

RCRA PERMIT
FOR THE
IDAHO NATIONAL LABORATORY

Volume 14
INTEC Liquid Waste Management System

Attachment 8, Section I
Closure Plan

Revision Date: April 12, 2011

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ACRONYMS.....iii

I. FACILITY DESCRIPTION..... 1

ACRONYMS

1	CFR	Code of Federal Regulations
2	CPP	Chemical Processing Plant
3	CRR	Carbon Reduction Reformer
4	DMR	Denitration and Mineralization Reformer
5	EPA	Environmental Protection Agency
6	ETS	Evaporator Tank System
7	HVAC	heating, ventilating, and air conditioning
8	HWMA	Hazardous Waste Management Act
9	IDAPA	Idaho Administrative Procedures Act
10	ILWMS	INTEC Liquid Waste Management System
11	INL	Idaho National Laboratory
12	INTEC	Idaho Nuclear Technology and Engineering Center
13	IWTU	Integrated Waste Treatment Unit
14	LET&D	Liquid Effluent Treatment and Disposal
15	P.E.	professional engineer
16	PEWE	Process Equipment Waste Evaporator
17	RCRA	Resource Conservation and Recovery Act
18	TFF	Tank Farm Facility
19	TFT	Tank Farm Tank

I. FACILITY DESCRIPTION

1 The Idaho National Laboratory (INL) Site encompasses approximately 2,276 km² (890 mi²) on the
2 Eastern Snake River Plain in southeastern Idaho, west of Idaho Falls. Within the laboratory complex are eight
3 major applied engineering, interim storage, and research and development facilities.

4 The Idaho Nuclear Technology and Engineering Center (INTEC) is situated on the south-central
5 portion of the INL site. INTEC occupies an enclosed and secured area of approximately one km² (250 acres).
6 INTEC was initially constructed in the 1950s to reprocess spent fuel from naval ship reactors and has
7 undergone continuous additions and improvements since that time. Current work at INTEC includes
8 receiving and storing spent nuclear fuel, environmental restoration, decontamination and decommissioning
9 activities, and technology development.

10 Process Equipment Waste Evaporator (PEWE) System

11 The PEWE system includes tanks and ancillary equipment in Building Numbers CPP-604, CPP-649,
12 and CPP 659. The regulated tanks and ancillary equipment specific to the PEWE system are listed below:

- 13 • VES-WL-132, Evaporator Feed Sediment Tank [regulated under the Idaho Administrative
14 Procedures Act (IDAPA) as a storage/treatment tank]
- 15 • VES-WL-133, Evaporator Feed Collection Tank (regulated under IDAPA as a
16 storage/treatment tank)
- 17 • VES-WL-102, Surge Tank for VES-WL-133 (regulated under IDAPA as a storage/treatment
18 tank)
- 19 • VES-WL-109, Evaporator Head Tank (regulated under IDAPA as a storage tank)
- 20 • EVAP-WL-129, CPP-604 Evaporator Unit, including VES-WL-129, VES-WL-130, HE-WL-
21 307, and HE-WL-308 (regulated under IDAPA as a miscellaneous unit with treatment/storage
22 tanks)
- 23 • VES-WL-134, Process Condensate Surge Tank (regulated under IDAPA as a storage tank,
24 ancillary to both evaporators)
- 25 • EVAP-WL-161, CPP-604 Evaporator Unit, including VES-WL-161, VES-WL-162, HE-WL-
26 300, and HE-WL-301 (regulated under IDAPA as a miscellaneous unit with treatment/storage
27 tanks)
- 28 • VES-WL-131, Process Condensate Surge Tank (regulated under IDAPA as a storage tank)

- 1 • VES-WL-108, Process Condensate Knock Out Pot (regulated under IDAPA as a storage
2 tank)
- 3 • VES-WL-111, Bottoms Collection Tank (regulated under IDAPA as a storage/treatment tank)
- 5 • VES-WL-101, Bottoms Collection Tank (regulated under IDAPA as a storage/treatment tank)
- 7 • VES-WL-106, VES-WL-107, and VES-WL-163, CPP-604 Process Condensate Collection
8 Tanks (regulated under IDAPA as storage/treatment tanks)
- 9 • VES-WM-100, VES-WM-101, and VES-WM-102, CPP-604 Tank Farm Tanks (regulated
10 under IDAPA as storage/treatment tanks)
- 11 • VES-WL-135, -136, -137, -138, -139, -142, -144, and -150 (regulated under IDAPA as
12 storage tanks).

13 The PEWE system receives mixed wastes from the INTEC and non-INTEC facilities. INTEC wastes
14 are received at the PEWE system through underground piping and are accumulated in the feed collection tank,
15 VES-WL-133, prior to being fed to the evaporators.

16 The evaporation process reduces the volume of the wastes sent to the INTEC Tank Farm Facility
17 (TFF) for storage. Two waste streams are produced as a result of the evaporation process; overhead
18 condensates and concentrated bottoms. The overhead condensates are further treated at the Liquid Effluent
19 Treatment and Disposal (LET&D) facility. The concentrated bottoms are accumulated in the Bottoms
20 Collection Tank (VES-WL-101 or VES-WL-111). The bottoms are transferred to either VES-WL-101 or
21 VES-WL-111, or are recycled back to VES-WL-133 for further processing. From VES-WL-101 or VES-WL-
22 111, the bottoms can be sent to the CPP-604 Tank Farm Tanks (TFT), (VES-WM-100, VES-WM-101, and
23 VES-WM-102), to the TFF, or to the CPP-659 Blend and Hold Tanks (VES-NCC-101, -102, -103).

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Closure Strategy

The strategy is to clean close (decontamination and removal of equipment) the tank systems and miscellaneous units associated with the PEWE system. In the future, as the actual closure of the PEWE system is considered, this closure plan will be modified to reflect any information or condition that has changed or occurred and may precipitate different closure options such as risk based closure or possibly landfill.

Liquid Effluent Treatment and Disposal (LET&D) system

The LET&D system includes fractionators, tanks, and ancillary equipment in Building Numbers CPP-1618 and CPP-659 Annex at the INTEC. The regulated fractionators, tanks, and ancillary equipment specific to the LET&D system are listed below:

- VES-WLK-197, Feed Head Tank (regulated under IDAPA as a storage tank)
- FRAC-WLK-171, CPP-1618 Acid Fractionator, including FRAC-WLK-171, HE-WLK-392, HE-WLK-397, HE-WLK-399, and VES-WLK-199 (regulated under IDAPA as a miscellaneous unit with treatment/storage tanks)
- FRAC-WLL-170, CPP-1618 Acid Fractionator, including FRAC-WLL-170, HE-WLL-391, HE-WLL-396, HE-WLL-398, and VES-WLL-198 (regulated under IDAPA as a miscellaneous unit with treatment/storage tanks)
- VES-WLL-195, Bottoms Tank (regulated under IDAPA as a storage tank)
- VES-NCR-171, CPP-659 Annex LET&D Nitric Acid Recycle Tank (regulated under IDAPA as a storage tank)
- VES-NCR-173, CPP-659 Annex LET&D Nitric Acid Head Tank (regulated under IDAPA as a storage tank).

The LET&D system receives mixed wastes from the PEWE system as overhead condensates. The overhead condensates are received at the LET&D system through overhead piping and are accumulated in the feed collection tank, VES-WLK-197, prior to being fed to the fractionators.

The fractionation process significantly reduces the volume of waste transferred to the TFF. Two streams are produced as a result of the evaporation process; overhead condensates and concentrated nitric acid bottoms. The overhead condensates are heated, filtered and sent to the INTEC main stack. The concentrated nitric acid bottoms are accumulated in the bottoms collection tank. The concentrated bottoms are transferred to the Nitric Acid Recycle Tank at the CPP-659 Annex for reuse at the INTEC.

1 **Closure Strategy**

2 The strategy is to clean close (decontamination and removal of equipment) the tank systems and
3 miscellaneous units associated with the LET&D system. In the future, as the actual closure of the LET&D
4 system is considered, this closure plan will be modified to reflect any information or condition that has
5 changed or occurred and may precipitate different closure options.

