Hanford Facility RCRA Permit Modification Notification Forms

Part V, Closure Unit 33

PUREX Tanks TK-P4 and TK-40

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Submitted by Co-Operator:

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Hanford Facility RCRA Permit Modification Form	
Unit: ***PUREX Tanks TK-P4 and TK-40***	Permit Part ***Part V, Closure Unit Group 33, Addendum H***

Description of Modification:

Reason for Change: Due to the challenges of addressing CERCLA cleanup in close proximity to the dangerous waste management units, it is necessary to extend the closure schedule which is currently identified in the PUREX Tanks TK-P4 and TK-40 Closure Plan.

Background: The permit modification incorporating closure plan into the Rev 8C permit was approved on August 25, 2021 (C3-PUREX-2016-01, 8C.2021.9F). The original date for closure completion was January 21, 2022. The closure timeline was extended from January 21, 2022, to February 23, 2023, through Class 1 Permit Modification PCN-PUREX-2022-01 (8C.2022.Q1). The closure timeline was subsequently extended from February 23, 2023, to December 21, 2023, through approval of Class 1 Permit Modification PCN-PUREX-2023-01 (8C.2023.Q1).

Change: The changes pertain to the Section H.8 and the associated footnote. Changes to sections H.1.4.2, H.1.4.2.1, H.1.4.2.2, H.1.4.3, H.1.4.3.1, H.1.5 and table H2 had language changed to reflect removal of tanks in present condition for consistency. The table of contents page had page numbers updated. Pursuant to WAC 173-303-610(4)(a), the closure timeline is being extended from December 21, 2023, to December 21, 2026, through this Class 1 Permit Modification (PCN-PUREX-TK-P4-TK-40-2024-01). Attached to this permit change notice are the proposed changes shown in redline/strikeout and a demonstration of continued compliance for dangerous waste management units needing an extension of closure.

This Class 1 Permit Modification extends the closure period to allow incorporation of remaining soil contamination concerns into the 200-CP-1 Operable Unit (OU) and other applicable TPA documents. The extension aligns the closure strategy with ongoing site remediation efforts. Although, the IQRPE certification has been obtained, additional time is needed to complete integration of these elements so that RCRA closure is coordinated with the 200-CP-1 Operable Unit (OU).

On November 20, 2023, the permittees met with Ecology for the purpose of demonstrating/presenting that closure activities will take longer than the currently allowed 180 days to complete (see WAC 173-303-610(4)(c)) and to fulfill the requirement for notification at least 30 days prior to the closure date of December 21,2023. The permittee requests Ecology concurrence that the November 20, 2023 meeting and demonstration fulfilled this requirement as part of this Class 1 modification.

WAC 173-303-830 Modification Class	Class 1	Class 1	Class 2	Class 3
Please mark the Modification Class:		X		

Enter relevant WAC 173-303-830, Appendix I Modification citation number:

D.1 Changes to the closure plan: b. Changes in the closure schedule for any unit, changes in the final closure schedule for the facility, or extension of the closure period, with prior approval of the director . . . .

Modification Approval: ☒ Yes ☐ No

Approved by Ecology:

Digitally signed by Holbrook, Edward (ECY)
Date: 2025.09.22 08:25:02 -07'00'

E. J. Holbrook

Date

Revision Instructions:

Revise PUREX Tanks TK-P4 and TK-40 Closure Plan to incorporate the changes shown herein.

H.1.4.1 PUREX Security

This section describes the signs [WAC 173-303-310(2)(a)], 24-hour surveillance [WAC 173-303-310(2)(b)], and additional artificial and natural barriers [WAC 173-303-310(2)(c)] that are specific to the PUREX facility including the 203A Acid Storage Area and the 211A Chemical Storage Area. These signs and barriers prevent unknowing entry and minimize the possibility for unauthorized entry onto the active portions of the PUREX facility.

H.1.4.1.1 Signs

All signs are written in English and state the following:

- "Danger - Unauthorized Personnel Keep Out."

The signs are legible from a distance of at least 7.6 m (25 ft).

Signs are placed along the perimeter fence around the PUREX facility. Some signs along the fence line are located at perimeter fence gates described in Section H.1.4.1.3. The signs are placed no more than 76.2 m (250 ft) apart along the fence line. Sign inspection frequency listed in Section H.1.5

H.1.4.1.2 24-hour Surveillance System

The PUREX facility is located in the 200 East Area and does not maintain a separate 24-hour surveillance system. The entire Hanford Site is a controlled-access area. 24-hour surveillance information for the Hanford Site is described in Permit Attachment 3, *Security* (WA7890008967).

The 24-hour surveillance system supplies security at the PUREX facility while the gates described in Section H.1.4.1.3 are open.

H.1.4.1.3 Barriers

The PUREX facility is located inside the 200 East Area fence.

