LIQUID EFFLUENT RETENTION FACILITY & 200 AREA EFFLUENT TREATMENT FACILITY
ADDENDUM H
CLOSURE PLAN
CHANGE CONTROL LOG

Change Control Logs ensure that changes to this unit are performed in a methodical, controlled, coordinated, and transparent manner. Each unit addendum will have its own change control log with a modification history table. The "**Modification Number**" represents Ecology's method for tracking the different versions of the permit. This log will serve as an up to date record of modifications and version history of the unit.

Modification History Table

Modification Date	Modification Number
03/10/2021	8C.2020.8F
05/19/2020	8C.2020.6F
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H CLOSURE PLAN

This addendum describes the planned activities and performance standards for closing Liquid Effluent Retention Facility (LERF) and 200 Area Effluent Treatment Facility (ETF).

H.1 Closure Plan

The LERF and 200 Area ETF will be closed by removal or decontamination with respect to dangerous waste contamination that resulted from operation as Treatment, Storage, and Disposal (TSD) units, with closure of LERF occurring first. To facilitate closure, the LERF retention basins are being viewed as consisting of seven components: the covers and primary liner, drainage layer system/bentonite carpet liner, secondary liner, soil/bentonite, internal and/or external piping, ancillary equipment, and concrete basins. To facilitate closure of 200 Area ETF, the 200 Area ETF is being viewed as consisting of six components: tanks, internal and/or external piping, ancillary equipment, concrete floors/dikes/encasements, structures, and soil directly beneath the structure. If it is determined that closure by removal or decontamination is not possible, the closure plan will be modified to address required post closure activities.

Uncontaminated structures will be left for future use or disassembled, dismantled, and removed for disposal. Uncontaminated equipment and structures could include aqueous makeup, Heating, Ventilation, and Air Conditioning (HVAC) and piping, steam condensate and cooling water piping, and the 200 Area ETF Control Room and office areas.

Closure by removal or decontamination requires decontamination or removal and disposal of all dangerous waste, waste residues, contaminated equipment, soil, or other material established in accordance with the removal or decontamination closure performance standards of Washington Administrative Code (WAC) 173-303-610(2). This and future closure plan revisions will provide for compliance with these performance standards.

H.2 Closure Performance Standard

Closure by removal or decontamination, as provided for in this plan based on the requirements of WAC 173-303-610(2), will eliminate future maintenance and will be protective of human health and the environment by removing or reducing chemical contamination at LERF and 200 Area ETF to levels that are below concern with respect to human health and the environment.

This plan proposes to leave clean structures and equipment in place after closure for potential use in future operations. This need will be evaluated at the time of closure.

H.2.1 Closure Standards for Metal Surfaces, Rubber, Tanks, and Concrete

This closure plan proposes use of a “clean debris surface” (defined in the following paragraph) as the clean closure performance standard for the metal surfaces, rubber (i.e., basin covers, liners, etc.), tanks, and concrete that will remain after closure. This approach is consistent with the Washington State Department of Ecology (Ecology) guidance (Publication #94-111, Ecology 2005) for achievement of clean closure. Additionally, adherence to this guidance ensures that all residues have been removed as required by WAC 173-303-640 for closure of the 200 Area ETF tank systems.

The clean debris surface standard is verified visually.

> “Clean debris surface” means the surface, when viewed without magnification, shall be free of all visible contaminated soil and hazardous waste except that residual staining from soil and waste consisting of light shadows, slight streaks, or minor discolorations, and soil and waste in cracks, crevices, and pits may be present provided that such staining and waste and soil in cracks, crevices, and pits shall be limited to no more than 5% of each square inch of surface area. (40 Code of Federal Regulations [CFR] 268.45)

When a physical extraction method is used on concrete, the performance standard is based on removal of the contaminated layer of debris. The physical extraction performance standard for concrete is removal of 0.25 inches of the surface layer and treatment to a clean debris surface. Inspections to verify achievement of a clean debris surface will be performed and documented.