6 **CPP-659 Annex Nitric Acid Recycle System**

7 The CPP-659 Annex Nitric Acid Recycle Tank includes VES-NCR-171, VES-NCR-173, and
8 ancillary equipment at the INTEC.

9 The concentrated nitric acid bottoms from LET&D are stored in the Nitric Acid Recycle Tank for
10 reuse at the INTEC.

11 **Closure Strategy**

12 The strategy is to clean close (decontamination and removal of equipment) the tank systems
13 associated with the Nitric Acid Recycle system. In the future, as the actual closure of the LET&D system is
14 considered, this closure plan will be modified to reflect any information or condition that has changed or
15 occurred and may precipitate different closure options such as risk based closure or possibly landfill.

16 **CPP-659 Evaporator Tank System**

17 The ETS includes tanks and ancillary equipment in Building Number CPP-659 at the INTEC. The
18 regulated tanks and ancillary equipment specific to the ETS are listed below:

- 19 • VES-NCC-152, CPP-659 Constant Head Feed Tank (regulated under the IDAPA as a storage
20 tank)
- 21 • EVAP-NCC-150, CPP-659 (which includes HE-NCC-350, HE-NCC-351), (regulated under the
22 IDAPA as a miscellaneous treatment (evaporation) unit and tank storage)
- 23 • VES-NCC-101, CPP-659 Blend Tank (regulated under the IDAPA as a storage/treatment tank)
- 24 • VES-NCC-102, CPP-659 Hold Tank (regulated under the IDAPA as a storage/treatment tank)
- 25 • VES-NCC-103, CPP-659 Hold Tank (regulated under the IDAPA as a storage/treatment tank)
- 26 • VES-NCC-119, CPP-659 Fluoride Hot Sump Tank (regulated under the IDAPA as a
27 storage/treatment tank)

- 1 • VES-NCC-122, CPP-659 Non-Fluoride Hot Sump Tank (regulated under the IDAPA as a
2 storage/treatment tank)
- 3 • VES-NCC-108, CPP-659 Scrub Hold Tank (regulated under the IDAPA as a storage/treatment
4 tank)
- 5 • VES-NCC-136, CPP-659 Vent Condenser Knockout Drum (regulated under the IDAPA as a
6 storage tank)
- 7 • VES-NCC-116, CPP-659 Mist Collector (regulated under the IDAPA as a storage tank)

8 The function of the ETS is to concentrate liquid waste stored in the TFF. The overheads are
9 condensed and transferred to the PEWE System for further treatment of the liquid waste. The ETS bottoms
10 are concentrated and transferred back to the TFF, which reduces the overall volume of storage in the TFF.

11 **Closure Strategy**

12 The strategy is to clean close (decontamination and removal of equipment) the tank systems and
13 miscellaneous units associated with the ETS. In the future, as the actual closure of the ETS is considered, this
14 closure plan will be modified to reflect any information or condition that has changed or occurred and may
15 precipitate different closure options.

16 **CPP-1696 Integrated Waste Treatment Unit**

17 The IWTU includes tanks, ancillary equipment, and container storage in Building Number CPP-1696
18 at the INTEC. The regulated tanks specific to the IWTU facility are listed below:

- 19 • VES-SRC-131, Waste Feed Tank (regulated under IDAPA as a storage/treatment tank)
- 20 • VES-SRC-190 and -191, Product Receiver/Coolers (regulated under IDAPA as a storage
21 tanks)
- 22 • TK-SRH-196, Firewater Collection Tank (regulated under IDAPA as a storage tank)
- 23 • Integrated Waste Treatment Unit (regulated under IDAPA as a miscellaneous treatment unit),
24 which can be divided into the following two subsystems; 1) Sodium Bearing Waste (SBW)
25 Treatment System, which manages the liquid and offgas phases of the process; and 2) Product
26 Transfer and Loadout System, which deals with solids management. The components of each
27 of these subsystems are identified below:
- 28 • TK-SRH-141, Condensate Collection Tank (regulated under IDAPA as a storage tank)

1. REGULATORY REQUIREMENTS MATRIX
1.1 IDAPA 58.01.05.008 (40 CFR 264 Subpart G)
INTEC Liquid Waste Management System Closure and Post-Closure Plan

Regulatory Citation (Description of Requirement)	Compliance Methodology
1.1.1 264.110 Applicability	264.110 Applicability
<p>Except as § 264.1 provides otherwise: (a) §§ 264.111 through 264.115 (which concern closure) apply to the owners and operators of all hazardous waste management facilities; and</p>	<p>(a) IDAPA 58.01.05.008 [40 Code of Federal Regulation (CFR) §§ 264.111 through 264.115] addressing closure performance standards, the closure plan and amendments to the plan, closure time, disposal or decontamination of equipment, structures and soils, and certification of closure is applicable to the units described in Volume 14.</p>
<p>(b) §§ 264.116 through 264.120 (which concern post-closure care) apply to the owners and operators of:</p> <ul style="list-style-type: none"> (1) All hazardous waste disposal facilities; (2) Waste piles and surface impoundments for which the owner or operator intends to remove the wastes at closure to the extent that these sections are made applicable to such facilities in § 264.228 or § 264.258; (3) Tank systems that are required under § 264.197 to meet requirements for landfills; and (4) Containment buildings that are required under § 264.1102 to meet the requirement for landfills. 	<p>(b) This closure plan is written to consider clean closure (decontaminating and removal of equipment) as practicable with risk based closure or landfill being a possibility if the clean closure standards cannot be met. If the clean closure standards cannot be met the owner/operator will comply with the post-closure care requirements of IDAPA 58.01.05.008 (40 CFR §§ 264.116 through 264.120) as necessary.</p>
<p>(c) The Regional Administrator may replace all or part of the requirements of this subpart (and the unit-specific standards in § 264.111(c)) applying to a regulated unit (as defined in § 264.90), with alternative requirements for closure set out in an... <i>NOTE: The remainder of this regulation has not been cited and is not applicable to this closure plan.</i></p>	<p>(c) Not applicable to this closure plan.</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p style="text-align: center;">This space was intentionally left blank</p>	<p>Ancillary Equipment and Process Lines</p> <ul style="list-style-type: none"> • Ancillary equipment and process lines will be decontaminated to allow removal and disposal of equipment. • After closure activities have been completed, the ancillary equipment and process lines will be secured, by blind flanging lines, locking valves closed, or tagging valves out of service, to prevent reintroduction of waste or liquids. <p>PEWE System Cells</p> <ul style="list-style-type: none"> • The PEWE system cells will be decontaminated to the extent practicable. For the PEWE system cells “to the extent practicable” means removing as much contamination as possible with flushing and hands-on decontamination. • Verification of removal to this standard will be performed by direct visual observation. Confirmation that waste removal and decontamination activities occurred will be written in a formal report and certified by an independent registered P.E. <p>LET&D System Cells</p> <ul style="list-style-type: none"> • The LET&D system cells will be decontaminated by removing as much contamination as possible with flushing and hands-on decontamination. • Verification of removal to this standard will be performed by direct visual observation. Confirmation that waste removal and decontamination activities occurred will be written in a formal report and certified by an independent registered P.E.

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p style="text-align: center;">This space was intentionally left blank</p>	<p>CPP-659 Annex</p> <ul style="list-style-type: none"> • The CPP-659 Annex will be decontaminated by flushing and hands-on decontamination. <p>Verification of removal to this standard will be performed by direct visual observation. Confirmation that waste removal and decontamination activities occurred will be written in a formal report and certified by an independent registered P.E.</p> <p>ETS Cells</p> <ul style="list-style-type: none"> • The ETS cells will be decontaminated to the extent practicable. For the ETS cells “to the extent practicable” means removing as much contamination as possible with flushing and/or hands-on decontamination. • Verification of removal to this standard will be performed by direct visual observation. Confirmation that waste removal and decontamination activities occurred will be written in a formal report and certified by an independent registered PE. <p>IWTU Cells</p> <ul style="list-style-type: none"> • The IWTU cells will be decontaminated to the extent practicable. For the IWTU cells “to the extent practicable” means removing as much contamination as possible with flushing and/or hands-on decontamination. • Verification of removal to this standard will be performed by direct visual observation. Confirmation that waste removal and decontamination activities occurred will be written in a formal report and certified by an independent, registered P.E.