In addition, the PUREX facility is surrounded by two separate perimeter fences on the north, west, and south side. A section on the east side of the PUREX facility has a single perimeter fence. The fences are chain link and at least 1.8 m (6 ft) (nominal) in height. In sections with two separate fences, the fences are separated by an isolation zone that is 14 to 50 m (40 to 167 ft) wide.

The PUREX facility fences have the following six gates:

- North Gate (Main Gate), north side of 202A Building (gate for vehicle traffic).
- South Gate (Gate 4), south side of 202A Building (gate for vehicle traffic).
- Gate 3, East side of 202A Building.
- Gate 1, Railroad Gate.
- Gate 2, Railroad Gate.
- Decontamination and Decommissioning (D&D) Gate, north side of 202A Building (gate for vehicle traffic).

Gates 1 and 2 (the railroad gates) and Gate 3 are closed and locked when not in use. The North Gate, the South Gates and the D&D Gate are open during hours when work is performed at the PUREX facility, and these gates are closed and locked at all other hours. Only authorized personnel are issued keys to the locked gates.

H.1.4.2 203A Tank Farm

This facility ~~has~~ consisted of an ~~abovegrade~~above grade tank farm with concrete secondary containment basins. Only ~~one~~ tank TK-P4 ~~is~~ was a DWMU ~~(TK-P4)~~. The tank farm ~~is~~ was located north of the 202A Building and north of the 211A Tank Farm.

H.1.4.2.1 Signs

Prior to removal of Tank TK-P4, s~~S~~igns ~~are~~ were posted at the following locations around the 203A Tank Farm:

- Five signs along the perimeter chain around the 203A Tank Farm and 203A Building:
- Two signs on the south side near the 203A Building.
- One sign on the west side.
- One sign on the north side near the northeast corner.
- One sign at the southeast corner.

H.1.4.2.2 Barriers

The 203A Tank Farm ~~is~~ was located inside the PUREX perimeter fences. Metal posts with a single-chain strand surrounds the perimeter of the tank farm except at the 203A Building.

H.1.4.3 211A Tank Farm

This facility ~~has~~ consisted of an ~~abovegrade~~above grade tank farm with concrete secondary containment basins. Only ~~one~~ tank ~~is a DWMU (~~TK-40 was a DWMU~~)~~. The tank farm is located north of the 202A Building and south of the 203A Tank Farm.

H.1.4.3.1 Signs

Prior to removal of Tank TK-40 s~~S~~igns ~~are~~ were posted at the following locations around the 211A Tank Farm:

- Four signs along the perimeter concrete walls of the secondary containment basins around the four northernmost tanks in the 211A Tank Farm:
  - One sign on the north side.
  - One sign on the west side.
  - One sign on the south side near the southeast corner.
  - One sign on the east side.

H.1.4.3.2 Barriers

The 211A Tank Farm ~~is~~ was located inside the perimeter fences.

H.1.5 Inspection Information

Tanks TK-P4 and TK-40 ~~will be inspected as described in Table H-2 until they are removed.~~have been removed, thus inspection of the tanks is no longer required. Since final RCRA closure will be coordinated with the 200-CP-1 Operable Unit (OU), inspections are described in Table H-2.

Table H-2 TK-P4 and TK-40 Inspection Requirements

Inspection Item	Frequency*	Types of Problems and Acceptable Conditions
PUREX Facility		
203A and 211A Tank Farms Area		
Signage	Annually	Problem: “Danger - Unauthorized Personnel Keep Out” signs, or equivalent signs, are not present or not in satisfactory conditions at locations described in Section H.1.4.1~~2~~.3~~1~~.

Table H-2 TK-P4 and TK-40 Inspection Requirements

Inspection Item	Frequency*	Types of Problems and Acceptable Conditions
		Acceptable condition: Signs are present, not damaged, unobstructed and readable from a distance of 25 ft, or more.
~~Tank conditions~~	~~Annually~~	~~Problem: Major deterioration of the exterior of TK-P4 that could threaten the integrity of the tank.~~ ~~Acceptable conditions: The exterior of TK-P4 has only minor areas of corrosion or other types of deterioration that will not threaten the integrity of the tank.~~
~~Tank conditions~~	~~Annually~~	~~Problem: Major deterioration of TK-P4 as observed by evidence of leaks from the tank.~~ ~~Acceptable conditions: No evidence of leaks from the tank.~~
	~~**211A Tank Farms**~~	
~~Signage~~	~~Annually~~	~~Problem: "Danger- Unauthorized Personnel Keep Out" signs, or equivalent signs, are not present or not in satisfactory conditions at locations described in Section H.1.4.3.1.~~ ~~Acceptable condition: Signs are present, not damaged, unobstructed and readable from a distance of 25 ft, or more.~~
~~Tank conditions~~	~~Annually~~	~~Problem: Major deterioration of the exterior of TK-40 that could threaten the integrity of the tank.~~ ~~Acceptable conditions: The exterior of TK-40 has only minor areas of corrosion or other types of deterioration that will not threaten the integrity of the tank.~~
~~Tank conditions~~	~~Annually~~	~~Problem: Major deterioration of TK-40 as observed by evidence of leaks from the tank.~~ ~~Acceptable conditions: No evidence of leaks from the tank.~~

12-month period ±30 days~~.~~

H.2 GROUNDWATER MONITORING

Tanks TK-40 and TK-P4 will be closed by removal or decontamination, and are not subject to any groundwater monitoring requirements.