H.2.2 Closure Standards for Piping and Ancillary Equipment

The internal and external piping of both LERF and 200 Area ETF that has contacted dangerous waste will be flushed and drained as part of closure. When practical, ancillary equipment, which has contacted dangerous waste will also be flushed and drained. For piping and ancillary equipment where the contaminated surfaces can be inspected, an inspection will be performed to see if the surfaces meets the clean debris surface standard in 40 CFR 268.45, incorporated by reference by WAC 173-303-140, and can be declared non-dangerous in accordance with WAC 173-303-071(3)(qq). If it is not possible to inspect the contaminated surfaces or meet the clean debris surface performance standard, the particular piping or ancillary equipment of concern will be removed, designated, and disposed of accordingly.

Dangerous and/or mixed-waste materials generated during closure activities will be managed in accordance with WAC 173-303-610(5). Removal of any dangerous wastes or dangerous constituents during partial or final closure will be handled in accordance with applicable requirements of WAC 173-303-610(5).

H.2.3 Closure Standards for Underlying Soils

The LERF retention basins have a leachate collection system that channels the leachate to sumps at the bottom of the basins. The collected liquid is pumped back into the basins, thereby limiting fluid head on the secondary liner. The secondary liner is comprised of several protective layers, including a high-density polyethylene geomembrane and a soil/bentonite admixture. The soil below the LERF only could be contaminated if the layers of the secondary liner had failed. The primary liner and the drainage gravel, geotextile, and geonet between the primary and secondary liners cannot easily be decontaminated. The high-density polyethylene layer of the secondary liner also cannot be decontaminated. These materials will be removed and disposed according to the requirements of WAC 173-303-170. The soil/bentonite admixture will be sampled and analyzed for constituents of concerns according to the sampling and analysis plan developed prior to the time of closure. If the analytical results determine that the constituents of concern are at or below the levels in WAC 173-303-610(2)(b)(i), or background levels for Hanford soil if background is greater, the soil/bentonite admixture and the soil below LERF will be considered clean closed.

Clean closure of soil under the 200 Area ETF will be accomplished by demonstrating that the coated concrete floor kept contaminants from reaching the soil. The coated concrete floor provided secondary containment for all the tanks and process piping. Unless inspections identify potential through-thickness cracks indicating containment failure and a subsequent potential for soil contamination from TSD unit operations, the soil will be considered clean closed. However, if inspections identify such cracks and there have been documented spills in the vicinity, potential soil contamination will be investigated. Soils will be sampled and analyzed for constituents of concern according to the sampling and analysis plan. The sampling and analysis plan will be prepared following the completion of a data quality objectives process in accordance with EPA/600/R-96/055 (QA/G-4), *Data Quality Objectives Process*, as amended. The data quality objectives process will be initiated prior to closure on a schedule to ensure timely closure of LERF. The sampling and analysis plan will be submitted to Ecology as part of a permit modification request meeting the requirements of WAC 173-303-830. The sampling and analysis plan will be prepared consistent with EPA/240/B-01/003 (EPA QA/R-5), *EPA Requirements for Quality Assurance Project Plans*, as amended.

If the soil analytical results determine that the constituents of concern are at or below the levels in WAC 173-303-610(2)(b)(i), or background levels in the Hanford soil if background is greater, the soil will be considered clean closed. If the constituents of concern exceed background levels, the soil will be closed per the standards of WAC 173-303-610(2)(b).

H.3 Closure Activities

At the time of closure, the closure plan will be modified as necessary to reflect current regulation or informational revisions in accordance with WAC 173-303-610(3)(b). If it is determined that clean closure is not possible, the closure plan will be modified to address required post closure activities.

H.3.1 General Closure Activities

The approach to LERF closure is to dispose of accumulated basin aqueous waste by processing the waste through 200 Area ETF. Primary basin liners, covers, drainage gravel, geonets, and secondary High Density Polyethylene (HDPE) liners will be removed, designated, and disposed of as described in Sections H.3.4.1 and H.3.4.2. Any remaining solids (residue) within the basins will also be removed, designated, and disposed of accordingly. Piping associated with LERF closure is intended to be decontaminated, drained, and inspected. Piping that meets the closure standard in Section H.2.2 will be left in place. Piping that does not meet the closure standard, or cannot be inspected, will be disposed of accordingly. Rinsate generated during decontamination also will be disposed of through 200 Area ETF. Sampling will assess whether contamination beneath the secondary HDPE liner has occurred. Contamination above background levels, if present, will be removed or decontaminated to meet the regulatory requirements of WAC 173-303-610(2)(b).

