

**LIQUID EFFLUENT RETENTION FACILITY & 200 AREA EFFLUENT TREATMENT FACILITY
ADDENDUM I
INSPECTION REQUIREMENTS
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
06/13/2022	8C.2021.13F
09/23/2021	8C.2021.2F
06/28/2021	8C.2021.7F
03/10/2021	8C.2020.8F
05/19/2020	8C.2020.6F
04/30/2019	PCN-LERF/ETF-2019-01 (8C.2019.Q2)
01/23/2018	PCN-LERF/ETF-2017-02 (8C.2018.Q1)
10/25/2017	8C.2017.3F
08/25/2016	8C.2016.Q2

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**LIQUID EFFLUENT RETENTION FACILITY & 200 AREA EFFLUENT TREATMENT FACILITY
ADDENDUM I
INSPECTION REQUIREMENTS**

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ADDENDUM I
INSPECTION REQUIREMENTS

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15
16
17
18
19
20

TABLE OF CONTENTS

I. INSPECTION REQUIREMENTS 5

I.1 Inspection Plan..... 5

I.1.1 General Inspection Requirements 5

I.1.2 Specific Process Inspections 6

I.1.3 Inspection Log 8

I.1.4 Storage of Ignitable or Reactive Wastes 9

I.1.5 Instrumentation Monitoring 12

TABLES

Table I-1 Visual Inspection Schedule for the Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility..... 9

Table I-2 Inspection Plan for Instrumentation Monitoring 12

1
2
3
4
5

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1 **I. INSPECTION REQUIREMENTS**

2 **I.1 Inspection Plan**

3 This addendum describes the method and schedule for inspections of the Liquid Effluent Retention
4 Facility (LERF) and 200 Area Effluent Treatment Facility (ETF). The purpose of inspections is to help
5 ensure that situations do not exist that might cause or lead to the release of dangerous and/or mixed waste
6 that could pose a threat to human health and the environment. Abnormal conditions identified by an
7 inspection will be corrected on a schedule that prevents hazards to workers, the public, and the
8 environment.

9 **I.1.1 General Inspection Requirements**

10 The content and frequency of inspections are described in this section. Inspection records are retained in
11 the Hanford Facility Operating Record, LERF and 200 Area ETF file, or other approved locations, in
12 accordance with Permit Condition II.I.1.

13 In certain areas of the 200 Area ETF, many inspections are performed remotely to maintain as low as
14 reasonably achievable (ALARA) exposure. Monitoring instruments are connected to audible alarms and
15 visual indicators track alarm status. The monitoring system provides trending of selected monitoring data,
16 graphics, and equipment summary displays.

17 A preventive maintenance recall system is employed to direct preventive maintenance activities at the
18 LERF and 200 Area ETF. Equipment requiring maintenance is checked as indicated by the maintenance
19 history, manufacturer's recommendations, or engineering recommendations. The preventive maintenance
20 of certain equipment might not be possible if the LERF or the 200 Area ETF is in an operational mode.
21 Thus, the preventive maintenance could be performed slightly earlier or later than planned to minimize
22 impact on operations.

23 Instrumentation at 200 Area ETF is calibrated regularly to ensure accuracy and reliability. All process
24 control instrumentation is calibrated on a schedule depending on previous calibration experience. An
25 instrument calibration and recall system is employed to manage calibrations.

26 **I.1.1.1 Types of Problems**

27 Key components of the LERF inspection program include the following areas:

- 28 • Structural integrity of the basins.
- 29 • Catch basin secondary containment system integrity.
- 30 • Evidence of release from basins.
- 31 • Safety, communications, and emergency equipment.

32 Key components of the 200 Area ETF inspection program include the following areas:

- 33 • Condition of tanks and ancillary piping.
- 34 • Condition of containers.
- 35 • Condition of the process control equipment.
- 36 • Condition of emergency equipment.
- 37 • Condition of secondary containment.

38 Table I-1 and Table I-2 provide a description of LERF and 200 Area ETF items to be inspected.

1 **I.1.1.2 Frequency of Inspections**

2 The frequency of inspections is how often (at a minimum) an inspection must be performed. The
3 frequency of inspections is based on the rate of possible deterioration of equipment, operational history,
4 engineering judgement, or the probability of a threat to human health or the environment.

