CHAPTER 6.0
PROCEDURES TO PREVENT HAZARDS

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CHAPTER 6.0
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6.0 PROCEDURES TO PREVENT HAZARDS

This chapter discusses security, inspection schedules, preparedness and prevention requirements, preventive procedures, structures, and equipment, and prevention of reaction of ignitable, reactive, and incompatible waste for the 242-A Evaporator.

6.1 Security

Refer to Permit Attachment 3, Security for compliance with Washington Administrative Code (WAC) 173-303-310(2)(b) and (c). The 242-A Evaporator is located within the 200 Area of the Hanford Facility and access is controlled by physical barriers, which complies with WAC 173-303-310(2)(c). To meet the requirements of WAC 173-303-310(2)(a), signs stating *Danger-Unauthorized Personnel Keep Out*, or equivalent language, legible at 7.6 meters (25 feet) or more, are posted at each entrance to the active portion or each entrance that will lead to the active portion. The Permittees will post signs on or near the outside doors to the 242-A Evaporator.

6.1.1 Waiver

A waiver of security procedures and equipment requirements is not requested for the 242-A Evaporator. Therefore, the waiver requirements outlined in WAC 173-303-310(1)(a) and (b) are not applicable.

6.2 Inspection Plan

This section describes the method and schedule for inspections of the 242-A Evaporator. The purpose of inspections is to identify situations that might cause or lead to a release of mixed waste that could pose a threat to human health and the environment. Abnormal conditions identified by an inspection must be corrected on a schedule that prevents hazards to the public and environment.

6.2.1 General Inspection Requirements

This section provides an overview of inspections performed at the 242-A Evaporator. A copy of the inspection plan is kept in the Hanford Facility Operating Record, 242-A Evaporator unit-specific portion. There are three general classes of inspections at the 242-A Evaporator:

- Monitoring of remote instrumentations and alarms are performed by operating personnel in the 242-A Evaporator control room using the monitor control system (MCS) computer.
- Visual inspections of tanks and equipment are performed by operating personnel. Other inspections of 242-A Evaporator equipment are performed as noted in Table 6.1 through Table 6.4.
- Preventive maintenance of equipment and calibration of instruments are performed by maintenance personnel. A computerized tracking system is used to identify and schedule preventive maintenance and calibration activities.

Preventive maintenance and instrument calibrations on certain equipment might not be possible when the 242-A Evaporator is operating. Because of the limited duration of 242-A Evaporator campaigns, these activities are scheduled during outages between campaigns to avoid interference with operating activities. Per Condition II.O.3 inspection of high radiation areas will be addressed on a case-by-case basis.

6.2.1.1 Types of Problems

The 242-A Evaporator inspections include, but are not limited to, the following:

- Condition of tanks and ancillary equipment.
- Condition of secondary containment.
- Evidence of leaks or overflows from tanks, piping, or transfer lines.
- Condition of security equipment.
- Condition of safety, communications, and emergency equipment.

A schedule of inspections, including items to be inspected, problems to look for, frequency of inspections and responsible organization are provided in Tables 6.1 through 6.4.

6.2.1.2 Frequency of Inspections

The frequency of inspections is based on the significance of a failure of the equipment and on regulatory requirements, Hanford Site and industry standards, and experience of the nature and frequency of equipment failures.

- The frequency of inspections for the 242-A Evaporator is given in Tables 6.1 through 6.4.

Leak detectors are functionally checked within 92 days of the start of a campaign and every 92 days thereafter until the campaign is over. The frequency of some alarm monitoring is continuous. This means an operator must be present in the control room to monitor alarm instruments that continuously check for conditions such as leaks and high sump levels. Continuous monitoring is only required when the 242-A Evaporator is processing waste

6.2.2 Tank System Inspections and Corrective Actions

This section discusses the inspections performed on the two tank systems at the 242-A Evaporator: the vapor liquid separator (C-A-1), and the condensate collection tank (TK-C-100). Inspections include secondary containment and leak and overfill prevention equipment.