The approach to 200 Area ETF closure is to process any aqueous waste through the effluent treatment system. Any waste, which cannot be treated at 200 Area ETF as the facility is being closed, will be transferred to other TSD units or off-site TSD facility. Piping will be rerouted and temporary piping installed to allow the isolation of tanks and ancillary equipment for draining, decontamination, and closure. Rerouted and temporary piping will be closed in the same manner as process piping. All structures and equipment will be decontaminated to the closure standards in Section H.2.2 or disposed. Piping associated with 200 Area ETF closure is intended to be decontaminated, drained, and inspected. Piping that meets the closure standard in Section H.2.2 will be left in place. Piping that does not meet the closure standard, or cannot be inspected, will be disposed of accordingly. Contamination, if present, will be managed in compliance with regulatory requirements.

Equipment or materials used in performing closure activities will be decontaminated or disposed at a permitted facility.

H.3.2 Constituents of Concern for Closure for the Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility

Using the list of dangerous waste numbers in the Addendum A, "Part A Form," constituents in the final delisting in 40 CFR 261 Appendix IX, sample results from wastes added to LERF and 200 Area ETF, process knowledge and the risk to human health and the environment, the constituents of concern for closure will be determined through the data quality objective process. Based on constituents in wastewater received at LERF from 2000 to 2006 which are present at five percent of their delisting levels or higher, the constituents of concern are:

- Acetone.
- Ammonia.
- Barium.
- Chromium.
- Carbon tetrachloride.
- Fluoride.
- Lead.
- Mercury.
- Methyl ethyl ketone.
- n-Butyl alcohol.
- Total cresols.
- Tributyl phosphate.
- Vanadium.

Arsenic and beryllium are excluded because they are present in Hanford soils and may therefore give a false positive sample result. Constituents of concern vary in each basin. For example, ammonia may be present only in LERF Basin 42. The constituents of concern for each basin will be determined by process knowledge as part of the Data Quality Objectives process for the Sampling and Analysis Plan.

H.3.3 Removing Dangerous Waste

At the start of LERF closure, aqueous waste will be transferred sequentially from each basin to another LERF basin or to 200 Area ETF for treatment.

At a pump rate of about 75 gallons per minute, it will take approximately 60 days to empty a full basin. Basin covers will remain in place to prevent possible wind dispersion of waste until all basin waste has been removed.

All of the aqueous waste inventory at the 200 Area ETF will be processed before closure. Any residue remaining in piping, equipment, or the LERF liner will be removed to an appropriate disposal unit. All containerized waste will be dispositioned. All secondary waste in containers will be transferred to an appropriate TSD unit.

H.3.4 Decontaminating Structures, Equipment, and Soils

This section discusses the activities necessary to implement a clean closure strategy for the LERF and 200 Area ETF.

H.3.4.1 Covers and Primary Liner

The following steps will be performed to close each LERF basin cover and primary liner:

- Wastewater will be removed from the basins and transferred to another LERF basin or to 200 Area ETF. Additional pumps and piping may be installed to empty the basin as low as possible.
- The basin cover will be cut into pieces and disposed in containers.
- As much as practical of the remaining residue within the basins will be removed and transferred to containers, another LERF basin, or 200 Area ETF. Rinsing may be performed to facilitate removal.
- The pipe risers, transfer pump, HDPE primary liner and bentonite carpet liner will be cut into pieces and disposed in containers.

