
To: HANFORD-INFO@LISTSERV.ECOLOGY.WA.GOV
Subject: 30-day notice for upcoming IDF public comment period
Date: Friday, August 13, 2021 9:36:58 AM

IDF Operating Permit Modification 30-Day Advance Notice

The Washington State Department of Ecology is providing notification of a 45-day public comment period starting mid to late September. This comment period will address a Class 3 permit modification (8C.2020.1D) to the Integrated Disposal Facility (IDF) Dangerous Waste Permit. This modification adds three dangerous waste management units (an additional disposal cell, a storage area, and a treatment area) to IDF and provides detailed information which supports operation of IDF.

The Permittees are the U.S. Department of Energy Richland Office and Central Plateau Cleanup Company. IDF is located on the Hanford Site in southeastern Washington.

What changes are being proposed?

The proposed modification provides operating details to the following chapters and permit conditions:

- Unit - Specific Permit Conditions
- Addendum A, Part A Form
- Addendum B, Waste Analysis Plan
    - Appendix BA, Quality Assurance Project Plan for IDF Waste Analysis
    - Appendix BB, Waste Stream Descriptions
- Addendum C, Process Information
    - Appendix C1, Phase I Critical Systems Design Report
    - Appendix C2, Critical Systems Table
    - Appendix C3, Design Drawings
    - Appendix C4, Construction Quality Assurance Plans
    - Appendix C5, Facility Response Action Plan
- Addendum D, Groundwater Monitoring Plan
    - Appendix A, Quality Assurance Project Plan
    - Appendix B, Sampling Protocol

    - Appendix C, Well As-Built Diagrams and Proposed Well Locations
- Addendum E, Security
- Addendum F, Preparedness and Prevention
- Addendum G, Personnel Training
- Addendum H, Closure Plan
    - Appendix HA, Sampling and Analysis Plan
    - Appendix HA.a, Visual Sample Plan Report Documentation
- Addendum I, Inspection Plan
- Addendum J, Building Emergency Plan for the Integrated Disposal Facility
- Addendum K, Post-Closure Plan

Public hearing

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

Daina McFadden
Hanford@ecy.wa.gov
509-372-7950

Ecology logo

From: McFadden, Daina (ECY)
To: HANFORD-INFO@LISTSERV.ECOLOGY.WA.GOV
Subject: IDF Public comment period starts today
Date: Monday, September 13, 2021 11:04:33 AM

Integrated Disposal Facility public comment period notification

The Washington State Department of Ecology is providing notification of a 45-day public comment period starting Sept. 13 to Oct. 28, 2021. This comment period will address proposed modifications to the *Dangerous Waste Portion for the Treatment, Storage, and Disposal of Dangerous Waste* Integrated Disposal Facility (IDF). The Permittees are the U.S Department of Energy, Richland Office and the Central Plateau Cleanup Company. IDF is located on the Hanford Site in southeastern Washington.

What changes are being proposed?

This draft permit modification for the existing IDF Operating Unit Group incorporates new and modified information that includes the addition of three dangerous waste management units:

- Operation of an additional disposal cell
- Storage area
- Treatment area

The draft permit also provides detailed information to support the operation of IDF.

How to comment

Ecology invites you to review and comment on this proposed IDF permit modification. The proposed modification is online at the Nuclear Waste Program's public comment page. Copies of the proposed modification are located on the Administrative Record and at Information Repositories.

Please submit comments by **Oct. 28, 2021.** Electronic submission (preferred):

Integrated Disposal Facility Class 3 permit modification

Mail or hand-deliver to:

Daina McFadden
3100 Port of Benton Blvd
Richland WA 99354

Fax 509-372-7971

Public hearing

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

Daina McFadden
Hanford@ecy.wa.gov
509-372-7950

Ecology logo

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From: Washington Department of Ecology
To: McFadden, Daina (ECY)
Subject: IDF Operating Permit Modification 30-Day Advance Notice
Date: Friday, June 24, 2022 11:30:46 AM

IDF Operating Permit Modification

30-Day Advance Notice

Ecology will be holding a 45-day public comment period addressing proposed modifications to the *Dangerous Waste Portion for the Treatment, Storage, and Disposal of Dangerous Waste, Integrated Disposal Facility* (IDF) *Permit* starting in late July 2022. Ecology is reopening our comment period to allow the public to comment on changes made based on our first comment period in 2021.