6.2.2.1 Overfill Prevention

The vapor liquid separator (C-A-1), is equipped with instrumentation that alarms before the tank reaches a level where the tank could overflow or entrain liquid waste into the vacuum condenser system. The alarm annunciates in the control room allowing operating personnel to take immediate action to stop the vapor liquid separator (C-A-1) from overfilling.

The condensate collection tank (TK-C-100), was designed with an overflow line that routes waste to the DST System feed tank 241-AW-102. This design prevents tank overflow to the condenser room.

6.2.2.2 Visual Inspections

Visual inspections of tanks and secondary containments are performed to check for leaks, signs of corrosion or damage, and malfunctioning equipment. The following rooms containing dangerous waste are inspected:

- Condenser room
- Pump room
- Loadout and hot equipment storage room

In addition, the aqueous makeup unit (AMU) and Loading Room are inspected when dangerous waste is present in the room.

The vapor liquid separator (C-A-I) is located in the evaporator room, with a portion of the recirculation loop located in the pump room. Because of the high radiation dose in the evaporator room, visual inspections cannot be performed. Leaks in the evaporator room drain to the pump room sump; monitoring of the pump room sump instrumentation is performed to determine if leaks have occurred. Visual inspection of the pump room and the loadout and hot equipment storage room is performed through the shielding windows in the AMU to constrain personnel radiological exposure to levels that are as low as reasonably achievable (ALARA).

6.2.2.3 Leak Detectors

The sample enclosures in the load out and hot equipment storage room have leak detectors for both the feed and slurry samplers. For information on these systems and their secondary containment, refer to Chapter 4.0, Process Information.

During sampling or maintenance activities associated with the evaporator room, pump room, or loadout and hot equipment storage room, a radiological contamination control curtain may be extended over the load out room to reduce the likelihood of contaminants reaching the environment through the load out door. When extended, the contamination control curtain will limit visibility to the load out and hot equipment storage room from the shielding window on the AMU mezzanine while completing inspections. When this is the case, inspection forms will denote that the containment curtain was extended. Leaks in the evaporator room, pump room, and the loadout and hot equipment storage room drain to the pump room sump. The sump high-level alarm serves as a leak detector for these rooms. For information on the rooms and their drain systems, refer to Chapter 4.0, Process Information.

The PC-5000 transfer line may be continuously monitored during transfers by an electronic leak detection system (Chapter 4.0, Process Information) or visually inspected at the encasement catch tank (TK-PC-101) in the Liquid Effluent Retention Facility (LERF) catch basin (242AL-43). The leak detection system alarms are monitored in the 242-A Evaporator Control Room on the Monitoring and Control System (Chapter 4.0, Process Information). When necessary, visual inspections of the PC-5000 transfer line encasement are administratively controlled by the 242-A Evaporator Shift Manager and occur at a minimum once every 24 hours during waste water transfers through the PC-5000 transfer line to ensure compliance with WAC 173-303-640(4)(c)(iii). Visual inspection for leaks from the PC-5000 transfer line are performed by 242-A Evaporator Operations, by looking for signs of any liquid not attributed to rain/precipitation at the encasement catch tank (TK-PC-101). If any liquid is observed the 242-A Evaporator Shift Manager is notified to take corrective actions.

6.2.2.4 Alternative Leak Detection during Electrical/Ventilation Outages

As part of maintenance or system upgrades, the need to secure electrical power or ventilation to the 242-A Evaporator sometimes becomes necessary. This includes activities such as, but not limited to: cleaning and inspection of the motor control centers (MCCs) for distributing electrical power to the systems at the 242-A Evaporator, ventilation system maintenance and upgrades. Planned electrical or ventilation outages are performed during periods when Double Shell Tank System waste is not being processed.

During times when access is limited as a result of electrical or ventilation outages, performance of daily inspections specified in Table 6.1 may be impacted. When impacted, an alternative method of leak detection is implemented for the condenser room, and the inspections are suspended in the pump room, loadout and hot equipment storage room, and the loading room.

