

AMWTP HWMA/RCRA PERMIT
FOR THE
IDAHO NATIONAL LABORATORY

ATTACHMENT 8

Section I

Closure Plan

Revision Date: December 2017

TABLE OF CONTENTS

ATTACHMENT 8

CLOSURE PLAN

I. CLOSURE PLAN.....1

 I. Closure Requirements.....1

I. CLOSURE PLAN

I. Closure Requirements [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR Part 264, Subpart G and 270.14(B)(13)]

This Closure Plan, hereinafter referred to as the “Plan”, specifies the performance standards and describes the process for final closure of the MWMUs. Upon termination of operations, the owner/operator shall willfully close the MWMUs in accordance with the applicable HWMA/RCRA closure requirements promulgated at IDAPA 58.01.05.008 (40 CFR Part 264, Subpart G). The activities and closure performance standards described herein apply only to wastes and waste constituents regulated under HWMA/RCRA. In this Plan, the term “decontamination” refers to the removal of HWMA/RCRA-regulated wastes and waste constituents. Standards and methods for management of residual radiological contamination, which is not HWMA/RCRA-regulated that may be present at the MWMUs and disposition of radiological contaminated government-furnished equipment, shall follow the DOE-ID requirements governing the management and disposal of radiological-contaminated materials.

This Plan satisfies the requirements of IDAPA 58.01.05.008 [40 CFR 264.112(a)] that waste management units have a written closure plan. Of the additional requirements at IDAPA 58.01.05.008 [40 CFR 264.111(c) (i.e., 40 CFR 264.178, 264.197, 264.228, 264.258, 264.280, 264.310, 264.351, 264.601 through 264.603 and 264.1102)], only those at IDAPA 58.01.05.008 (40 CFR 264.178 and 264.601) apply. Closure of the MWMUs in accordance with this Plan satisfies the requirements of IDAPA 58.01.05.008 (40 CFR 264.178).

Although closure under HWMA/RCRA is primarily concerned with the hazardous waste constituents in the MW managed at the MWMUs, closure is performed with full cognizance of the radiological component and the threat to human health and the environment engendered by that component. Closure will be performed to ensure the safety of personnel, as follows:

- Qualified AMWTP personnel supervise and perform closure activities in compliance with established safety procedures,
- Personnel are equipped with appropriate PPE and trained in applicable safety procedures, and

- 1 • The use of established radiological control procedures to ensure personnel and
2 equipment are clean of radiological contamination before leaving any
3 contaminated area.

4 While closure employs technologies to safeguard workers, treatment technologies that
5 minimize the generation of aerosols and other particulates are preferentially selected.

6 Information specific to the closure of WMF-634 is presented in Attachment 8.A. The
7 information pertaining to the closure of the Type II Modules, designated as WMF-628 through
8 WMF-633, is presented in Attachment 8.B, the closure information pertaining to the Type I
9 Module is presented in Attachment 8.C, the closure information pertaining to SWEPP is
10 presented in Attachment 8.D, the closure information pertaining to WMF-636 Pad 2 is presented
11 in Attachment 8.E, the closure information pertaining to the AMWTP Outside Storage Area is
12 presented in Attachment. 8.F, and the closure information pertaining to WMF-676 is presented in
13 Attachment 8.G.

AMWTP HWMA/RCRA PERMIT
FOR THE
IDAHO NATIONAL LABORATORY

ATTACHMENT 8.A

Section I

WMF-634 Closure Plan

Revision Date: December 2017

TABLE OF CONTENTS**ATTACHMENT 8.A****WMF-634 CLOSURE PLAN**

I-1	Closure Plan	1
I-1a	Partial Closure Activities	1
I-1b	Closure Performance Standard.....	1
I-1c	Maximum Waste Inventory.....	3
I-1d	Disposal or Decontamination of Equipment, Structures, and Soils	3
I-1d(1)	Sampling and Analysis	4
I-1d(2)	Disposal of Equipment.....	4
I-1d(3)	Equipment and Structures to be Reused	4
I-1d(4)	WMF-634 Closure Procedures	5
I-1d(5)	Order of Closure	7
I-1e	Amendment of Plan.....	7
I-1f	Schedule and Notification of Closure	8
I-2	Extensions for Closure Time.....	11
I-3	Certification of Closure.....	12
I-4	Post-Closure Requirements	13
I-5	Closure Financial Requirements	14
I-5a	Closure Cost Estimates.....	14
I-5b	Financial Assurance for Closure	14
I-5c	Liability Requirements	14
I-5d	Use of State Required Financial Mechanisms.....	14
I-5e	State Assumption of Responsibility	14
I-6	Post-Closure Financial Requirements	15

LIST OF TABLES

Table I-1. Closure Performance Standards9

Table I-2. Closure Schedule.....10

1 **I-1 Closure Plan [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.112(b) and**
2 **270.14(b)(13)]**

3 This section of the Closure Plan hereinafter referred to as the “Plan”, describes the
4 closure process, standards, and activities to be employed during the closure of WMF-634. The
5 design and operation of WMF-634 and the types of MW managed at WMF-634 are described in
6 detail in Attachments 1, 1.A, and 2.