The permittees are the U.S. Department of Energy Richland Office and Central Plateau Cleanup Company. The IDF is located on the Hanford Site in southeastern Washington.

What changes are being proposed?

This comment period will address a Class 3 permit modification to IDF portion of the Dangerous Waste Permit. This modification adds three dangerous waste management units (an additional disposal cell, a storage area, and a treatment area) to the IDF and provides detailed information which supports operation of the IDF.

Public hearing

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

Daina McFadden
Permit Communication Specialist
Hanford@ecy.wa.gov
509-372-7950

From: Washington Department of Ecology
To: McFadden, Daina (ECY)
Subject: IDF Operating Permit Modification public comment period
Date: Monday, July 25, 2022 10:10:54 AM

IDF Operating Permit Modification

Ecology is holding a 45-day public comment period addressing proposed modifications to the *Dangerous Waste Portion for the Treatment, Storage, and Disposal of Dangerous Waste, Integrated Disposal Facility* (IDF) *Permit.* The permittees are the U.S. Department of Energy (Energy) and the Central Plateau Cleanup Company, LLC, (CPCCo). IDF is located on the Hanford Site in southeastern Washington.

Comment period starts: **July 25, 2022**
Comment period ends: **Sept. 9, 2022**

Proposed changes

Ecology is reopening our comment period to allow the public to comment on additional changes made based on public comments received during our previous comment period in 2021.

This comment period will address a Class 3 permit modification to the IDF portion of the Dangerous Waste Permit. This modification adds three dangerous waste management units (an additional disposal cell, a storage area, and a treatment area) to the IDF and provides detailed information which supports operation of the IDF.

How to comment

The proposed modification is available for review online at the Nuclear Waste Program's public comment page. Electronic copies of the proposed modification are also located at the Administrative Record and Information Repositories.

Please submit comments by **Sept. 9, 2022**. Electronic submission is preferred.

Comment

Mail or hand-deliver to:

Daina McFadden
3100 Port of Benton Blvd
Richland WA 99354

Public hearing

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

Daina McFadden

Permit Communication Specialist

Hanford@ecy.wa.gov

509-372-7950

Washington Department of Ecology - Hanford
Published by Anna Eco Alvarez · 9m ·

A new public comment period began today, involving the Integrated Disposal Facility (IDF). Check it out and provide your input by Sep. 9:
https://ecology.wa.gov/.../Nuclear.../Public-comment-periods

Washington Department of Ecology Hanford Site U.S. EPA, Region 10 U.S. Department of Energy, Office of River Protection

Ecology - Hanford @ecyHanford · 9m

A new public comment period began today, involving the Integrated Disposal Facility (IDF). Check it out and provide your input by Sep. 9:
ecology.wa.gov/Waste-Toxics/N...

IDF Operating Permit Modification public comment period

July 25, 2022 - Sept. 9, 2022

We are holding a 45-day public comment period addressing proposed modifications to the Hanford Dangerous Waste Permit, for the Integrated Disposal Facility (IDF). The permittees are the U.S. Department of Energy (Energy) and the Central Plateau Cleanup Company, LLC, (CPCCo). IDF is located on the Hanford Site in southeastern Washington.

Proposed changes

We are reopening our comment period to allow the public to comment on additional changes made based on public comments received during our previous comment period in 2021.

This comment period will address a Class 3 permit modification to the IDF portion of the Dangerous Waste Permit. This modification adds three dangerous waste management units (an additional disposal cell, a storage area, and a treatment area) to IDF and provides detailed information which supports operation of the facility.

How to comment

Copies of the proposed permit modification and supporting documents are available below, at the Hanford Information Repositories listed at the bottom of this page, and at the Hanford Administrative Record.