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>(b) Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere, and</p> <p style="text-align: center;">This space was intentionally left blank</p>	<p>(b) The specific closure objectives described in Section 1.2.1, 264.111(a), will achieve the IDAPA 58.01.05.008 [40 CFR § 264.111(b)] closure performance standard as described below:</p> <ul style="list-style-type: none"> • The systems will be secured to prevent reintroduction of liquids. These activities will reduce the quantity of hazardous waste and residue available for escape, reduce the hazardous characteristics and mobility of the waste and residue, and eliminate the presence of liquid that could transport waste and residue. • The systems cells and equipment within the buildings, and the process lines outside the buildings, have underlying, impermeable floors and/or secondary containment. • Run-off is controlled in CPP-604, CPP-1618, CPP-659, and CPP-1696 by being fully enclosed buildings that prevent run-off from hazardous waste handling areas to other areas or the environment. CPP-1618 is inside of the floodplain boundary as postulated in the Big Lost River Flood Hazard Study, November 2005 (see Volume 3 of the INL permit application). CPP-604, CPP-659, and CPP-1696 are outside the postulated 100-year floodplain boundary. The INL emergency plan provides for the establishment of plans for the surveillance and protection of buildings and equipment, as necessary during flooding conditions to prevent run-on. This could include sand bagging, building berms, dikes, or trenches. • The existing heating, ventilating and air conditioning (HVAC) system controls releases to the atmosphere.
<p>(c) Complies with the closure requirements of this subpart, including, but not limited to, the requirements of §§ 264.178, 264.197, 264.228, 264.258, 264.280, 264.310, 264.351, 264.601, through 264.603, and 264.1102.</p>	<p>(c) The PEWE, LET&D, ETS, and IWTU are miscellaneous treatment units and subject to the closure requirements of IDAPA 58.01.05.008 (40 CFR § 264.603). The tank systems associated with the ILWMS are subject to the tank closure requirements of IDAPA 58.01.05.008 (40 CFR § 264.197).</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>1.1.3 264.112 Closure plan; amendment of plan</p>	<p>264.112 Closure plan; amendment of plan</p>
<p>(a) <i>Written plan.</i></p>	<p>(a) The hazardous waste management facility is by definition the entire INL Site [IDAPA 58.01.05.004 (40 CFR § 260.10)]. However, this is a partial closure plan that, by definition, is for less than the entire facility. Therefore, for purposes of this closure plan, “facility” shall refer to the PEWE, LET&D, ETS, or IWTU.</p>
<p>The owner or operator of a hazardous waste management facility must have a written closure plan. In addition, certain surface impoundments and waste piles from which the owner or operator intends to remove or decontaminate the hazardous waste at partial or final closure are required by §§ 264.228(c)(1)(i) and 264.258(c)(1)(i) to have contingent closure plans. The plan must be submitted with the permit application, in accordance with § 270.14(b)(13) of this chapter, and approved by the Regional Administrator as part of the permit issuance procedures under Part 124 of this chapter. In accordance with § 270.32 of this chapter, the approved closure plan will become a condition of any RCRA permit.</p>	<p>(1) A copy of the most current version of the closure plan for the facility will be maintained by the facility until closure is certified in accordance with IDAPA 58.01.05.008 (40 CFR § 264.115). The plan will be furnished to the Director, upon request, any time prior to closure certification of the facility. Until the closure plan is approved, it will be provided to a duly authorized representative of the Agency on the day of a site inspection.</p>
<p>The Director’s approval of the plan must ensure that the approved closure plan is consistent with §§ 264.111 through 264.115 and the applicable requirements of subpart F of this part, 264.178, 264.197, 264.228, 264.258, 264.280, 264.310, 264.351, 264.601, 264.1102. Until final closure is completed and certified in accordance with § 264.115, a copy of the approved plan and all approved revisions must be furnished to the Director upon request, including requests by mail.</p>	<p>The plan will be furnished to the Director, upon request, any time prior to closure certification of the facility.</p>
<p>Content of plan. The plan must identify steps necessary to perform partial and/or final closure of the facility at any point during its active life. The closure plan must include, at least:</p> <p>(1) A description of how each hazardous waste management unit at the facility will be closed in accordance with § 264.111;</p>	<p>(b)(1) The details of how the closure will be performed are provided in Section 1.1.3, 264.112(b)(3) and (b)(4), of this plan.</p>
<p>(2) A description of how final closure of the facility will be</p>	<p>(2) Final closure of the facility shall constitute final closure in the</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>conducted in accordance with § 264.111. The description must identify the maximum extent of the operation which will be unclosed during the active life of the facility; and</p>	<p>terms of this plan. The details of how this closure will be conducted are shown in Section 1.1.3, 264.112(b)(3) and (b)(4), of this plan.</p>
<p>(3) An estimate of the maximum inventory of hazardous wastes ever on-site over the active life of the facility and a detailed description of the methods to be used during partial and final closure, including, but not limited to, methods for removing, transporting, treating, storing or disposing of all hazardous waste, and identification of and the type(s) of off-site hazardous waste management units to be used, if applicable; and</p> <p style="text-align: center;">This space was intentionally left blank</p>	<p>(3) The maximum inventory of hazardous waste ever in the PEWE system over its active life can only be estimated based on the capacity of the miscellaneous treatment (evaporator) and the capacity of the tank systems associated with the PEWE:</p> <ul style="list-style-type: none"> • Evaporator Feed Sediment Tank, VES-WL-132, has a maximum capacity of 4,700 gal • Evaporator Feed Collection Tank, VES-WL-133, has a maximum capacity of 19,000 gal • Surge Tank, VES-WL-102, has a maximum capacity of 18,400 gal • Process Condensate Knock Out Pot, VES-WL-108, has a maximum capacity of 98 gal • Evaporator Head Tank, VES-WL-109, has a maximum capacity of 270 gal • Evaporators VES-WL-129 and VES-WL-161 have maximum capacities of 1,000 gal/each • Condensate Surge Tank, VES-WL-131, has a maximum capacity of 66 gal • Condensate Surge Tank, VES-WL-134, has a maximum capacity of 500 gal • Bottoms Collection Tank, VES-WL-101, has a maximum capacity of 18,400 gal • Bottoms Collection Tank, VES-WL-111, has a maximum capacity of 1,500 gal • CPP-604 Tank Farm Tanks (TFT), VES-WM-100, VES-WM-101, and VES-WM-102 have a maximum capacity of 18,400 gal/each

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p style="text-align: center;">This space was intentionally left blank</p>	<ul style="list-style-type: none"> • CPP-604 Process Condensate Collection Tanks, VES-WL-106, VES-WL-107, and VES-WL-163, have a maximum capacity of 5,000 gal/each • Tanks VES-WL-135, VES-WL-136, VES-WL-139, and VES-WL-142 have a maximum capacity of 10 gal. Tanks VES-WL-137, VES-WL-138, and VES-WL-144 have a maximum capacity of 25 gal. VES-WL-150 has a maximum capacity of 50 gal. <p>The maximum inventory of hazardous waste ever in the LET&D system over its active life can only be estimated based on the capacity of the miscellaneous treatment (fractionator) and the capacity of the tank systems associated with the LET&D:</p> <ul style="list-style-type: none"> • VES-WLK-197 has a maximum capacity of 270 gal • FRAC-WLL-170 and FRAC-WLK-170 have a maximum capacity of 460 gal/each including equipment listed in Section D of this document. • VES-WLL-195 has a maximum capacity of 270 gal <p>The maximum inventory of hazardous waste ever in the CPP-659 Annex over its active life can only be estimated based on the capacity of the capacity of the tank system associated with the CPP-659 Annex:</p> <ul style="list-style-type: none"> • VES-NCR-171 has a maximum capacity of 22,500 gal • VES-NCR-173 has a maximum capacity of 90 gal. <p>The maximum inventory of hazardous waste ever in the ETS over its active life can only be estimated based on the capacity of the miscellaneous treatment (evaporator) and the capacity of the tank</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
	<p>systems associated with the ETS.</p> <ul style="list-style-type: none"> • Constant Head Feed Tank VES-NCC-152, has a maximum capacity of 200 gal • Evaporator VES-NCC-150, has a maximum capacity of 2,600 gal • Blend Tank VES-NCC-101, has a maximum capacity of 5,870 gal • Hold Tanks VES-NCC-102 and VES-NCC-103, each have a maximum capacity of 4,000 gal • Fluoride Hot Sump Tank VES-NCC-119, has a maximum capacity of 6,500 gal • Non-Fluoride Hot Sump Tank VES-NCC-122, has a maximum capacity of 4,100 gal • Scrub Hold Tank VES-NCC-108, has a maximum capacity of 2,000 gal • Vent Condenser Knockout Drum VES-NCC-136, has a maximum capacity of 60 gal • Mist Collector VES-NCC-116, has a maximum capacity of 500 gal <p>The maximum inventory of hazardous waste ever in the IWTU over its active life can only be estimated based on the capacity of the miscellaneous treatment (reformers) and the capacity of the tank systems associated with the IWTU:</p> <ul style="list-style-type: none"> • Waste Feed Tank, VES-SRC-131, has a maximum capacity of 2,170 gal • Denitration and Mineralization Reformer, VES-SRC-140, has a maximum capacity of approximately 3,400 gal • Process Gas Filter, F-SRC-153, has a maximum capacity of 2,300 gal • Carbon Reduction Reformer, VES-SRC-160, has a maximum