5 Unless otherwise noted, inspection frequencies are defined by the following periodicities:

- 6 • Daily means once per calendar day.
- 7 • Weekly means once per calendar week, spanning from Sunday to Saturday.
- 8 • Monthly means once each calendar month.
- 9 • Quarterly means once per calendar quarter.
- 10 • Annually means at least once per 12-month period ± 30 days.
- 11 • Continuous monitoring means instrument monitoring performed remotely in the 200 Area ETF
12 Control Room continuously during 200 Area ETF waste processing operations and/or waste
13 transfers. If instrumentation is not functioning, daily visual inspections are performed as
14 identified in Table I-2, and as discussed in Addendum C, "Process Information."

15 The LERF and 200 Area ETF inspections and instrument monitoring frequencies are indicated in
16 Table I-1 and Table I-2. The LERF and 200 Area ETF is inspected as indicated in Table I-1 and Table I-2.

17 **I.1.2 Specific Process Inspections**

18 The following sections describe the specific process inspections performed at LERF and 200 Area ETF.

19 **I.1.2.1 Container Inspections**

20 Container inspections and frequencies are provided in Table I-1. Containers are used at the 200 Area ETF
21 to store secondary waste, such as the powder waste from the thin film dryer, liquid from the brine loadout
22 system, and maintenance and operations waste. When containers are being held in container storage areas,
23 the inspection schedule identified in Table I-1 is maintained.

24 Following the inspections, an inspection datasheet is signed and dated by the inspector and supervisor.

25 **I.1.2.2 Tank System Inspections**

26 A description of the tank systems and ancillary equipment at the 200 Area ETF is given in Addendum C.
27 Tank system inspections, instrument monitoring criteria, and frequencies are given in Table I-1 and
28 Table I-2. Tank system inspections occur at least once each operating day. Each operating day is defined
29 as every day the tank is in operations (i.e. storing or treating dangerous waste).

30 The 200 Area ETF employs an extensive piping system. During inspections at the 200 Area ETF, any
31 aboveground piping is inspected visually for signs of leakage and for general structural integrity. During
32 the visual inspection, particular attention is paid to valves and fittings for signs of cracking, deformation,
33 and leakage.

34 Integrity assessments for the 200 Area ETF tank systems is discussed in Addendum C,
35 "Process Information." The integrity assessment program will continue over the life of the tank systems at
36 a frequency of every 10 years. The schedule is based on design and age of the tank systems,
37 characteristics and quantity of the waste processed, tank visual inspections, corrosion assessment
38 program, facility upgrades, past integrity assessments, and recommendation of the independent qualified
39 registered professional engineer (IQRPE). A description of the tank systems and ancillary equipment at
40 the 200 Area ETF is given in Addendum C, "Process Information."

1 **I.1.2.3 Surface Impoundment Inspections**

2 Inspection and monitoring criteria and frequencies for the LERF Basins 41, 42, 43, and 44 are provided in
3 Table I-1 and Table I-2. A description of the LERF basins; leachate detection, collection, and removal
4 system; inter-basin transfer pipelines, and overtopping and flow controls are discussed in Addendum C.

5 The totalizer method or pump run hour method is used to calculate the action leakage rate for each basin,
6 to determine whether the action leakage rate for each basin is less than the limit of 2,100 gallons per acre
7 per day. A flow meter/totalizer measures the amount of leachate removed from the leachate collection
8 sump. In addition, a timer on the leachate pump tracks the cumulative pump run time. The amount of
9 liquid removed from each leachate detection system sump is recorded weekly, and average daily flow rate
10 calculated to verify that the action leakage rate has not been exceeded. The flow meter or the pump hour
11 meter may not always be in service; therefore, the leak rate through the primary liner can be determined
12 using one of two methods:

- 13 • Measured as the leachate flow meter/totalizer readings (flow meters/totalizers are located on the
14 outflow line from the collection sumps at the bottom of the LERF basins); or
- 15 • Calculated using the pump operating time readings multiplied by the pump flow rate (the pump
16 runs at a constant flow rate).

17 Structural integrity of the LERF basin dikes is discussed in Addendum C, “Process Information.”

18 **I.1.2.3.1 Overtopping Control**

19 Under current operating conditions, 2 feet of freeboard is maintained at each LERF basin, which
20 corresponds to an operating level of 22.2 feet, or operating capacity of 7.8 million gallons. Level
21 indicators at each basin are monitored to confirm that this level is not exceeded.