Please submit comments by **Sept. 9, 2022,** electronically (preferred), or deliver to:

Daina McFadden
3100 Port of Benton Blvd
Richland WA 99354

Public hearing

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

Daina McFadden
Hanford@ecy.wa.gov
509-372-7950

Documents

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Addendum C - Process Information	Appendix C3 - Design Drawings
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Addendum E - Security	Appendix C5 - Facility Response Action Plan
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Supplemental Information

CQA Report IDF Cell 1 and 2
IDF WAC
IQRPE IDF Cell 2

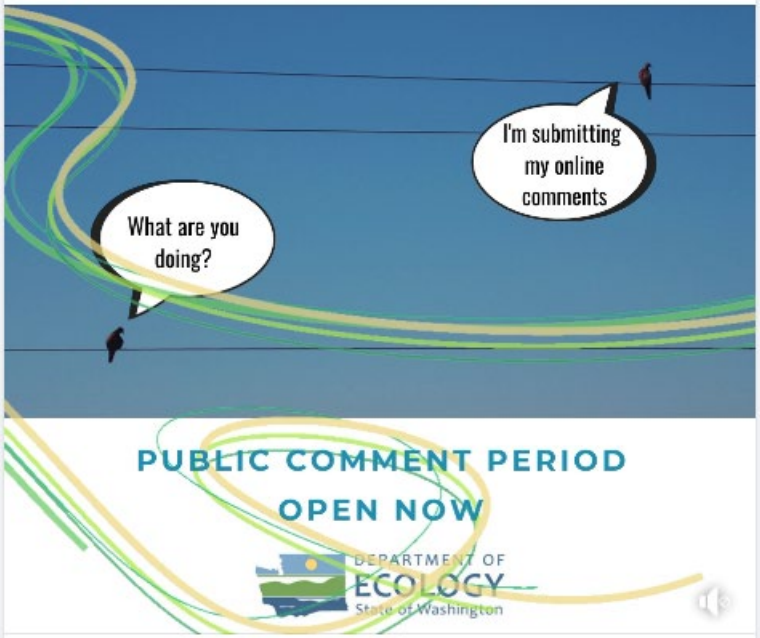
Documents Removed

Chapter 2 - Topographic Map Description
Chapter 6 - Procedures to Prevent Hazards
Chapter 13 - Other Federal and State Laws
Addendum J1 - Pre-active Life Contingency Plan
Addendum J2 - Active Life Contingency Plan

Washington Department of Ecology - Hanford
Published by Ecology Ryan · Just now ·

A new #Hanford public comment period, involving the Integrated Disposal Facility, began today. Check it out and submit your comments by Oct. 28: https://ecology.wa.gov/.../Nuclear.../Public-comment-periods

Washington Department of Ecology Hanford Site U.S. Department of Energy, Office of River Protection U.S. EPA, Region 10



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Ecology - Hanford @ecyHanford · 1m

A new #Hanford public comment period, involving the Integrated Disposal Facility, began today. Check it out and submit your comments by Oct. 28: ecology.wa.gov/Waste-Toxics/N... @EcologyWA @EPAnorthwest @HanfordSite @RiverProtection @EPA @ENERGY

Integrated Disposal Facility permit modification

Sept. 13, 2021 – Oct. 28, 2021

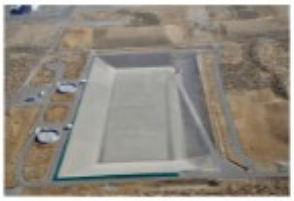
We're holding a 45-day public comment period addressing proposed modifications to the Hanford Dangerous Waste Permit for the Integrated Disposal Facility (IDF). The permittees are the U.S Department of Energy, Richland Office and the Central Plateau Cleanup Company. IDF is located on the Hanford Site in southeastern Washington.

Proposed changes

This draft permit modification for the existing IDF Operating Unit Group 11 incorporates new and modified information that includes the addition of three dangerous waste management units:

- Operation of an additional disposal cell
- Storage area
- Treatment area

The draft permit also provides detailed information to support the operation of IDF.