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>This space was intentionally left blank</p>	<p>capacity of approximately 4,300 gal</p> <ul style="list-style-type: none"> • Offgas Filter, F-SRC-160, has a maximum capacity of 3,250 gal • Product Receiver/Cooler, VES-SRC-190, has a maximum capacity of 512 gal • Product Receiver/Cooler, COL-SRC-191, has a maximum capacity of 512 gal • Product Receiver Filter, F-SRC-191, has a maximum capacity of 900 gal • Product Handling Vacuum Filter, F-SRC-190, has a maximum capacity of 900 gal • Mercury Adsorber, F-SRH-141A, has a maximum capacity of approximately 11,600 gal • Mercury Adsorber, F-SRH-141B, has a maximum capacity of approximately 11,600 gal • Firewater Collection Tank, TK-SRH-196, has a maximum capacity of 15,000 gal • Offgas Condensate Collection Tank, TK-SRH-141, has a maximum capacity of 120 gal • Vault Storage Area and Vault Loading Area combined have a maximum capacity of 179,070 gal <p>Waste will be removed by an acid and water flush. If additional removal is needed, chemicals such as oxalic acid, potassium permanganate, sodium hydroxide, and/or other chemicals may be used, alone, or in combination.</p> <p>The vaults and cells will be rinsed with water. If additional removal is needed, chemicals such as oxalic acid, potassium permanganate, sodium</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology																												
	<p>hydroxide, and/or other chemicals may be used, alone, or in combination. Prior to rinsing the cells, miscellaneous debris will be removed. Debris will be characterized, stored, treated, and disposed, as appropriate, in accordance with IDAPA 58.01.05.005, 58.01.05.006, 58.01.05.008, and 58.01.05.011 (40 CFR §§ 261, 262, 264, and 268).</p> <p><i>Waste Generation</i> - The Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) hazardous waste numbers applicable to the ILWMS wastes are based on a historical review of the listed waste processed in the system. The applicable characteristic waste numbers are those listed on the INL's Part A Permit Application.</p> <p>Environmental Protection Agency (EPA) Hazardous Waste Numbers applicable to the PEWE system are as follows:</p> <table border="1" data-bbox="1050 763 1575 1440"> <thead> <tr> <th data-bbox="1050 763 1260 795"><u>Waste Numbers</u></th> <th data-bbox="1260 763 1575 795"><u>Chemical Name</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="1050 803 1260 836">D001</td> <td data-bbox="1260 803 1575 836">Ignitable</td> </tr> <tr> <td data-bbox="1050 844 1260 876">D002</td> <td data-bbox="1260 844 1575 876">Corrosive</td> </tr> <tr> <td data-bbox="1050 885 1260 917">D004</td> <td data-bbox="1260 885 1575 917">Arsenic</td> </tr> <tr> <td data-bbox="1050 925 1260 958">D005</td> <td data-bbox="1260 925 1575 958">Barium</td> </tr> <tr> <td data-bbox="1050 966 1260 998">D006</td> <td data-bbox="1260 966 1575 998">Cadmium</td> </tr> <tr> <td data-bbox="1050 1006 1260 1039">D007</td> <td data-bbox="1260 1006 1575 1039">Chromium</td> </tr> <tr> <td data-bbox="1050 1047 1260 1079">D008</td> <td data-bbox="1260 1047 1575 1079">Lead</td> </tr> <tr> <td data-bbox="1050 1088 1260 1120">D009</td> <td data-bbox="1260 1088 1575 1120">Mercury</td> </tr> <tr> <td data-bbox="1050 1128 1260 1161">D010</td> <td data-bbox="1260 1128 1575 1161">Selenium</td> </tr> <tr> <td data-bbox="1050 1169 1260 1201">D011</td> <td data-bbox="1260 1169 1575 1201">Silver</td> </tr> <tr> <td data-bbox="1050 1209 1260 1242">D018</td> <td data-bbox="1260 1209 1575 1242">Benzene</td> </tr> <tr> <td data-bbox="1050 1250 1260 1282">D019</td> <td data-bbox="1260 1250 1575 1282">Carbon Tetrachloride</td> </tr> <tr> <td data-bbox="1050 1291 1260 1323">D021</td> <td data-bbox="1260 1291 1575 1323">Chlorobenzene</td> </tr> </tbody> </table>	<u>Waste Numbers</u>	<u>Chemical Name</u>	D001	Ignitable	D002	Corrosive	D004	Arsenic	D005	Barium	D006	Cadmium	D007	Chromium	D008	Lead	D009	Mercury	D010	Selenium	D011	Silver	D018	Benzene	D019	Carbon Tetrachloride	D021	Chlorobenzene
<u>Waste Numbers</u>	<u>Chemical Name</u>																												
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D018	Benzene																												
D019	Carbon Tetrachloride																												
D021	Chlorobenzene																												

Regulatory Citation (Description of Requirement)	Compliance Methodology	
This space was intentionally left blank	D022 Chloroform	
	D026 Cresol	
	D028 1,2-Dichloroethane	
	D032 Hexachlorobenzene	
	D034 Hexachloroethane	
	D035 Methyl ethyl ketone	
	D036 Nitrobenzene	
	D038 Pyridine	
	D039 Tetrachloroethylene	
	D040 Trichloroethylene	
	F001 1,1,1-Trichloroethane, Carbon tetrachloride Trichloroethylene	
	F002 1,1,1-Trichloroethane, Carbon tetrachloride Trichloroethylene, Tetrachloroethylene	
	F003 Acetone, Benzene, Carbon disulfide, Toluene	
	F005 Benzene, Carbon disulfide, Pyridine Toluene	
	U134 Hydrogen fluoride	
	Environmental Protection Agency (EPA) Hazardous Waste Numbers applicable to the LET&D system are as follows:	
	<u>Waste Numbers</u> <u>Chemical Name</u>	
	D001	Ignitable
	D002	Corrosive
	D004	Arsenic

Regulatory Citation (Description of Requirement)	Compliance Methodology
This space intentionally left blank	D005 Barium
	D006 Cadmium
	D007 Chromium
	D008 Lead
	D009 Mercury
	D010 Selenium
	D011 Silver
	D018 Benzene
	D019 Carbon Tetrachloride
	D021 Chlorobenzene
	D022 Chloroform
	D026 Cresol
	D028 1,2-Dichloroethane
	D032 Hexachlorobenzene
	D034 Hexachloroethane
	D035 Methyl ethyl ketone
	D036 Nitrobenzene
	D038 Pyridine
	D039 Tetrachloroethylene
	D040 Trichloroethylene
	F001 1,1,1-Trichloroethane, Carbon tetrachloride Trichloroethylene
	F002 1,1,1-Trichloroethane, Carbon tetrachloride Trichloroethylene, Tetrachloroethylene

Regulatory Citation (Description of Requirement)	Compliance Methodology	
This space was intentionally left blank	F003	Acetone, Benzene, Carbon disulfide, Toluene
	F005	Benzene, Carbon disulfide, Pyridine
		Toluene
	U134	Hydrogen fluoride
	Environmental Protection Agency (EPA) Hazardous Waste Numbers applicable to the ETS are as follows:	
	<u>Waste Numbers</u>	<u>Chemical Name</u>
	D001	Ignitable
	D002	Corrosive
	D004	Arsenic
	D005	Barium
	D006	Cadmium
	D007	Chromium
	D008	Lead
	D009	Mercury
	D010	Selenium
	D011	Silver
	D018	Benzene
	D019	Carbon Tetrachloride
	D021	Chlorobenzene
	D022	Chloroform
D026	Cresol	
D028	1,2-Dichloroethane	
D032	Hexachlorobenzene	