22 Before an aqueous waste is transferred into a basin, administrative controls are implemented to ensure
23 overtopping will not occur during the transfer. The volume of feed to be transferred is compared to the
24 available volume in the receiving basin. The transfer is not initiated unless there is sufficient volume
25 available in the receiving basin or a cut-off level is established. The transfer into the basin would be
26 stopped when this cut-off level is reached.

27 The LERF basins also are provided with floating covers that are designed and constructed to prevent
28 overtopping by the introduction of precipitation and dust into the basins. Overtopping and flow control
29 also are discussed in Addendum C.

30 **I.1.2.3.2 Impoundment Contents**

31 The LERF basins are inspected weekly to assess whether the contents are escaping from a basin. Level
32 indicators are inspected weekly to check for unaccountable change in the level of the basins.

33 **I.1.2.3.3 Leak Detection**

34 The leachate detection, collection, and removal system is described in Addendum C. The leachate
35 collection sump pump is activated when the liquid level in the leachate sump reaches a preset level, or
36 manually when needed. A flow meter/totalizer measures the amount of leachate removed. In addition, the
37 timer on the leachate pump tracks the cumulative pump run time. The leak rate through the primary liner
38 can be determined using one of two methods:

- 39 1. Measured as the leachate flow meter/totalizer readings (flow meters/totalizers are located on the
40 outflow line from the collection sumps in the bottom of the LERF basins) or
- 41 2. Calculated using the pump operating time readings multiplied by the pump flow rate (the pump
42 runs at a constant flow rate).

1 Calculations using either method are sufficient for compliance. If either the flow meter/totalizer or pump
2 operating time system is not functioning, this is identified as an abnormal condition (see Section I.1).

3 The LERF employs a double-walled transfer piping between 242-A Evaporator/Waste Treatment and
4 Immobilization Plant, Effluent Management Facility (WTP-EMF) and LERF and between LERF and
5 200 Area ETF. The Washington Administrative Code (WAC) 173-303-650 regulations do not require a
6 discussion of piping for surface impoundments. However, for the purposes of comprehensive coverage of
7 the LERF, inspections and integrity assessments are performed on the piping system. Aqueous waste
8 (e.g., process condensate) is transferred from the 242-A Evaporator and WTP-EMF to the LERF via a
9 buried pipeline. Likewise, aqueous waste is transferred to the 200 Area ETF via buried pipelines. At the
10 LERF dikes, aboveground piping serves to transfer waste from one basin to another.

11 **I.1.2.3.4 Dike Erosion**

12 The LERF basins and dikes are visually inspected weekly and after significant precipitation events for
13 run-on, runoff, cover integrity, erosion problems, or other signs of deterioration in the dikes from
14 precipitation, wind, burrowing mammals, or vegetation.

15 **I.1.2.3.5 Structural Integrity**

16 A written certification attesting to the structural integrity of the basin dikes, signed by a qualified,
17 registered professional engineer, is provided in Addendum C.

18 **I.1.2.3.6 Container Inspection**

19 Normal operation of the LERF does not involve the storage of dangerous waste in containers. Therefore,
20 the inspection requirements of this section normally are not applicable to the LERF. Any containerized
21 dangerous waste generated at LERF will be brought to the 200 Area ETF and managed in accordance
22 with WAC 173-303-630 and is discussed in Addendum C.

23 **I.1.3 Inspection Log**

24 Observations made and deficiencies noted during an inspection are recorded on an inspection log
25 (round sheets, work packages, data sheets, electronic inspection logs, etc.). On completion, the inspection
26 log includes the inspector's printed name, handwritten or electronic signature, date, and time of
27 inspection; the inspection log is submitted for review and approval by LERF and 200 Area ETF
28 management or their designee. Once approved, the inspection log is kept in the Hanford Facility
29 Operating Record, LERF and 200 Area ETF files. Inspection records are retained in the Hanford Facility
30 Operating Record, LERF and 200 Area ETF files, or other approved locations, in accordance with
31 Permit Condition II.I.1. The inspection records are used to help determine any necessary corrective
32 actions. Problems identified during the inspections are prioritized and addressed in a timely fashion to
33 mitigate health risks to workers, maintain integrity of the Treatment, Storage, and Disposal (TSD) units,
34 and prevent hazards to public health and the environment.