H.3.4.2 Drainage Layer and Secondary Liner

The following steps will be performed to close each LERF basin drainage layer and secondary liner:

- The drainage gravel, geotextile, and geonet will be cut into pieces, and disposed in containers.
- As much as practical of the remaining residue on the secondary liner will be removed and transferred to containers, another LERF basin or 200 Area ETF. Rinsing may be performed to facilitate removal of residue.
- The HDPE liner portion of the secondary liner will be visually inspected for physical damage. This will provide potential sampling locations to determine if the soil/bentonite below the HDPE liner may be clean closed.
- The leachate pump, pump riser, and HDPE liner portion of the secondary liner will be removed, cut into pieces, and disposed in containers.
- The soil/bentonite portion of the secondary liner will be visually inspected for signs of contamination. This will provide potential sampling locations to determine if the soil/bentonite may be clean closed.

Assessment of contamination beneath the LERF's secondary liner will be performed within each basin by sampling the top surface of the 36-inch-thick layer of soil/bentonite. Biased and random location selection will be used to increase the probability of detecting leachate contamination. Some sampling points will be chosen randomly, while others will be chosen where physical damage was noted during the inspection of the secondary HDPE liner and soil/bentonite layer, and in areas where the underlying material porosity and permeability and the hydraulic head would most likely drive any leachate. The leakage rate through the liner would increase toward the bottom of the liner as hydraulic head increases. Any leakage that did occur in the sloped sides could be expected to travel down slope through the geotextile between the primary and secondary liner until reaching the bottom of the liner.

Therefore, the most likely area of contamination would be the soil/bentonite in the leachate sump and at the bottom of the basin. Sampling and disposal objectives will be determined at the time prior to closure activities through the data quality objectives process. The sampling and analysis plan will be prepared following the completion of a data quality objectives process in accordance with EPA/600/R-96/055 (QA/G-4) *Data Quality Objectives Process*, as amended.

The data quality objectives process will be initiated prior to closure on a schedule to ensure timely closure of LERF. The sampling and analysis plan will be submitted to Ecology as part of a permit modification request meeting the requirements of WAC 173-303-830. The sampling and analysis plan will be prepared consistent with EPA/240/B-01/003 (EPA QA/R-5), *EPA Requirements for Quality Assurance Project Plans*, as amended.

Sampling of the soil/bentonite will be performed in accordance with the sampling methods allowed for in WAC 173-303-110(2). Special care will be needed in sampling for volatiles. To aid in ensuring sample integrity, the initial sampling of the soil/bentonite may proceed while the secondary HDPE liner is in the process of being removed.

If no constituents of concern are found above soil closure performance standards (Section H.2.3), no further analysis will be done. If the initial sample analysis indicates liner leakage, additional samples from different depths and locations will be taken to determine the spatial extent of contamination. The soil/bentonite will be removed in the area around the contamination and placed in containers. If contamination is found to extend through the entire depth of the soil/bentonite layer, soil beneath the basin that is contaminated above closure performance standards will also be removed and placed in containers.

H.3.4.3 Tank Systems

The following general steps will be performed to close, each 200 Area ETF tank and ancillary equipment:

- Wastewater and chemical additions to the tank will be isolated or rerouted to a downstream tank.
- Piping and ancillary equipment associated with the tank will be flushed with water and drained to the tank being closed, to another tank, or to containers.
- Wastewater will be removed from the tank and transferred to another tank. Additional pumps and piping may be installed to empty the tank as low as possible.
- All remaining residue at the bottom of the tank will be removed and transferred to another tank or containers. Rinsing may be performed to facilitate removal of residue.
- An initial visual inspection of the tank’s interior and exterior surfaces will be performed to determine the type of flushing that will allow the tank to be clean closed, or whether the tank cannot be clean closed.
- For all tanks, except Load-In Station Tanks 59A-TK-109 and 59A-TK-117, the tank’s surfaces, piping and ancillary equipment will be cleaned by chemical or physical extraction techniques described in 40 CFR 268.45. Flush solution will be transferred to another tank or containers. All flush solution at the bottom of the tank will be removed before visual inspection.