Regulatory Citation (Description of Requirement)	Compliance Methodology		
<p style="text-align: center;">This space was intentionally left blank</p>	D034 Hexachloroethane		
	D035 Methyl ethyl ketone		
	D036 Nitrobenzene		
	D038 Pyridine		
	D039 Tetrachloroethylene		
	D040 Trichloroethylene		
	F001 1,1,1-Trichloroethane, Carbon tetrachloride Trichloroethylene		
	F002 1,1,1-Trichloroethane, Carbon tetrachloride Trichloroethylene, Tetrachloroethylene		
	F003 Acetone, Benzene, Carbon disulfide, Toluene		
	F005 Benzene, Carbon disulfide, Pyridine Toluene		
	U134 Hydrogen fluoride		
	<p>Environmental Protection Agency (EPA) Hazardous Waste Numbers applicable to the IWTU are as follows:</p>		
	<table border="0"> <tr> <td style="text-align: center;"><u>Waste Numbers</u></td> <td style="text-align: center;"><u>Chemical/Characteristic</u></td> </tr> </table>	<u>Waste Numbers</u>	<u>Chemical/Characteristic</u>
	<u>Waste Numbers</u>	<u>Chemical/Characteristic</u>	
	D001 Ignitable		
	D002 Corrosive		
	D004 Arsenic		
D005 Barium			
D006 Cadmium			
D007 Chromium			
D008 Lead			

Regulatory Citation (Description of Requirement)	Compliance Methodology
This space was intentionally left blank	D009 Mercury
	D010 Selenium
	D011 Silver
	D018 Benzene
	D019 Carbon Tetrachloride
	D021 Chlorobenzene
	D022 Chloroform
	D026 Cresol
	D028 1,2-Dichloroethane
	D032 Hexachlorobenzene
	D034 Hexachloroethane
	D035 Methyl ethyl ketone
	D036 Nitrobenzene
	D038 Pyridine
	D039 Tetrachloroethylene
	D040 Trichloroethylene
	F001 1,1,1-Trichloroethane, Carbon tetrachloride Trichloroethylene
	F002 1,1,1-Trichloroethane, Carbon tetrachloride Trichloroethylene, Tetrachloroethylene
	F003 Acetone, Benzene, Carbon disulfide, Toluene
	F005 Benzene, Carbon disulfide, Pyridine Toluene
	U134 Hydrogen fluoride

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p style="text-align: center;">This space was intentionally left blank</p>	
<p>(4) A detailed description of the steps needed to remove or decontaminate all hazardous waste residues and contaminated containment system components, equipment, structures, and soils during partial and final closure including, but not limited to, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination required to satisfy the closure performance standard; and</p>	<p>(4) The waste removal activities described in Section 1.1.3, 264.112(b)(3), will also serve to decontaminate the system.</p> <p>The closure plan will be modified, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.112(c)], to include the appropriate verification sampling techniques to be used to meet the closure performance standards prior to implementation of the closure plan.</p>
<p>(5) A detailed description of other activities necessary during the closure period to ensure that all partial closures and final closure satisfy the closure performance standards, including, but not limited to, groundwater monitoring, leachate collection, and run-on and run-off control; and</p>	<p>(5) Other activities necessary during the closure will focus on securing the system to prevent reintroduction of waste and liquids into the system.</p> <ul style="list-style-type: none"> • The utility lines (e.g., decontamination, water, steam lines) will be secured by blind flanging and/or locking valves closed at the decontamination header source. The header will be flushed with water prior to securing the system. • Disposition of all instrumentation will be determined during final closure.
<p>(6) A schedule for closure of each hazardous waste management unit and for final closure of the facility. The schedule must include, at a minimum, the total time required to close each hazardous waste management unit and the time required for intervening closure activities which will allow tracking of the progress of partial and final closure. (For example, in the case of a landfill unit, estimates of the time required to treat or dispose of all hazardous waste inventory and of the time required to place a final cover must be included.)</p>	<p>(6) A general schedule for closure is estimated as follows:</p> <p>Day 0 Approval of the closure plan</p> <p>Day 100 Complete equipment decontamination</p> <p>Day 140 Complete surface decontamination</p> <p>Day 160 Decontaminate tools (where applicable), complete waste assessments, remove wastes</p> <p>Day 180 Complete all closure activities.</p> <p>60 days after completion of closure – submit closure certification to the State of Idaho.</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
	As the actual closure is anticipated the schedule above will be modified to reflect conditions and activities existing at that time. The amended closure schedule will allow adequate time to complete the closure of the systems.
(7) For facilities that use trust funds to establish financial assurance under § 264.143 or 264.145 and that are expected to close prior to the expiration of the permit, an estimate of the expected year of final closure.	(7) This requirement is not applicable.
(8) For facilities where the Regional Administrator has applied alternative requirements at a regulated unit under §§ 264.90(f), 264.110(d), and/or 264.140(d), either the alternative requirements applying to the regulated unit, or a reference to the enforceable document containing those alternative requirements.	(8) Not applicable to this closure plan.
(c) <i>Amendment of plan.</i> The owner or operator must submit a written notification of or request for a permit modification to authorize a change in operating plans, facility design, or the approved closure plan in accordance with the applicable procedures in Parts 124 and 270. The written notification or request must include a copy of the amended closure plan for review or approval by the Regional Administrator.	(c) The owner/operator may amend the approved closure plan, prior to notification of partial closure, by notifying the Director with a written request. The request will contain a copy of the amended closure plan for approval.
(1) The owner or operator may submit a written notification or request to the Regional Administrator for a permit modification to amend the closure plan at any time prior to the notification of partial or final closure of the facility.	(1) The owner or operator will submit a written notification or request to the Regional Administrator for a permit modification to amend the closure plan prior to the notification of partial or final closure of the facility, as necessary.