When impacted in the condenser room, a camera will be placed above the floor drain to detect the presence of leaks or spills. The process condensate collection tank (TK-C-100), located in the condenser room, is the only tank storing dangerous waste on a routine basis. It is not normal to allow personnel access into the condenser room during extended electrical or ventilation outages unless maintenance activities or upgrades require entry. If required, the camera and subsequent television monitor will be provided electrical power via an alternative source. Operators will complete their daily observations for leaks or spills using this method for the condenser room. Facility personnel will document the use of this alternative method in the Hanford Facility Operating Record, 242-A Evaporator unit specific portion.

For the pump room, loadout and hot equipment storage room, and the loading room, these rooms do not have the capability for a camera so that inspections are suspended during maintenance activities affecting the electrical power supply to the overhead lighting.

Performance of Table 6.1 daily inspections is not possible. Storage of mixed waste does not occur in these rooms because systems which manage mixed waste within the pump room and the loadout and hot equipment storage room are flushed and gravity drained to the extent possible after each campaign. Should any remaining liquid leak from primary containment; it is captured by the secondary containment system and routed to the pump room sump and ultimately to the 241-AW-102 DST System feed tank. Quantities of liquid sufficient to reach 241-AW-102 would cause a change in tank level. Facility personnel will document when inspections cannot be performed due to electrical outages in the Hanford Facility Operating Record, 242-A Evaporator unit specific portion.

The process described in the preceding paragraphs of this section may also be implemented when external events cause electrical or ventilation outages.

6.2.2.5 Cathodic Protection

Cathodic protection is not required for the equipment within the 242-A facility boundaries. The only portion of the system, which is underground, is the PC-5000 transfer line. The PC-5000 transfer line is constructed of fiberglass.

6.2.2.6 Tank Assessments

The IARs were issued in 1998 and 2008. The frequency and nature of these assessments are discussed in Chapter 4.0, Process Information.

6.2.3 Storage of Reactive and Ignitable Wastes

A Fire Protection Engineer (FPE) performs the annual ignitable and reactive waste inspection of the 242-A Evaporator. The inspection record includes the date and time of the inspection, the name of the professional inspector, a notation of the observations made, and any remedial actions which were taken as a result of the inspection. The completed inspection record is included in the Hanford Facility Operating Record, 242-A Evaporator unit-specific portion.

6.2.4 Air Emissions Control and Detection Inspections

The process vent at the 242-A Evaporator is subject to 40 CFR 264, Subpart AA, which requires organic emissions be limited to 1.4 kilograms (3 pounds) per hour, and 2.8 mega grams (3.1 tons) per year, or controls be installed to reduce organic emissions by 95 percent. Organic concentrations in the waste processed at the 242-A Evaporator are limited to ensure the values of 1.4 kilograms (3 pounds) per hour and 2.8 mega grams (3.1 tons) per year are not exceeded. Therefore, no emission control devices are installed on the 242-A Evaporator vessel ventilation system and no inspections are required (Chapter 4.0, Process Information).

6.2.5 Inspection Logs

Visual inspections (refer to Tables 6.1-6.4) are performed using inspection log sheets (also called round sheets) that outline frequency, the components to inspect, operating conditions and ranges, and types of problems. Log sheets are kept in the 242-A Evaporator control room. Inspectors record the following information:

- Date and time of the visual inspection.
- Printed name and signature of the person performing the inspection.
- Notations of the observations made, including space for writing comments.
- An account of spills or discharges in accordance with WAC 173-303-145.

Completed log sheets are reviewed and approved by the shift supervisor, collected, and stored for at least 5 years.

Maintenance inspections are performed as part of the maintenance job control system. After completion, the maintenance documentation is reviewed and signed.