35 If an inspection log cannot be located in the LERF and 200 Area ETF Operating Record, substitute
36 documentation/log will be added to the LERF and 200 Area ETF Operating Record that documents the
37 missing log. If an inspection was scheduled or attempted, but could not be performed or fully completed
38 due to a planned event (e.g., power outage), then a reasonable attempt will be made to reschedule and
39 complete the inspection within the identified inspection frequency. If an inspection was scheduled or
40 attempted but could not be performed or fully completed due to an unplanned event (e.g., Hanford Site or
41 local area emergency or injury; unplanned power outage; unexpected or radiological conditions, work,
42 training, or safety restrictions); the missed inspection or portions thereof that were not completed shall be
43 documented on the relevant inspection log or facility logbook; and if applicable, reported in the Hanford
44 Facility Annual Noncompliance Report.

1 If while performing an inspection, a leak or spill is discovered, facility operations responds per the
2 emergency response procedures action is taken to stop the leak and determine the cause. The waste is
3 removed from the secondary containment in a timely manner that prevents harm to human health and the
4 environment.

5 **I.1.4 Storage of Ignitable or Reactive Wastes**

6 Inspection and frequency criteria for ignitable and reactive waste is provided in Table I-1. The LERF
7 could receive an aqueous waste that is designated reactive or ignitable. Any aqueous waste exhibiting
8 these characteristics is managed (e.g., through flow equalization in LERF) such that the waste no longer
9 exhibits the reactive or ignitable characteristics, as described in Addendum C, Section C.5.10.

10 Though unlikely, the 200 Area ETF secondary wastes might have the characteristics of being reactive or
11 ignitable. A qualified inspector performs annual fire inspections of the 200 Area ETF using a checklist
12 developed specifically for facilities that handle dangerous and/or mixed waste.

13

**Table I-1 Visual Inspection Schedule for the Liquid Effluent Retention Facility
and 200 Area Effluent Treatment Facility**

Item	Inspection	Frequency
Tank Systems		
Load-In Station tank system (2025ED)	Inspect area for leaks. Note any unusual noises or vibration from the system pumps during waste transfers. Inspect secondary containment system for signs of deterioration.	Daily
Backup Load-In Station (2025EG)	Inspect ancillary equipment (transfer piping/valves) for leaks during processing operation, waste storage, or during waste transfers.	Daily
Filter drain sump tanks 59A-TK-2/59A-TK-3 and 59A-TK-4	Inspect tanks and ancillary equipment for corrosion or releases of waste.	Daily
Surge tank system	Inspect area for leaks. Note any unusual noises or vibration from the system pumps. Inspect secondary containment system for signs of deterioration.	Daily
Rough filter	Inspect for leaks.	Daily
Ultraviolet oxidation system	Inspect module for leaks. Inspect peroxide storage tank, ancillary equipment for leaks.	Daily
pH adjustment tank	Inspect tank and ancillary equipment for leaks.	Daily
H ₂ O ₂ decomposer	Inspect tank and ancillary equipment for leaks.	Daily
Fine filter	Inspect module for leaks.	Daily
Degasification system	Inspect module for leaks. Note any unusual noises or vibration from the degasification blower.	Daily
Reverse osmosis (RO) system	Inspect tanks and ancillary equipment for leaks. Note any unusual noises or vibration from the system pumps.	Daily
Polishers	Inspect tanks and ancillary equipment for leaks.	Daily
Effluent pH adjustment tank	Inspect tank and ancillary equipment for leaks.	Daily
Verification tanks	Inspect tanks and ancillary equipment for leaks. Note any unusual noises or vibration from the system pumps. Inspect secondary containment system for signs of deterioration.	Daily

**Table I-1 Visual Inspection Schedule for the Liquid Effluent Retention Facility
and 200 Area Effluent Treatment Facility**