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>(2) The owner or operator must submit a written notification of or request for a permit modification to authorize a change in the approved closure plan whenever:</p> <ul style="list-style-type: none"> (i) Changes in operating plans or facility design affect the closure plan, or (ii) There is a change in the expected year of closure, if applicable, or (iii) In conducting partial or final closure activities, unexpected events require a modification of the approved closure plan. (iv) The owner or operator requests the Regional Administrator to apply alternative requirements to a regulated unit under §§ 264.90(f), 264.110(c), and/or 264.140(d). 	<p>(2) The owner/operator will amend the closure plan whenever:</p> <ul style="list-style-type: none"> (i) Changes in operating plans or facility design affect the closure plan (ii) Change in the closure schedule, or (iii) Unexpected events occur during partial closure requiring a modification. <p>The owner/operator will not request alternative requirements of the Regional Administrator.</p>
<p>(3) The owner or operator must submit a written request for a permit modification including a copy of the amended closure plan for approval at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred which has affected the closure plan. If an unexpected event occurs during the partial or final closure period, the owner or operator must request a permit modification no later than 30 days after the unexpected event. An owner or operator of a surface impoundment or waste pile that intends to remove all hazardous waste at closure and is not otherwise required to prepare a contingent closure plan under § 264.228(c)(1)(i) or 264.258(c)(1)(i), must submit an amended closure plan to the Regional Administrator no later than 60 days from the date that the owner or operator or Regional Administrator determines that the hazardous waste management unit must be closed as a landfill, subject to the requirements of § 264.310, or no later than 30 days from that date if the determination is made during partial or final closure. The Regional Administrator will approve, disapprove, or modify this amended plan in accordance with the procedures in Parts 124 and 270. In accordance with § 270.32 of this chapter, the approved closure plan will become a condition of any RCRA permit issued.</p>	<p>(3) The owner/operator will amend the closure plan at least 60 days prior to any and all proposed changes in design or operation that could affect partial or final closure, or no later than 60 days after an unexpected event occurs that has affected the closure plan. If an unexpected event occurs during partial closure, the owner/operator will amend the closure plan no later than 30 days after the unexpected event occurs.</p> <p style="text-align: center;">This space was intentionally left blank</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>(4) The Regional Administrator may request modifications to the plan under the conditions described in paragraph 264.112(c)(2). The owner or operator must submit the modified plan within 60 days of the Regional Administrator’s request, or within 30 days if the change in facility conditions occurs during partial or final closure. Any modifications requested by the Regional Administrator will be approved in accordance with the procedures in Parts 124 and 270.</p>	<p>(4) Once this closure plan is approved, the owner/operator will submit a modified plan within 60 days of a request from the Director, or within 30 days, if an unexpected event occurs during partial or final closure.</p>
<p>(d) Notification of partial closure and final closure.</p>	<p>(d) The owner/operator will notify the Director in writing at least 45 days prior to the date on which the owner/operator expects to begin final closure.</p>
<p>(1) The owners or operator must notify the Regional Administrator in writing at least 60 days prior to the date on which he expects to begin closure of a surface impoundment, waste pile, land treatment or landfill unit, or final closure of a facility with such a unit. The owner or operator must notify the Regional Administrator in writing at least 45 days prior to the date on which he expects to begin final closure of a facility with only treatment or storage tanks, container storage, or incinerator units to be closed. The owner or operator must notify the Regional Administrator in writing at least 45 days prior to the date on which he expects to begin partial or final closure of a boiler or industrial furnace, whichever is earlier.</p>	<p>(1) The owner/operator will notify the Director in writing at least 45 days prior to the date on which the owner/operator expects to begin final closure.</p>
<p>(2) The date when he “expects to begin closure” must be either:</p> <p>(i) No later than 30 days after the date on which any hazardous waste management unit receives the known final volume of hazardous wastes, or if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous wastes, no later than one year after the date on which the unit received the most recent volume of hazardous waste. If the owner or operator of a hazardous waste</p>	<p>(2)(i) The requirements will be applicable when the ILWMS receives its final volume of waste.</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>management unit can demonstrate to the Regional Administrator that the hazardous waste management unit or facility has the capacity to receive additional hazardous wastes and he has taken all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements, the Regional Administrator may approve an extension to this one-year limit; or</p>	<p>This space was intentionally left blank</p>
<p>(ii) For units meeting the requirements of § 264.113(d), no later than 30 days after the date on which the hazardous waste management unit receives the known final volume of non-hazardous wastes, or if there is a reasonable possibility that the hazardous waste management unit will receive additional non-hazardous wastes, no later than one year after the date on which the unit received the most recent volume of non-hazardous wastes. If the owner or operator can demonstrate to the Regional Administrator that the hazardous waste management unit has the capacity to receive additional non-hazardous wastes and he has taken, and will continue to take, all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements, the Regional Administrator may approve an extension to this one-year limit.</p>	<p>(ii) The requirements will be applicable when the ILWMS receives its final volume of waste.</p>
<p>(3) If the facility's permit is terminated, or if the facility is otherwise ordered, by judicial decree or final order under § 3008 of RCRA, to cease receiving hazardous wastes or to close, then the requirements of this paragraph do not apply. However, the owner or operator must close the facility in accordance with the deadlines established in § 264.113.</p>	<p>(3) The owner/operator understands this allowance.</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>(e) Removal of wastes and decontamination or dismantling of equipment. Nothing in this section shall preclude the owner or operator from removing hazardous wastes and decontaminating or dismantling equipment in accordance with the approved partial or final closure plan at any time before or after notification of partial or final closure.</p>	<p>(e) The owner/operator understands this allowance.</p>
<p>1.1.4 264.113(a) Closure; time allowed for closure</p>	<p>264.113 Closure; time allowed for closure</p>
<p>(a) Within 90 days after receiving the final volume of hazardous wastes, or the final volume of non-hazardous wastes if the owner or operator complies with all applicable requirements in paragraphs (d) and (e) of this section, at a hazardous waste management unit or facility, the owner or operator must treat, remove from the unit or facility, or dispose of on-site, all hazardous wastes in accordance with the approved closure plan. The Regional Administrator may approve a longer period if the owner or operator complies with all applicable requirements for requesting a modification to the permit and demonstrates that:</p>	<p>(a) In accordance with the provisions of IDAPA 58.01.05.008 [40 CFR 264.113(a)], the owner/operator is not requesting an extension of the closure period longer than 90 days for removing waste from the systems. However, when a decision is made to close the systems, the 90-day time-period will be reevaluated and a request for an extension may be made at that time.</p>
<p>(1)(i) The activities required to comply with this paragraph will, of necessity, take longer than 90 days to complete; or</p> <p>(ii)(A) The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes, or has the capacity to receive non-hazardous wastes if the owner or operator complies with paragraphs (d) and (e) of this section; and</p> <p>(B) There is a reasonable likelihood that he or another person will recommence operation of the hazardous waste management unit or the facility within one year; and</p> <p>(C) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and</p>	<p>(1) Not applicable to this closure plan.</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
(2) He has taken and will continue to take all steps to prevent threats to human health and the environment, including compliance with all applicable interim status requirements.	(2) Not applicable to this closure plan.
(b) The owner or operator must complete partial and final closure activities in accordance with the approved closure plan and within 180 days after receiving the final volume of hazardous wastes, or the final volume of non-hazardous wastes if the owner or operator complies with all applicable requirements in paragraphs (d) and (e) of this section, at the hazardous waste management unit or facility. The Regional Administrator may approve an extension to the closure period if the owner or operator complies with all applicable requirements for requesting a modification to the permit and demonstrates that:	(b) The owner/operator intends to perform partial and final closure activities in accordance with the approved closure plan and the closure schedule in Section 1.1.3, 264.113(b).
(1)(i) The partial or final closure activities will, of necessity, take longer than 180 days to complete; or (ii)(A) The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes, or has the capacity to receive non-hazardous wastes if the owner or operator complies with paragraphs (d) and (e) of this section; and (B) There is reasonable likelihood that he or another person will recommence operation of the hazardous waste management unit or the facility within one year; and (C) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and	(1) Not applicable to this closure plan.
(2) He has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed but not operating hazardous waste management unit or facility, including compliance with all applicable permit requirements.	(2) Not applicable to this closure plan.