- Due to severe pitting and corrosion, attainment of a clean debris surface is not practical for Load-In Station Tanks 59A-TK-109 and 59A-TK-117. Consequently, these tanks will be removed and disposed of as dangerous waste. The tank, piping, and ancillary equipment will be inspected visually for compliance with the performance standard in Sections H.2.1 and H.2.2.

Closure will begin with the Load-In Station tank 59A-TK-1, surge tank, and other tanks of the main treatment train. The secondary treatment train will operate as long as possible to reduce the volume of flush water requiring disposal. Condensate from the secondary treatment train will be routed to the main treatment train or the verification tanks for storage or treatment.

After rinsing, the tanks will be inspected visually for compliance with the performance standard. Visual inspection might be made remotely using a camera or other device that allows verification of meeting the performance standard.

If any tank surface areas are found not to meet the clean debris surface performance standard, these areas will be decontaminated in-place, or the contaminated portions will be removed, designated, and disposed accordingly. Per 40 CFR 268.45, Table 1 incorporated by reference at WAC 173-303-140, only removal of contaminants from the surface layer is necessary for metal surfaces.

The outside of the tanks also will be inspected for compliance to the performance standard. Any areas found not to meet this performance standard will be decontaminated in-place, or the contaminated portions will be removed, designated, and disposed accordingly.

Before using decontamination solutions on the outside of the tanks, the floor will be inspected for cracks or other openings that could provide a pathway to soil. This inspection will be performed as described in Section H.2.3 in conjunction with mapping of potential through-thickness cracks. Any such cracks will be mapped. The cracks will be sealed before beginning treatment or other engineered containment devices (e.g., portable catch basins, liners) will be used to collect and contain solutions.

Decontamination residues will be collected, designated, and managed as appropriate. If it is not possible to meet the clean closure performance standard, contaminated portions of the tanks could be removed, designated, and disposed of accordingly. The inspections for a clean debris surface will be documented on an inspection record.

H.3.4.4 Internal and External Piping and Ancillary Equipment

The internal piping and ancillary equipment for both LERF and 200 Area ETF, which have contacted dangerous waste will be flushed and drained as part of closure. Any treatment media, such as filters, reverse osmosis membranes, ion exchange resins, will be removed from the ancillary equipment, and disposed of accordingly. Where the contaminated surfaces can be inspected, an inspection will be performed to see if the piping and ancillary equipment meet the clean debris surface standard in 40 CFR 268.45 and can be declared non-dangerous. If it is not possible to meet the clean debris surface standard or the piping or ancillary equipment cannot be inspected, those portions of the piping and ancillary equipment will be removed, designated, and disposed of accordingly.

External piping (transfer lines) associated with LERF and 200 Area ETF consist of below grade and above grade piping. Below grade, piping will be dispositioned at closure consistent with the practices for below grade piping in the 200 Areas at the time of closure consistent with the 200-IS-1 operable unit decisions. Above grade piping will be dispositioned consistent with the provisions for internal piping.

Rinsate from the LERF and 200 Area ETF external piping and LERF internal piping will be processed through 200 Area ETF. Dangerous and/or mixed-waste solutions and materials generated during closure activities, which cannot be treated at 200 Area ETF will be managed in accordance with WAC 173-303-610(5).

H.3.4.5 Concrete

At LERF, the concrete catch basins are located at the northeast corner of each retention basin, where inlet pipes, leachate risers, and transfer pipe risers emerge for the basin. The concrete catch basin is curbed, and coated with a chemical resistant epoxy sealant. The concrete catch basin is sloped so that any leaks or spills from the piping or connections will drain into the basin. At the 200 Area ETF, the coated concrete floor and berm provides secondary containment for all the tanks and process piping.

Closure of concrete at LERF and 200 Area ETF will be performed after the associated tanks, piping, ancillary equipment, and structures have been closed. All concrete will be inspected visually and surveyed before any decontamination. The purpose of the inspection will be twofold: to identify and map any cracks in the concrete that might have allowed contaminants a pathway to the soil below (Section H.2.3), and to identify areas that potentially are contaminated with dangerous waste or dangerous waste residues. The inspection standard will be a clean debris surface as defined in Section H.2.1. The inspection of the concrete for a clean debris surface will be documented on an inspection record. Those areas already meeting the standard can be clean closed as is.