Item	Inspection	Frequency
Secondary waste receiving tanks	Inspect tanks and ancillary equipment for leaks.	Daily
200 Area ETF evaporator	Inspect tank and equipment for leaks. Note any unusual noises or vibration from the system pumps or compressor.	Daily
Concentrate tanks	Inspect tanks and ancillary equipment for leaks. Note any unusual noises or vibration from the system pumps.	Daily
Thin Film Dryer Room	Inspect piping and ancillary equipment for spills, leaks, and accumulated liquids (viewed through camera). Note any unusual noises or vibration from the system pumps or blower.	Daily ¹
60K-CO-001, Stripper Column	Inspect aboveground portions of the tank system to detect corrosion or releases of waste.	Daily
60K-TK-001, Stripper Condensate Tank		
60K-CO-201, Concentrator Column		
60K-TK-201, Concentrator Condensate Tank		
Container handling	Inspect area for spills, leaks, accumulated liquids.	Daily
Container handling	Inspect for deterioration of containers and secondary containment, including corrosion and cracks in secondary containment foundation and coating. Inspect container labels to ensure that they are readable.	Weekly
Vessel ventilation system	Inspect filters (HEPA and pre-filters), check vessel off gas pressures, system flow, and discharge temperatures.	Daily
Sump tank system	Inspect sump trenches for unexpected liquids, which indicate spills or leaks from process equipment.	Daily
Safety Systems/Equipment		
Eye wash stations	Check status; check for adequate pressure.	Monthly
Safety showers	Check status; check for adequate pressure.	Monthly
Signs for WTP-EMF to LERF Underground Piping (4"-WTP-001-M17)	Verify portions of WTP-EMF to LERF underground transfer pipeline (4"-WTP-001-M17) located outside the 200 East Area are marked with signs reading "Buried Dangerous Waste Pipe" in accordance with Permit Condition II.V. Note: Signs and anchoring devices are made of durable plastic or metal.	Annually
Emergency Systems/Equipment		
Fire extinguishers	Check for adequate charge.	Monthly
Emergency lighting	Test operability.	Monthly
Uninterruptible power supply	Check output voltage and visually inspect battery pack for corrosion and leakage. Check indicator lights for fault conditions.	Annually

**Table I-1 Visual Inspection Schedule for the Liquid Effluent Retention Facility
 and 200 Area Effluent Treatment Facility**

Item	Inspection	Frequency
LERF (Surface Impoundment)		
LERF Basins 41, 42, 43, and 44 Catch Basins	Perform daily visual check for leak in each catch basin during waste transfers.	Daily
LERF basins and dikes	Check the overtopping controls and integrity of the basins and dikes.	Weekly
LERF contents	Check basin level indicators for unaccountable changes in the level of the basins.	Weekly
Leak Detections	Determine the leak rate per wetted surface area.	Weekly
LERF basins and dikes	Check for run-on, runoff, cover integrity, erosion problems, and other signs of deterioration.	Weekly & After significant precipitation events
Vessel Off Gas (VOG)		
VOG ventilation system	Inspect filters (HEPA and pre-filters), check VOG pressures, system flow, and discharge temperatures.	Daily
Ignitable and Reactive Waste		
Ignitable and reactive waste	Storage in compliance with Hanford Site fire protection standards and WAC 173-303-630(8).	Annually ²
Container Storage Areas		
Container Storage	Container labels to ensure labels are not obscured, removed, or otherwise unreadable.	Weekly
	Deterioration of containers, containment systems, or cracks in protective coating or foundations caused by corrosion, mishandling, or other factors.	Weekly
	Leaks, spills, accumulated liquids, and open or improperly sealed containers.	Daily
Secondary Containment Areas		
Integrity of floors, berms, trenches, dikes, sumps/pits, ramps, curbs, walls, and special coatings	Visually inspect the protective coatings, sumps/pits, trenches, ramps, curbs, and walls for evidence of significant cracks, gaps, or other degradation that may compromise the integrity of the containment. Check that items are in good condition, and that no liquid is present on the floors.	Daily

¹If the camera system is inoperable, daily visual inspections will be performed; or the Thin Film Dryer will be emptied and isolated (either physically or administratively), by closing the influent valves and/or ensuring the influent pumps remain off, to prevent waste additions that could result in undetected leaks or spills in the Thin Film Dryer Room.

²When waste management activities occur.

HEPA – High efficiency particulate air.

1 **I.1.5 Instrumentation Monitoring**

2 The Inspection schedule pertaining to instrumentation monitoring and frequencies is provided in
 3 Table I-2. Instrumentation is monitored in the 200 Area ETF Control Room or location specified in
 4 Table I-2. In cases where this instrumentation is out of service (e.g., calibration, power failures, or
 5 maintenance), daily visual inspections will be performed in accordance with WAC 173-303-640, using the
 6 methods identified in Tables I-1 and I-2, and discussed in Addendum C, “Process Information,” for leak
 7 detection, level inspection, and overfill prevention.