6.2.6 Schedule for Remedial Action for Problems Revealed

If while performing a visual inspection (Table 6.1), a leak or spill is discovered, 242-A Evaporator management responds immediately per Chapter 7.0, Contingency Plan. Action is taken to stop the leak and determine the cause. The waste is removed from the secondary containment within 24 hours or in a timely manner that prevents harm to human health and the environment. The specific actions for the pump room sump are described in Chapter 4.0, Process Information.

If an alarm activates during inspections, an operator responds immediately and implements appropriate actions.

If an inspection identifies equipment that is missing, damaged, or not operating properly, the operator records the problem on a deficiency log in the 242-A Evaporator control room. Repair work is prioritized by 242-A Evaporator management to mitigate health and environmental risks.

6.3 Preparedness and Prevention Requirements

The following sections document the preparedness and prevention measures taken at the 242-A Evaporator.

6.3.1 Equipment Requirements

The following sections describe the internal and external communications and emergency equipment located at the 242-A Evaporator that can be activated by the 242-A Evaporator Building Emergency Director (BED). Hanford Facility-wide equipment is identified in Permit Attachment 4, *Hanford Emergency Management Plan* (DOE/RL-94-02).

6.3.2 Internal Communications

The 242-A Evaporator is equipped with internal communication systems to provide immediate emergency instruction to personnel. The onsite communication systems at the 242-A Evaporator include telephones, hand-held two-way radios, a public address system, and alarm systems. The telephone and radio systems provide for internal and external communication. Alarm systems allow personnel to appropriately respond to various emergencies, including building evacuations, take cover events, fires and/or explosions. The locations of telephones, public address systems, and alarms are given in the Chapter 7.0, Contingency Plan.

Immediate emergency instruction to personnel is provided by a public address system using speaker horns and speakers located throughout the 242-A and 242-AB Buildings and outside.

6.3.2.1 External Communications

The 242-A Evaporator is equipped with devices for summoning emergency assistance from the Hanford Fire Department, the Hazardous Materials Response Team, and/or Hanford Patrol, as necessary. External communication to summon emergency assistance is made by using a telephone communication system, fire alarm pull boxes, or hand-held radio as described in Permit Attachment 4, *Hanford Emergency Management Plan*, (DOE/RL-94-02). These devices are provided throughout the 242-A Evaporator.

During certain periods, only one operator may be available within the 200 East plateau. This operator has access to external communication using telephones located throughout the building.

6.3.2.2 Emergency Equipment

Emergency equipment is available throughout the 242-A Building. The locations of emergency equipment are provided in Chapter 7.0, Contingency Plan.

Major fire damage is unlikely at the 242-A Evaporator because of the concrete construction and because the amount of combustible material is minimized. Temperature activated water sprinkler systems, emergency lights, fire alarms pull boxes, and fire extinguishers are located throughout the 242-A Evaporator. The 242-A Evaporator relies primarily on the Hanford Fire Department to respond to fires and other emergencies as described in Permit Attachment 4, *Hanford Emergency Management Plan*, (DOE/RL-94-02). The Hanford Fire Department is capable of providing rapid response to fires within the 200 East Area.

Safety showers are used to decontaminate personnel. Water for these devices is supplied from the sanitary water system.

Spill kits are used to provide spill control measures. An inventory of the equipment in the spill kit is included inside the cabinet. The spill kit seal is checked monthly to ensure the spill kit has not been used. If used, the spill kit will be replenished by the next monthly inspection and a new seal applied.

If items are unavailable, then this will be noted on the inspection sheet and the kit will be left unsealed until inventory items are replenished.

The 242-A Evaporator operating personnel are trained in the use of emergency equipment (Chapter 8.0, Personnel Training).

6.3.2.3 Water for Fire Control

Water for fire protection is supplied from the 200 East Area raw water system. The water distribution system is sized to provide adequate volume and pressure to supply firefighting needs under normal and emergency conditions. A fire hydrant is located in the immediate proximity of the 242-A Building.

In the event that the sprinkler system at the 242-A Evaporator does not put out a fire, or the sprinkler system is damaged during an accident, the Hanford Fire Department fire station will provide equipment as described in Permit Attachment 4, *Hanford Emergency Management Plan (DOE/RL-94-02)*.