Those potentially contaminated areas will undergo decontamination to meet the clean closure standard of a clean debris surface. The concrete will be washed down; the rinsate collected, designated, and disposed of accordingly. The concrete will be reinspected for a clean debris surface. Concrete surfaces indicated by visual examination, as still being potentially contaminated will have the surface layer removed to a depth of 0.25 inches by scabbing or other approved methods. This will not threaten the environment, even if potential through-thickness cracks had been found during the inspection, because concrete decontamination (scabbing) will not employ liquid solutions that could enter cracks and because scabbing residues will be vacuumed away from cracks as, any residue is generated.

Achievement of a clean debris surface will be documented on an inspection record. Decontamination residues will be collected, designated, and managed as appropriate.

H.3.4.6 Structures

If contaminated with either dangerous or mixed waste constituents, the 200 Area ETF structures will be decontaminated and/or disassembled, if necessary, packaged, and disposed of in accordance with existing land disposal restrictions (WAC 173-303-140).

Closure steps could include the following activities.

- Containerize (as necessary and practicable) and remove any remaining waste.
- Review operating records for spillage incidents and visually inspect storage area surfaces for evidence of contamination or for cracks that could harbor contamination or allow the escape of decontamination solutions. Inspect storage area surfaces for visible evidence of contamination (e.g., discoloration, material degradation, wetness, and odor). If contamination is evident, the affected area(s) will be decontaminated.
- Decontaminate 200 Area ETF walls and floors to minimize the potential for loose contamination and facilitate any required surveys and/or chemical field screening. The structures could be cleaned by water rinse or high-pressure, low-volume steam cleaning coupled with a detergent wash. After decontamination, the walls and floors will be compared to closure performance standards.
- Collect rinsate and manage as dangerous waste for appropriate disposal.
- Secure (lock) personnel entries into building and post doors with appropriate warning signs.

H.3.4.7 Underlying Soils

Clean closure of soil under LERF's secondary liner will be accomplished by demonstrating that the liners and leak detection system kept contaminants from reaching the soil. The secondary liner provided secondary containment for the LERF basins. Unless inspections identify potential leaks, punctures, cracks, or tears indicating containment failure and a subsequent potential for soil contamination from TSD unit operations, the soil will be considered clean closed. However, if inspections identify such leaks, punctures, etc., potential soil contamination will be investigated.

Clean closure of soil under 200 Area ETF will be accomplished by demonstrating that the coated concrete floor kept contaminants from reaching the soil. The coated concrete floor and bermed area provided secondary containment for all the tanks and process piping. Unless inspections identify potential through-thickness cracks indicating containment failure and a subsequent potential for soil contamination from TSD unit operations, the soil will be considered clean closed. However, if inspections identify such cracks and there have been documented spills in the vicinity, potential soil contamination will be investigated.

Where it is possible visually to inspect directly beneath the tanks, a visual inspection will be performed. Where it is not possible visually to inspect beneath the tanks, an evaluation of the tank integrity will be made. The condition of the tank will be evaluated to determine if there was any potential for leakage. If no cracks, severe corrosion, or evidence of leaks is observed, it will be reasoned that mixed or dangerous waste solutions could not have penetrated to the soil directly below the tank.

External piping (transfer lines) between the 242-A Evaporator and LERF and 200 Area ETF are double lined with a leak detection system. If records indicate that no leaks from the primary piping occurred, the soil will be considered clean with respect to Resource Conservation and Recovery Act (RCRA) closure.

Where there is evidence that contamination may have leaked into the soil below tanks, concrete, or the soil/bentonite layer at LERF, the contaminated tank, concrete, or soil/bentonite layer will be removed to allow the underlying soil to be sampled to determine the depth of the contamination. Soil that is contaminated above the closure performance standards in Section H.2.3 will be removed, placed in containers, and disposed accordingly.

H.4 Maximum Waste Inventory

The maximum waste inventory for LERF and 200 Area ETF is in Addendum A.