The Integrated Disposal Facility at Hanford. (Courtesy, U.S. Department of Energy)

Review and comment

Copies of the proposed modification and supporting documents are available below, at the Hanford Information Repositories listed at the bottom of this page, and at the Hanford Administrative Record.

Please submit comments by **Oct. 28, 2021,** electronically (preferred), or deliver to:

Daina McFadden
3100 Port of Benton Blvd
Richland, WA, 99354
Fax 509-372-7971

A public hearing is not scheduled, but if there's enough interest, we will consider holding one. To request a hearing, contact Daina McFadden by email or call 509-372-7950.

Documents

Transmittal Letter
Cover Sheet
Response to Comments
Focus Sheet
Fact Sheet

Permit Files

Unit Specific Conditions	Appendix BA - QA Project Plan for IDF Waste Analysis
Addendum A - Part A	Appendix BB - Waste Stream Descriptions
Addendum B - Waste Analysis Plan	Appendix C1 - Phase I Critical System Design Report
Addendum C - Process Information	Appendix C2 - Critical Systems Table
Addendum D -Groundwater Monitoring Plan	Appendix C3 - Design Drawings
Addendum E - Security	Appendix C4 - Construction Quality Assurance Plans
Addendum F - Preparedness and Prevention	Appendix C5 - Facility Response Action Plan
Addendum G - Personnel Training	Appendix DA - QA Project Plan
Addendum H - Closure Plan	Appendix DB - Sampling Protocol
Addendum I - Inspection Plan	Appendix DC - Well As-Built Diagrams and Proposed Well Locations
Addendum J - Contingency Plan	Appendix HA - Sampling and Analysis Plan
Addendum K - Post Closure	Appendix HA.a - Visual Sampling Plan Report Documentation

Supplemental Information

CQA Report IDF Cell 1 and 2
IDF WAC
IQRPE IDF Cell 2

Documents Removed

Topographic Map Description
Procedures to Prevent Hazards
Other Federal and State Laws
Addendum J.1 Contingency Plan Pre-Active
Addendum J.2 Contingency Plan Active Life

COMMENT PERIOD

Integrated Disposal Facility permit modification

Hanford Dangerous Waste Permit

Sept. 13, 2021 - Oct. 28, 2021, 11:59 p.m.

We're holding a 45-day public comment period addressing proposed modifications to the Hanford Dangerous Waste Permit for the Integrated Disposal Facility (IDF).

The permittees are the U.S Department of Energy, Richland Office and the Central Plateau Cleanup Company. IDF is located on the Hanford Site in southeastern Washington.

Review and comment

The modification proposal and supporting documents are on our Hanford public comment periods page.

Proposed changes

This draft permit modification for the existing IDF Operating Unit Group 11 incorporates new and modified information that includes the addition of three dangerous waste management units:

- Operation of an additional disposal cell
- Storage area
- Treatment area

The draft permit also provides detailed information to support the operation of IDF.

For more information see the Nuclear Waste Program public comment page.

IDF background

Located on the Hanford Site, IDF is an engineered disposal facility geared to receiving immobilized low-activity waste (ILAW) from the Waste Treatment Plant at Hanford, along with other low-level waste from site operations.

IDF is set to be a permanent disposal site for the ILAW containers, along with other mixed low-level waste streams. The facility currently has two disposal cells, which can be expanded at a future date. Leachate will be monitored, collected, and treated as needed.

Comment online

- Use our online comment form
- Submit your comment by email: Hanford@ecy.wa.gov

Comment by mail

Daina McFadden
3100 Port of Benton Blvd
Richland, WA 99354

Questions

Daina McFadden
Permit Communication Specialist
Hanford@ecy.wa.gov
509-372-7950

To request ADA accommodation, contact Ecology's ADA Coordinator by email at ecyadacoordinator@ecy.wa.gov, or call 360-407-6831, 711 (relay service), or 877-833-6341 (TTY). More about our accessibility services.