H.3 CLOSURE PERFORMANCE STANDARDS

The standards for closure of PUREX Tanks TK-P4 and TK-40 will be in accordance with the requirements of WAC 173-303-610 and WAC 173-303-640, *Tank systems*. The closure performance standards of WAC l73-303-610(2)(a)(i) through (iii) require the owner or operator to close the facility in a manner that will accomplish the following objectives:

- Minimize the need for further maintenance.
- Control, minimize, or eliminate post-closure escape of dangerous waste, dangerous waste constituents, leachate, contaminated runoff, or dangerous waste decomposition products to the ground, surface water, groundwater, or the atmosphere to the extent necessary to protect human health and the environment.
- Return the land to the appearance and use of surrounding land areas.

The laboratory is responsible for maintaining, and having available upon request, the following items:

- Analytical logbook.
- Raw data and QC sample records.
- Standard reference material and/or proficiency test sample data.
- Instrument calibration information.

Records may be stored in either electronic or hardcopy format. Documentation and records, regardless of medium or format, are controlled in accordance with internal work requirements and processes to ensure the accuracy and retrievability of stored records. Records will be kept for 5 years after Ecology approves clean closure confirmation.

H.6.2.7 Revisions to the Sampling and Analysis Plan and Constituents to Be Analyzed

If changes to the SAP are necessary due to unexpected events during closure that will affect sampling, a revision to this SAP will be submitted no later than 30 days after the unexpected event as a RCRA permit modification as required in WAC 173-303-610(3)(b)(iii) and WAC 173-303-830. An unanticipated event would be an event outside the scope of the SAP or a condition that inhibits implementation of the sampling as written.

H.7 CONTINGENT CLOSURE PLAN

A contingent closure plan is not required at this time since the expected outcome is clean closure. If sampling and analysis of the soil underlying Tanks TK-P4 and TK-40 show that the closure performance standards cannot be achieved, a permit modification will be prepared in accordance with WAC 173-303-610(3)(b) and WAC 173-303-830 to modify the closure plan so that RCRA closure is coordinated with the 200-CP-1 OU.

H.8 SCHEDULE FOR CLOSURE

Figure H-6 depicts the closure activities and the expected durations. The schedule for ~~T~~tank removal closure activities will be coordinated with cleanup work for the 200-CP 1 Operable Units~~a~~ as described in letter Determination on Closure Certification for Closure Unit Group 33, PUREX Tanks TK-P4 and TK-40, for the Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste (Site-wide Permit), Part V, WA7890008967.[1] ~~completed within 180 days after approval of the Permit Modification incorporating this closure plan.~~[‡] Should unexpected circumstances arise and an extension to the 180-day closure activity expiration date be deemed necessary, a Class 1 prime Permit Modification request will be submitted to Ecology for approval at least 30 days prior to the 180-day expiration date in accordance with WAC 173-303-610(4)(c) and WAC 173-303-830, Appendix I, *Modifications*.[2] The

[‡1] Letter, E. J. Holbrook, Ecology, to B. T. Vance, DOE, and R. E. Wilkinson, CPCCo, "RE: Determination on Closure Certification for Closure Unit Group 33, PUREX Tanks TK-PK and TK-40, for the *Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste* (Site-wide Permit) Part V, WA7890008967, 25-NWP-051~~m~~ dated March~~Nare~~ 28, 2025, ~~The closure timeline was extended for an additional one year through approval of the Class~~ [‡1] ~~1 Permit Modification, PCN-PUREX-2023-01.~~

[2] The permit modification incorporating this closure plan was approved August 25, 2021 (C3-PUREX-2016-01,8C.2021.9F). The original date for closure completion was January 21, 2022. The closure timeline was extended from January 21, 2022, to February 23, 2023, through Class 1 Permit Modification PCN-PUREX-2022-01 (8C.2022.Q1), The closure timeline was subsequently extended from February 23, 2023, to December 21, 2023, through approval of Class 1 Permit Modification PCN-PUREX-2023-01 (8C.2023.Q1) The closure timeline is extended from December 21, 2023, to December 21, 2026, through approval of Class 1 Permit Modification PCN-PUREX-TKP4-TK40-2024-01. The extension of the closure period is being requested to allow the Permittees sufficient time to incorporate remaining soil contamination from these sites into the 200-CP-1 Operable Unit and related Tri-Party Agreement (TPA) documents. This ensures that final closure actions align with the broader site remediation strategy. While the IQRPE certification has been obtained (as noted in the schedule in Figure H-6), the extension is necessary to maintain permit compliance while the TPA-related activities are completed.