H.5 Closure of Containers, Tanks, and Surface Impoundments

The following sections cover closure of containers, closure of tanks, and closure of surface impoundments.

H.5.1 Closure of Containers

Containers at 200 Area ETF will be used to contain dangerous waste in the event of a spill, unexpected release, or equipment failure. Containers will be used to accumulate nonradioactive dangerous waste and/or mixed wastes. All containers will be emptied and treated prior to closure of 200 Area ETF. Any containers used to contain dangerous and/or mixed waste at the 200 Area ETF that is generated during the closure process and therefore cannot be treated at 200 Area ETF will be designated and shipped to an on-site TSD unit or off-site TSD facility. Containers of dangerous and/or mixed waste will not be left in the 200 Area ETF after closure.

H.5.2 Closure of Tanks

Clean closure of 200 Area ETF will consist of the removal and disposal of all dangerous waste and the decontamination and/or removal and disposal of equipment which does not meet the performance standards in Section H.2, including tanks listed in Addendum C, Table C-1 and associated ancillary equipment as identified in Addendum C, Table C-8. The 200 Area ETF was designed to incorporate

removable components. This design facilitates closure by allowing complete removal of equipment, which does not meet the performance standards.

H.5.2.1 Load-In Tanks 59A-TK-109 and 59A-TK-117

Tanks 59A-TK-109 and 59A-TK-117 have been isolated from sources of dangerous waste because of severe pitting and corrosion. As such, these tanks are not fit for use; and do not meet the criteria for clean closure. Therefore, Tanks 59A-TK-109 and 59A-TK-117 will be managed as dangerous wastes and will be closed in accordance with this plan. The change in waste streams managed at the 2025ED Load-In Station, capacity of Load-In Station Tank 59A-TK-1, and the ability to unload tankers directly to the LERF basins has negated the need to replace the capacity of Tanks 59A-TK-109 and 59A-TK-117.

Tank 59A-TK-109 is empty and isolated from service; with the inlet valve (59A-MV-109), and outlet valve (59A-MF-105) replaced with blank flanges to isolate the tanks physically from potential sources of dangerous waste.

Tank 59A-TK-117 is empty and isolated from service; with the inlet valve (59A-MV-117) and outlet valve (59A-MV-113) replaced with blank flanges to isolate the tanks physically from potential sources of dangerous waste.

The 2025ED Load-In Station pumps, piping, secondary containment pit, sump, and sump leak detection will remain in service to support the mission of 2025ED Load-In Station.

H.5.2.2 2025EG Backup Load-In Station Unloading Components

Clean closure of 2025EG Load-In Station unloading components (platform, filter housing, and hose and hose transfer line) will consist of the removal and disposal of all dangerous waste and the removal and disposal of the unloading components. The secondary containment pit is shared with 2025ED and will remain in service to support the mission of 2025ED Load-In Station.

H.5.3 Closure of Surface Impoundments

At closure, all of LERF that received regulated waste will be closed in accordance with the requirements of this approved closure plan, which are intended to ensure compliance with the requirements of WAC 173-303-650(6)(a)(i). All equipment, structures, and other material associated with closure of LERF will be decontaminated or removed in accordance with WAC 173-303-610(2). All basin waste and decontamination rinsate will be transferred to 200 Area ETF. Sampling and testing will be conducted as described in Section H.3.4.2.

H.6 Schedule for Closure

Closure of LERF and 200 Area ETF has been extended to 2052 to support tank waste processing. The actual year of closure will depend on the time required for current waste to be processed and what role the LERF and 200 Area ETF will play in processing additional waste generated during future activities in the 200 Areas. Other factors affecting the year of closure include changes in operational requirements, lifetime extension upgrades, and unforeseen factors. When a definite closure date is established, notification of closure will be provided in accordance with Permit Condition II.J.3.

The activities required to complete closure are planned to be accomplished within 180 days in accordance with WAC 173-303-610(4)(b). Should a modified schedule be necessary, a revised schedule will be proposed through the permit modification procedure in accordance with WAC 173-303-610(4)(b).

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