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>(c) The demonstrations referred to in paragraphs (a)(1) and (b)(1) of this section must be made as follows:</p> <p>(1) The demonstrations in paragraph (a)(1) of this section must be made at least 30 days prior to the expiration of the 90-day period in paragraph (a) of this section; and</p> <p>(2) The demonstration in paragraph (b)(1) of this section must be made at least 30 days prior to the expiration of the 180-day period in paragraph (b) of this section, unless the owner or operator is otherwise subject to the deadlines in paragraph (d) of this section.</p>	<p>(c) Not applicable to this closure plan.</p>
<p>(d) The Regional Administrator may allow an owner or operator to receive non-hazardous wastes in a landfill, land treatment, or surface impoundment unit after the final receipt of hazardous wastes at that unit if:</p> <p>(1) The owner or operator requests a permit modification in compliance with all applicable requirements in parts 270 and 124 of this title and in the permit modification request demonstrates that...</p> <p><i>NOTE: The remainder of this regulation has not been cited and is not applicable to this closure plan.</i></p>	<p>(d) Not applicable to this closure plan.</p>
<p>1.1.5 264.114 Disposal or decontamination of equipment, structures and soils</p>	<p>264.114 Disposal or decontamination of equipment, structures and soils</p>
<p>During the partial and final closure periods, all contaminated equipment, structures and soils must be properly disposed of or decontaminated unless specified otherwise in §§ 264.197, 264.228, 264.258, 264.280, or 264.310. By removing all hazardous wastes or hazardous constituents during partial and final closure, the owner or operator may become a generator of hazardous waste and must handle that hazardous waste in accordance with all applicable requirements of part 262 of this chapter.</p>	<p>All equipment will be decontaminated, to allow removal and disposal, as detailed in Section 1.1.3, 264.112(b)(3) and (4) of this plan. All debris and waste generated during closure will be characterized, stored, treated, and disposed, as appropriate, in accordance with IDAPA 58.01.05.005, 58.01.05.006, 58.01.05.008, and 58.01.05.011 (40 CFR Parts 261, 262, 264, and 268). Final disposal/disposition of any equipment will be determined at final closure.</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>1.1.6 264.115 Certification of closure</p> <p>Within 60 days of completion of closure of each hazardous waste surface impoundment, waste pile, land treatment, and landfill unit, and within 60 days of completion of final closure, the owner or operator must submit to the Regional Administrator, by registered mail, a certification that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications in the approved closure plan. The certification must be signed by the owner or operator and by an independent registered professional engineer. Documentation supporting the independent registered professional engineer's certification must be furnished to the Regional Administrator upon request until he releases the owner or operator from the financial assurance requirements for closure under § 264.143(h).</p>	<p>264.115 Certification of closure</p> <p>Within 60 days after completion of the closure activities, the owner/operator will submit to the Director a certification that the systems have been closed in accordance with the approved closure plan. The certification will be signed by the owner/operator and by an independent, registered P.E.</p>
<p>1.1.7 264.116 Survey plat</p> <p>No later than the submission of the certification of closure of each hazardous waste disposal unit, an owner or operator must submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Regional Administrator, a survey plat indicating the location and dimensions of landfill cells or other hazardous waste disposal units with respect to permanently surveyed benchmarks. This plat must be prepared and certified by a professional land surveyor. The plat filed with the local zoning authority, or the authority with jurisdiction over local land use, must contain a note, prominently displayed, which states the owner's or operator's obligation to restrict disturbance of the hazardous waste disposal unit in accordance with the applicable Subpart G regulations.</p>	<p>264.116 Survey plat</p> <p>A survey plat meeting this requirement will be submitted to the local zoning authority or the authority with jurisdiction over local land use and the Regional Administrator.</p>
<p>1.1.8 264.117 Post-closure care and use of property</p> <p>(a)(1) Post-closure care for each hazardous waste management unit subject to the requirements of §§ 264.117 through 264.120 must begin after completion of closure of the unit and continue for 30 years after that date and must consist of at least the following:</p> <p>(i) Monitoring and reporting in accordance with the</p>	<p>264.117 Post-closure care and use of property</p> <p>(a) All hazardous wastes and equipment associated with the ILWMS will be removed and disposed of appropriately. Post closure plan and care will not be required.</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>requirements of Subparts F, K, L, M, N, and X of this part; and</p> <p>(ii) Maintenance and monitoring of waste containment systems in accordance with the requirements of Subparts F, K, L, M, N, and X of this part.</p> <p>(2) Any time preceding closure of a hazardous waste management unit subject to post-closure care requirements or final closure, or any time during the post-closure period for a particular unit, the Regional Administrator may, in accordance with the permit modification procedures in Parts 124 and 270:</p> <p>(i) Shorten the post-closure care period applicable to the hazardous waste management unit, or facility, if all disposal units have been closed, if he finds that the reduced period is sufficient to protect human health and the environment (e.g., leachate or ground-water monitoring results, characteristics of the hazardous waste, application of advanced technology, or alternative disposal, treatment, or re-use techniques indicate that the hazardous waste management unit or facility is secure); or</p> <p>(ii) Extend the post-closure care period applicable to the hazardous waste management unit or facility if he finds that the extended period is necessary to protect human health and the environment (e.g., leachate or groundwater monitoring results indicate a potential for migration of hazardous wastes at levels which may be harmful to human health and the environment).</p>	<p style="text-align: center;">This space was intentionally left blank</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>(b) The Regional Administrator may require, at partial and final closure, continuation of any of the security requirements of § 264.14 during part or all of the post-closure period when:</p> <ul style="list-style-type: none"> (1) Hazardous wastes may remain exposed after completion of partial or final closure; or (2) Access by the public or domestic livestock may pose a hazard to human health. 	<p>(b) All hazardous wastes and equipment associated with the ILWMS will be removed and disposed of appropriately. Post closure plan and care will not be required.</p>
<p>(c) Post-closure use of property on or in which hazardous wastes remain after partial or final closure must never be allowed to disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the facility's monitoring systems, unless the Regional Administrator finds that the disturbance:</p> <ul style="list-style-type: none"> (1) Is necessary to the proposed use of the property, and will not increase the potential hazard to human health or the environment; or (2) Is necessary to reduce a threat to human health or the environment. <p>(d) All post-closure care activities must be in accordance with the provisions of the approved post-closure plan as specified in § 264.118.</p>	<p>(c) All hazardous wastes and equipment associated with the ILWMS will be removed and disposed of appropriately. Post closure plan and care will not be required.</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>1.1.9 264.118 Post-closure plan; amendment of plan</p>	<p>264.118 Post-closure plan; amendment of plan</p>
<p>(a) <i>Written plan.</i> The owner or operator of a hazardous waste disposal unit must have a written post-closure plan. In addition, certain surface impoundments and waste piles from which the owner or operator intends to remove or decontaminate the hazardous wastes at partial or final closure are required by §§ 264.228(c)(1)(ii) and 264.258(c)(1)(ii) to have contingent post-closure plans. Owners or operators of surface impoundments and waste piles not otherwise required to prepare contingent post-closure plans under §§ 264.128(c)(1)(ii) and 264.258(c)(1)(ii) must submit a post-closure plan to the Regional Administrator within 90 days from the date that the owner or operator or Regional Administrator determines that the hazardous waste management unit must be closed as a landfill, subject to the requirements of §§ 264.117 through 264.120. The plan must be submitted with the permit application, in accordance with § 270.14(b)(13) of this chapter, and approved by the Regional Administrator as part of the permit issuance procedures under Part 124 of this chapter. In accordance with §270.32 of this chapter, the approved post-closure plan will become a condition of any RCRA permit issued.</p>	<p>(a) All hazardous wastes and equipment associated with the ILWMS will be removed and disposed of appropriately. Post closure plan and care will not be required. If clean closure cannot be achieved and a "risk-based closure" or "landfill closure" is deemed necessary then a post-closure plan will be developed.</p>
<p>(b) For each hazardous waste management unit subject to the requirements of this section, the post-closure plan must identify the activities that will be carried on after closure of each disposal unit and the frequency of these activities, and include at least:</p> <ol style="list-style-type: none"> (1) A description of the planned monitoring activities and frequencies at which they will be performed to comply with Subparts F, K, L, M, N, and X of this part during the post-closure care period; and (2) A description of the planned maintenance activities, and frequencies at which they will be performed, to ensure: <ol style="list-style-type: none"> (i) The integrity of the cap and final cover or other containment systems in accordance with the 	<p>(b) All hazardous wastes and equipment associated with the ILWMS will be removed and disposed of appropriately. Post closure plan and care will not be required. If clean closure cannot be achieved and a "risk-based closure" or "landfill closure" is deemed necessary then a post-closure plan will be developed.</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>requirements of subparts F, K, L, M, N, and X of this part; and</p> <p>(ii) The function of the monitoring equipment in accordance with the requirements of subparts F, K, L, M, N, and X of this part; and</p> <p>(3) The name, address, and phone number of the person or office to contact about the hazardous waste disposal unit or facility during the post-closure care period.</p> <p>(4) For facilities where the Regional Administrator has applied alternative requirements at a regulated unit under §§ 264.90(f), 264.110(c), and/or 264.140(d), either the alternative requirements that apply to the regulated unit, or a reference to the enforceable document containing those requirements.</p>	<p>This space was intentionally left blank</p>
<p>(c) Until final closure of the facility, a copy of the approved post-closure plan must be furnished to the Regional Administrator upon request, including request by mail. After final closure has been certified, the person or office specified in §264.118(b)(3) must keep the approved post-closure plan during the remainder of the post-closure period.</p>	<p>(c) All hazardous wastes and equipment associated with the ILWMS will be removed and disposed of appropriately. Post closure plan and care will not be required. If clean closure cannot be achieved and a "risk-based closure" or "landfill closure" is deemed necessary then a post-closure plan will be developed.</p>
<p>(d) Amendment of plan. The owner or operator must submit a written notification of or request for a permit modification to authorize a change in the approved post-closure plan in accordance with the applicable requirements in Parts 124 and 270. The written notification or request must include a copy of the amended post-closure plan for review or approval by the Regional Administrator.</p> <p>(1) The owner or operator may submit a written notification or request to the Regional Administrator for a permit modification to amend the post-closure plan at any time during the active life of the facility or during the post-closure care period.</p>	<p>(d) All hazardous wastes and equipment associated with the ILWMS will be removed and disposed of appropriately. Post closure plan and care will not be required. If clean closure cannot be achieved and a "risk-based closure" or "landfill closure" is deemed necessary then a post-closure plan will be developed</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>(2) The owner or operator must submit a written notification of or request for a permit modification to authorize a change in the approved post-closure plan whenever:</p> <ul style="list-style-type: none"> (i) Changes in operating plans or facility design affect the approved post-closure plan, or (ii) There is a change in the expected year of final closure, if applicable, or (iii) Events which occur during the active life of the facility, including partial and final closures, affect the approved post-closure plan. (iv) The owner or operator requests the Regional Administrator to apply alternative requirements to a regulated unit under §§ 264.90(f), 264.110(c), and/or 264.140(d). <p>(3) The owner or operator must submit a written request for a permit modification at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred which has affected the post-closure plan. An owner or operator of a surface impoundment or waste pile that intends to remove all hazardous waste at closure and is not otherwise required to submit a contingent post-closure plan under §§ 264.228(c)(1)(ii) and 264.258(c)(1)(ii) must submit a post-closure plan to the Regional Administrator no later than 90 days after the date that the owner or operator or Regional Administrator determines that the hazardous waste management unit must be closed as a landfill, subject to the requirements of § 264.310. The Regional Administrator will approve, disapprove or modify this plan in accordance with the procedures in Parts 124 and 270. In accordance with § 270.32 of this chapter, the approved post-closure plan will become a permit condition.</p>	<p style="text-align: center;">This space was intentionally left blank</p>