6.3.3 Spacing Requirement

Sufficient space is maintained on the exterior of the 242-A Evaporator to allow access of personnel and equipment responding to fires, spills, or other emergencies. Unobstructed fire lanes run from Fourth Street and Canton Avenue to the 242-A Building main entrance to allow emergency vehicle access to the main entrance and the nearby fire hydrant.

The 242-A Evaporator interior space is designed to allow access by emergency response personnel while maintaining barriers to contain releases of gaseous or liquid waste and hazardous substances as defined in WAC 173-303-040. Exit (egress) paths in the rooms containing dangerous waste are checked daily to ensure the walkways have not been obstructed.

6.4 Preventive Procedures, Structures, and Equipment

The following sections describe preventive procedures, structures, and equipment.

6.4.1 Loading and Unloading Operations

Loading and unloading operations, as described in WAC 173-303-395(4), do not take place at the 242-A Evaporator. Liquid mixed waste is transferred only by pipeline.

6.4.2 Runoff

Liquid waste handling at the 242-A Evaporator occurs within tank systems with secondary containment. Rooms containing mixed waste have drains that route to either the pump room sump or the DST System feed tank, 241-AW-102. The pump room sump overflows to the DST System feed tank as well. Therefore, run-off from a major leak, such as a break in a large water line within the 242-A Building, would be contained within the 242-A Evaporator or drained to the DST System feed tank 241-AW-102. Refer to Chapter 4.0, Process Information for information on secondary containment and drain systems.

6.4.3 Water Supplies

Raw and sanitary water are supplied to the 242-A Evaporator via separate underground lines. Raw water is filtered to prevent organisms and other debris from clogging valves, fire hydrants, and other equipment. Sanitary water is filtered and treated before distribution through a piping system separate from the raw water system.

The raw water supply to the 242-A Evaporator enters the 242-A-81 Water Service Building, passing through a strainer and backflow preventer before entering the facility. The backflow preventer ensures contaminated water cannot flow back into the raw water system. A second backflow preventer is installed in the 242-A Evaporator on the raw water supply line connecting with the condensate recycle line. This system allows either raw water or process condensate to be used for the pump seal water and deentrainment pad spray water without risk of contamination of the raw water system.

The sanitary water system provides water to the lunchroom, drinking fountains, men's and women's change rooms, safety showers, and supply ventilation system air washers. There are no connections between sanitary water and any system or piping containing mixed waste.

6.4.4 Equipment and Power Failures

Backup power is provided by a diesel generator. The diesel motor starts automatically on loss of electrical power and has sufficient fuel to operate the generator, if needed, to safely shut down the evaporator process. An uninterruptible power supply system also is provided to allow continued operation of the MCS computer to ensure uninterrupted monitoring until the backup generator is fully on line.

The 242-A Evaporator is designed to mitigate the effects of failure of a major piece of equipment. In general, the evaporator process can be shut down and the vapor liquid separator gravity drained to the DST System feed tank, 241-AW-102, in the event of equipment failure. The process condensate collection tank (TK-C-100), is designed to overflow to DST System feed tank 241-AW-102. This mitigates failure of the process condensate pump used to transfer the process condensate to LERF.

Response to loss of utilities is discussed in more detail in Chapter 7.0, Contingency Plan.

6.4.5 Personnel Exposure

Design, administrative controls, and personal protective equipment are used at the 242-A Evaporator to prevent undue exposure of personnel to mixed waste.

The following features were incorporated into the 242-A Evaporator design to minimize personnel exposure.

- The 242-A Evaporator is designed for remote operation of equipment containing highly radioactive solutions such as waste feed and slurry. These solutions usually are present only in the pump room and evaporator room, which are heavily shielded and routinely are not entered by operating personnel.
- The 242-A Building ventilation system is designed to provide air flow from uncontaminated zones to progressively more contaminated zones.
- Emergency lighting devices are located strategically throughout the 242-A Evaporator.
- Eyewash stations and safety showers are located as identified in Chapter 7.0, Contingency Plan.
- Methods for decontaminating vessels and equipment are available to reduce personnel exposure if entry for maintenance activity is required.
- Offices, control room, change rooms, and lunchroom are situated to minimize casual exposure of personnel.