8 If an alarm is activated, further investigation is performed to determine the cause of the alarm.

9 Continuous monitoring applies to the electronic monitoring performed in the 200 Area ETF Control
 10 Room for this instrumentation during 200 Area ETF processing operations, Backup Load-In Station
 11 (2025EG), and/or 2025-E Load-In Station transfers. Data from alarms, leak detectors, and level
 12 transmitters are monitored daily in the 200 Area ETF Control Room when waste transfers are not
 13 occurring (see C.2.5.1). In cases where this instrumentation is out of service (e.g., calibration, power
 14 failures, or maintenance) daily visual inspections will be performed in accordance with WAC 173-303-
 15 640, using the alternate methods discussed in Addendum C, Section C.1 for leak detection,
 16 Section C.4.3.1.2 for level inspection, and Section C.4.4.2 for overfill prevention will be followed.

17 In the event the electronic leak detectors or level indicators for Sump Tank 1 or Sump Tank 2 are out of
 18 service, daily visual inspections will be performed each operating day (WAC-173-303-640).

19 Inspections pertaining to instrumentation monitoring is provided in Table I-2.

20

Table I-2 Inspection Plan for Tank Systems Instrumentation Monitoring

Item	Inspection	Frequency
2025ED/2025EG Load-In Stations		
Level alarm LSH-59A-003	Monitor liquid level in Load-In Tanks TK-1 to prevent overflow.	Continuously
Leak alarm LDA-59A-125	Monitor for leakage in the Load-In Station tank pit sump. Monitor for leakage from pipeline between 2025ED and 2025EG.	Continuously
Main Treatment Train		
Leak detector LAH-20B009	Monitor for leakage in the surge tank drainage sump.	Continuously
Level alarm LAHX-60A012	Monitor surge tank level to prevent overflow.	Continuously
Level alarm LAH-60C-111	Monitor liquid levels in the pH adjustment tank to prevent overflow.	Continuously
Level alarm LAH-60F-101	Monitor liquid levels in the first RO feed tank to prevent overflow.	Continuously
Level alarm LAH-60F-201	Monitor liquid levels in the second RO feed tank to prevent overflow.	Continuously
Level alarms LAH-60C-211	Monitor liquid levels in the effluent pH adjustment tank to prevent overflow.	Continuously

Table I-2 Inspection Plan for Tank Systems Instrumentation Monitoring

Item	Inspection	Frequency
Level transmitter LAH-60H-001A/B/C	Monitor liquid level in verification tanks to prevent overflow.	Continuously
Leak detector LAH-20B-010	Monitor for leakage in the verification tank drainage sump.	Continuously
Stripper Column (60K-CO-001) Level alarm LAHH-60K028 Leak alarm LALL-60K026	Monitor for high-high level or leak alarm to prevent overflow and detect leaks. Note: Inspection required only when liquid is present in the tank.	Continuously
Stripper Condensate Tank (60K-TK-001) Level alarm LAHH-60K104 Leak alarm LALL-60K101		
Concentrator Column (60K-CO-201) Level alarm LAHH-60K126 Leak alarm LALL60K124		
Concentrator Condensate Tank (60K-TK-201) Level alarm LAHH60K171 Leak alarm LALL-60K168		
Secondary Treatment Train		
Level alarm LAHH-60I-001A/B	Monitor liquid levels in secondary waste receiver tanks A and B to prevent overflow.	Continuously
Level alarm LAHH-60J-001A/B	Monitor liquid levels in concentrate tanks A and B to prevent overflow.	Continuously
Level alarm LAHH-60I-107	Monitor liquid levels in the evaporator tank to prevent overflow.	Continuously
Level alarm LSHH-60J-036	Monitor liquid levels in the spray condenser tank to prevent overflow.	Continuously