<p>Regulatory Citation (Description of Requirement)</p>	<p>Compliance Methodology</p>
<p>(4) The Regional Administrator may request modifications to the plan under the conditions described in § 264.118(d)(2). The owner or operator must submit the modified plan no later than 60 days after the Regional Administrator’s request, or no later than 90 days if the unit is a surface impoundment or waste pile not previously required to prepare a contingent post-closure plan. Any modifications requested by the Regional Administrator will be approved, disapproved, or modified in accordance with the procedures in Parts 124 and 270.</p>	<p>This space was intentionally left blank</p>
<p>1.1.10 264.119 Post-closure notices</p>	<p>264.119 Post-closure notices</p>
<p>(a) No later than 60 days after certification of closure of each hazardous waste disposal unit, the owner or operator must submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Regional Administrator, a record of the type, location, and quantity of hazardous wastes disposed of within each cell or other disposal unit of the facility. For hazardous waste disposed of before January 12, 1981, the owner or operator must identify the type, location, and quantity of the hazardous wastes to the best of his knowledge and in accordance with any records he has kept.</p> <p>(b) Within 60 days of certification of closure of the first hazardous waste disposal unit and within 60 days of certification of closure of the last hazardous waste disposal unit, the owner or operator must:</p> <p>(1) Record, in accordance with State law, a notation on the deed to the facility property – or on some other instrument which is normally examined during title search – that will in perpetuity notify any potential purchaser of the property that:</p> <p>(i) The land has been used to manage hazardous wastes; and</p>	<p>All hazardous wastes and equipment associated with the ILWMS will be removed and disposed of appropriately. Post closure plan and care will not be required. If clean closure cannot be achieved and a "risk-based closure" or "landfill closure" is deemed necessary, then a post-closure plan will be developed.</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>(ii) Its use is restricted under 40 CFR Subpart G regulations; and</p> <p>(iii) The survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell or other hazardous waste disposal unit of the facility required by §§ 264.116 and 264.119(a) have been filed with the local zoning authority or the authority with jurisdiction over local land use and with the Regional Administrator; and</p> <p>(2) Submit a certification, signed by the owner or operator, that he has recorded the notation specified in paragraph (b)(1) of this section, including a copy of the document in which the notation has been placed, to the Regional Administrator.</p> <p>(c) If the owner or operator or any subsequent owner or operator of the land upon which a hazardous waste disposal unit is located wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, or contaminated soils, he must request a modification to the post-closure permit in accordance with the applicable requirements in parts 124 and 270. The owner or operator must demonstrate that the removal of hazardous wastes will satisfy the criteria of § 264.117(c). By removing hazardous waste, the owner or operator may become a generator of hazardous waste and must manage it in accordance with all applicable requirements of this chapter. If he is granted a permit modification or otherwise granted approval to conduct such removal activities, the owner or operator may request that the Regional Administrator approve either:</p> <p>(1) The removal of the notation on the deed to the facility property or other instrument normally examined during title search; or</p> <p>(2) The addition of a notation to the deed or instrument indicating the removal of the hazardous waste.</p>	<p>This space was intentionally left blank</p>
	<p>This space was intentionally left blank</p>

Regulatory Citation (Description of Requirement)	Compliance Methodology
1.1.11 264.120 Certification of completion of post-closure care	264.120 Certification of completion of post-closure care
<p>No later than 60 days after the completion of the established post-closure care period for each hazardous waste disposal unit, the owner or operator must submit to the Regional Administrator, by registered mail, a certification that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed by the owner or operator and an independent registered professional engineer. Documentation supporting the independent registered professional engineer's certification must be furnished to the Regional Administrator upon request until he releases the owner or operator from the financial assurance requirements for post-closure care under § 264.145(I).</p>	<p>All hazardous wastes and equipment associated with the ILWMS will be removed and disposed of appropriately. Post closure plan and care will not be required. If clean closure cannot be achieved and a "risk-based closure" or "landfill closure" is deemed necessary then a post-closure plan will be developed.</p>

IDAPA 58.01.05.008 (40 CFR 264 Subparts I and J)
1.2 Container Storage and Tank Systems Closure and Post-Closure

Regulatory Citation (Description of Requirement)	Compliance Methodology
1.2.1 264.178 Closure	264.178 Closure
At closure, all hazardous waste and hazardous waste residues must be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed.	The container storage will be closed by removing all waste residues from CPP-1696 container storage areas. All containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues will be decontaminated or removed.
1.2.2 264.197 Closure and post-closure care	264.197 Closure and post-closure care
(a) At closure of a tank system, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste, unless § 261.3(d) of this Chapter applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet all of the requirements specified in subparts G and H of this part.	(a) The tank systems will be closed by removing all waste residues; contaminated containment system components (liners, etc.); contaminated soils; and structures and equipment contaminated with waste, and manage them as hazardous waste.
(b) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in paragraph (a) of this section, then the owner or operator must close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills (§ 264.310). In addition, for the purposes of closure, post-closure, and financial responsibility, such a tank system is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in subparts G and H of this part.	(b) The requirements will be applicable when the ILWMS receives its final volume of waste.
(c) If an owner or operator has a tank system which does not have secondary containment that meets the requirements of § 264.193(b) through (f) and has not been granted a variance from the secondary containment requirements in accordance with § 264.193(g), then:	(c) Not applicable for this closure plan. The tank systems associated with the ILWMS have secondary containment.

Regulatory Citation (Description of Requirement)	Compliance Methodology
<p>(1) The closure plan for the tank system must include both a plan for complying with paragraph (a) of this section and a contingent plan for complying with paragraph (b) of this section.</p> <p>(2) A contingent post-closure plan for complying with paragraph (b) of this section must be prepared and submitted as a part of the permit application.</p> <p>(3) The cost estimates calculated for closure and post-closure care must reflect the costs of complying with the contingent closure plan and the contingent post-closure plan, if those costs are greater than the costs of complying with the closure plan prepared for the expected closure under paragraph (a) of this section.</p> <p>(4) Financial assurance must be based on the cost estimates in paragraph (c)(3) of this section.</p> <p>(5) For the purpose of the contingent closure and post-closure plans, such a tank system is considered to be a landfill, and the contingent plans must meet all of the closure, post-closure, and financial responsibility requirements for landfills under Subparts G and H of this part.</p>	<p style="text-align: center;">This space was intentionally left blank</p>

**IDAPA 58.01.05.008 (40 CFR 264 Subpart X)
 1.3 Miscellaneous Units**

Regulatory Citation (Description of Requirement)	Compliance Methodology
1.3.1 264.603 Post-closure care	264.603 Post-closure care
<p>A miscellaneous unit that is a disposal unit must be maintained in a manner that complies with § 264.601 during the post-closure care period. In addition, if a treatment or storage unit has contaminated soils or ground water that cannot be completely removed or decontaminated during closure, then that unit must also meet the requirements of § 264.601 during post-closure care. The post-closure plan under § 264.118 must specify the procedures that will be used to satisfy this requirement.</p>	<p>The owner/operator understand this requirement.</p>