All operations are conducted so employee exposure to mixed waste are maintained as low as reasonably achievable (ALARA). Exposures are minimized by engineering or administrative controls with protective gear used where such controls are not practical. Before the start of any operation that might expose personnel to the risk of injury or contamination, a review of the operation is performed to ensure the nature of hazards that might be encountered are considered and that appropriate protective gear is selected. Administrative procedures dictate the level of protective clothing worn and depend on the location within the 242-A Evaporator and the nature of the activity being performed.

6.5 Prevention of Reaction of Ignitable, Reactive, and Incompatible Waste

The following sections describe prevention of reaction of ignitable, reactive, and incompatible waste.

6.5.1 Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Waste

Administrative processes are designed to prevent the ignition or reaction of waste at the 242-A Evaporator. The precautions include the following:

- Analysis is performed on candidate waste in the DST System to check that there are no exothermic reactions when the waste is heated and that there will be no adverse effects due to mixing the contents of different waste tanks in the DST System feed tank and evaporator vessel (refer to Chapter 3.0, Waste Analysis Plan).
- Sample analysis of the candidate feed tank waste in the DST System includes a surface sample to identify the presence of a separable organic layer that might be ignitable. Refer to Chapter 3.0, Waste Analysis Plan for addressing a separable organic layer. The condensate collection tank (TK-C-100), is equipped with instrumentation to detect the presence of a separable organic phase. If a separate organic phase is detected, the tank is allowed to overflow, transferring the organic phase to the DST System feed tank 241-AW-102.
- The condensate collection tank (TK-C-100) is overflowed to the DST System during each campaign to prevent the possibility of accumulating immiscible organics in the condensate waste tank.
- The vapor liquid separator (C-A-1) and the condensate tank are drained and flushed before any welding is performed.

6.5.2 Precautions for Handling Ignitable or Reactive Waste and Mixing of Incompatible Waste

Waste received at the 242-A Evaporator is protected from materials or conditions that might cause the waste to ignite or react. Much of the waste handling is done remotely to reduce the risk to operating personnel. For precautions taken to prevent the ignition or reaction of waste, refer to Section 6.5.1.

The constituents in the waste received at the 242-A Evaporator that are ignitable or reactive are not very volatile. Therefore, the evaporation process renders the waste that is evaporated (i.e., the process condensate) neither ignitable nor reactive.

1 **Table 6.1. Visual Inspection Schedule for Tanks, Piping, and Rooms**

Item	Inspection	Frequency[1]
Tank and Piping Inspection		
Condensate collection (TK-C-100) tank and piping	• Inspect piping for leaks or corrosion	Daily
Room Inspections		
AMU Mezzanine	• Inspect piping for leaks or corrosion • Inspect floor for spills or damage • Inspect for equipment malfunctions • Inspect for housekeeping	Daily[2]
Pump room	• Inspect piping for leaks or corrosion • Inspect floor for spills or damage • Inspect for equipment malfunctions • Inspect for housekeeping • Monitor pump room sump for overflow	Daily[3]
Loadout and hot equipment storage room	• Inspect piping for leaks or corrosion • Monitor pump room sump and inspect floor for spills or damage • Inspect for housekeeping	Daily[3]
Loading room	• Inspect for housekeeping • Monitor drains	Daily[2 3,4]
Condenser room	• Inspect tanks and piping for leaks or corrosion • Inspect floors for spills or damage • Inspect for equipment malfunctions • Inspect for housekeeping	Daily
IX column [5] room	• Inspect piping for leaks or corrosion • Inspect floor for spills or damage	Daily[6]