Table I-2 Inspection Plan for Tank Systems Instrumentation Monitoring

Item	Inspection	Frequency
Level alarm LAHH-60I-108	Monitor liquid levels in the distillate flash tank to prevent overflow.	Continuously
Level alarm LAHH-60I-119	Monitor liquid levels in the entrainment separator tank to prevent overflow.	Continuously
Level alarm LAHH-20B-001	Monitor liquid level in Sump Tank 1 to prevent overflow.	Continuously
Level alarm LAHH-20B-002	Monitor liquid level in Sump Tank 2 to prevent overflow.	Continuously
Leak alarm LAH-20B-003	Monitor for leakage to Sump No. 1.	Continuously
Leak alarm LAH-20B-005	Monitor for leakage to Sump No. 2.	Continuously
Leak alarm	Monitor for leakage from pipeline between LERF and the 242-A Evaporator.	Continuously
Transfer Pipeline		
Leak alarm LDA-59A-127	Monitor for leakage from pipeline between 200 Area ETF and 2025ED Load-In Station. Note: Monitoring required only during waste transfers.	Continuously
Leak alarm LDA-60A-040 3" line LDA-60M-01A/-01B 4" line	Monitor for leakage from pipeline between 200 Area ETF and LERF. Note: Monitoring required only during waste transfers.	Continuously
WTP-EMF to LERF Catch Basin 242AL-41 (4"-WTP-001-M17) Leak Alarm LDA-41-4	Verify no leak alarm for transfer pipeline (4"-WTP-001-M17); or perform daily visual inspection to check for liquid in the sight glass FG-60M-003 at LERF Catch Basin 242AL-41 each day during dangerous waste transfers.	Daily
WTP-EMF to LERF Catch Basin 242AL-42 (4"-WTP-001-M17) Leak Alarm LDA-42-2	Verify no leak alarm for transfer pipeline (4"-WTP-001-M17); or perform daily visual inspection to check for liquid in the sight glass (FG-80W-001) at LERF Catch Basin 242AL-42. Note: Monitoring required only during WTP waste transfers.	Continuously
WTP-EMF to LERF Catch Basin 242AL-41 and Catch Basin 242AL-42 (4"-WTP- 001-M17) Leak Alarms LDA-015, LDA-010, and LDA-006	Verify no leak alarms for transfer pipeline (4"-WTP-001-M17); or perform daily visual inspection to check for liquid in the sight glasses (FG-60M-003 and FG-80W-001) at LERF Catch Basins 242AL-41 and 242AL-42. Note: Monitoring required only during WTP waste transfers.	Continuously

Table I-2 Inspection Plan for Tank Systems Instrumentation Monitoring

Item	Inspection	Frequency
Surface Impoundments (LERF Basins 41, 42, 43, 44)		
LERF Basins Level indicators LI-BSN-41/-42/-43/-44	Verify basin level at 200 Area ETF Control Room; or check basin level indicators located at 242-AL-71 for unaccountable changes in the level of the basins; or visually take level readings by interpreting level (0.5-foot level of accuracy) from the white markings at 2-foot increments painted on the side of the basin; or by using a tape measure. Verify that at least 2 feet of freeboard is maintained at each LERF basin for proper basin overtopping control.	Weekly
LERF Basins Leachate Level indicators LI-LCH-41/-42/-43/-44	Verify basin leachate level at 200 Area ETF Control Room; or check basin leachate level indicators located at 242-AL-71; or obtain level via dip tube (i.e., bubbler or Druck); or obtain level using pump run hours and flow.	Weekly
LERF Basin Leak Detection (action leakage rate) Totalizer FIT-41-1/42-1/-43-1/44-1 -or- Pump Run Hour KQI-41-1/42-1/-43-1/-44-1	Calculate action leakage rate for each basin using totalizer method or pump run hour method; and determine whether the action leakage rate for each basin is less than limit of 2,100 gallons per acre per day; and record the rate.	Weekly
Basins 43 and 44 Inter-basin transfer Leak alarms LDA-80W-002/-003	Verify no leak alarm for transfer pipeline; or perform daily visual check during waste transfers by opening drain valve at LERF catch basin to check for no liquid in the annular space between the inner and outer pipe each day during dangerous waste transfers.	Daily
Basin 41 and 42 Inter-basin transfer Leak Alarms LDA-41-6; sight glass FG-60M-004 LDA-41-7; sight glass FG-60M-005 LDA-42-3; sight glass FG-60M-007	Verify no leak alarm for transfer pipeline; or perform daily visual check of sight glass during waste transfers.	Daily

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