2

[1] Daily: Once each calendar day
2 When dangerous waste is present
3 Use viewing window in AMU Mezzanine to perform inspections except for the pump room which uses the ground floor window
[4] Denote use of contamination control curtain when extended
[5] IX column was removed in 2003. The remaining piping has been drained and isolated.
[6] Surveillance is only required if the piping is returned to service and dangerous waste is reintroduced to the piping

Table 6.2. Inspection Schedule of Safety, Security, and Emergency Equipment

Item	Inspection	Frequency[1]
Security		
Building external doors	Verify external doors are closed and locked[2]	Daily
Posted warning signs	Verify signs are present, legible, and visible at 7.6 meters (25 feet)	Weekly
Communications		
Radios	Verify radios are operable and batteries are charged	Monthly
Telephones	Verify telephones are operable	Quarterly
Intercom/public address system	Verify systems are working properly	Quarterly
Emergency Equipment		
Safety showers/ eyewash station	Verify operability	Monthly
Emergency lighting	Verify operability	Monthly
Fire extinguishers	Verify fire extinguishers are in their proper location	Monthly
Spill kit	Verify the spill kit is present and that the seal is intact.	Monthly
Personal protective clothing	Verify availability	Weekly
Respirators	Verify availability and shelf life	Monthly

[1] Daily: Once each calendar day
Weekly: Once each calendar week
Monthly: Once each calendar month
Quarterly: Once each quarter, not to exceed 124 days

[2] Entrances to office areas are allowed to be unlocked

1 **Table 6.3. Inspection Schedule for Alarm Monitoring**

Item	Inspection	Frequency[1]
Overfill Protection		
Vapor liquid separator (C-A-1): WFSH-CA11 WFSH-CA12	Monitor for vapor liquid separator high level. Surveillance required only when solution is in the vapor liquid separator.	Continuously
Leak Detection		
Sampler lines: LDS-SMPL1 LDS-SMPL2	Monitor feed and slurry sampler lines for leaks. Surveillance required only during feed or slurry sampling.	Continuously
Pump room sump: WFI-SUMP1	Monitor for leaks in the evaporator room, pump room, load out and hot equipment storage room and loading room. These rooms drain to the pump room sump. Surveillance required only when waste solution is present in the rooms listed.	Continuously

[1] Continuously: an operator must be present in the control room to respond to alarms.

Table 6.4. Inspection Schedule for Maintenance and Other Inspections

Item	Inspection	Frequency[1]
Instrumentation Functional Checks and Calibrations		
Leak detectors	Perform leak detector functional checks.	Within 92 days of campaign startup and every 92 days thereafter until the campaign is over
Vapor liquid separator (C-A-1) high level alarms: WFSH-CA11 WFSH-CA12	Perform calibrations of loop instruments.	Annually
Pump room sump level: WFI-SUMP1	Perform calibrations of loop instruments.	Annually
Backup Electrical Equipment		
Diesel generator	Verify operability.	Monthly
Uninterruptible power supply	Verify output voltage and inspect battery for signs of damage or tampering.	Annually
Fire Systems		
Fire suppressant and notification systems (i.e., sprinkler system and fire alarm pull boxes)	Water flow alarm tests of the sprinkler system to ensure the operation of a single sprinkler head will transmit an alarm, and that any of the manual fire alarm boxes will properly transmit an alarm signal.	Annually
Visual inspection of the physical condition of the sprinkler system, testing, and calibration of smoke detectors, and testing of heat detectors	A visual inspection of the sprinkler system to ensure system integrity as well as the required testing and calibration of detectors to ensure functionality. A flow test at the sprinkler system is performed to ensure proper flow to the system riser.	Biennial
Annual ignitable and reactive waste inspection	Inspect areas where ignitable or reactive wastes are permitted to be stored per WAC 173-303-395(1)(d).	Annually

[1] Continuously: an operator must be present in the control room to respond to alarms.
Monthly: Once each calendar month
Annually: Once each calendar year, not to exceed 365 days
Biennial Once every 2 years, not to exceed 730 days