7 **I-1a Partial Closure Activities [IDAPA 58.01.05.008; 40 CFR 264.112(b)(1 - 6)]**

8 No specific plans presently exist for partial closure of WMF-634. If partial closure is
9 considered in the future, the procedures for verification sampling, decontamination, and
10 confirmatory sampling presented in the following sections would be applicable to such an
11 approach. Containment enclosures, as described in Attachment 1.A, may be located within the
12 MWMU. If a containment enclosure is closed prior to the closure of WMF-634, then all
13 activities (e.g., sampling and analysis results, decontamination/reuse of equipment,
14 characterization, etc.) associated with the closure of the containment enclosure will be
15 documented in the Operating Record.

16 **I-1b Closure Performance Standard [IDAPA 58.01.05.008; 40 CFR 264.111**
17 **and 264.112(b)(1) and (2)]**

18 The HWMA/RCRA-regulated MWMUs will be closed in a manner such that:

- 19 • The need for post-closure maintenance is eliminated by controlling or eliminating the
20 potential for escape of MW, hazardous constituents, leachate, contaminated run-off,
21 or hazardous waste decomposition products to the environment;
- 22 • Closure activities generate a minimum amount of mixed or hazardous waste;
- 23 • Closure activities generate a minimum amount of non-HWMA/RCRA-regulated solid
24 and radioactive waste;
- 25 • Hazardous waste is removed and managed in accordance with the applicable
26 requirements of IDAPA 58.01.05.006 through 58.01.05.012 (40 CFR Parts 262
27 through 270); and
- 28 • Closure of the HWMA/RCRA-regulated MWMUs complies with all applicable state
29 and federal requirements.

1 **Performance Standard Description**

- 2 **1. Equipment to be Reused or Salvaged:** Upon closure, the performance standard
3 achieved for reusable structures and equipment from the closed MWMU will be the
4 clean closure standard as verified by sampling and analysis of swipe or
5 decontamination rinsate samples, as appropriate. Decontamination will be considered
6 successful based on confirmatory sampling and analysis when the analytical results
7 verify that the hazardous waste constituent(s) of concern in the samples is less than
8 ten times the practical quantitation level, as defined in the appropriate procedure
9 of SW-846.
- 10 **2. Equipment to be Disposed:** The visible surfaces of equipment, structures, etc., that
11 are to be disposed will be decontaminated by an alternative treatment technology
12 pursuant to IDAPA 58.01.05.011 (40 CFR 268.45) to achieve the clean debris surface
13 standard. “Clean debris surface” means that the surface, when viewed without
14 magnification, shall be free of all visible contaminated soil and hazardous waste
15 except that residual staining from soil and waste consisting of light shadows, slight
16 streaks, or minor discoloration, and soil and waste in cracks, crevices, and pits may be
17 present provided that such staining and waste and soil in cracks, crevices, and pits
18 shall be limited to no more than 5% of each square inch of surface area.’ Equipment
19 on which the contaminated surface is not readily visible (e.g., pipe) will be treated by
20 an appropriate alternative treatment standard for hazardous debris (e.g.,
21 macroencapsulation) per IDAPA 58.01.05.011 (40 CFR 268.45), as based on
22 Operating Records (including analytical data) for the waste treated by the equipment.

23 **Newly-Generated HWMA/RCRA Wastes**

24 HWMA/RCRA-regulated waste generated during closure will be classified as
25 newly-generated waste, and will be managed as described in Section I-1d.

26 **Safety Considerations**

27 Although closure under HWMA/RCRA is primarily concerned with the hazardous waste
28 constituents in MW, closure must be performed with full cognizance of the radiological
29 component and the threat to human health and the environment engendered by that component.
30 This Plan reflects the practical realities of performing work in an environment highly
31 contaminated with TRU radionuclides. Closure will be performed to ensure the safety of
32 personnel, as follows:

- 1 • Qualified personnel will supervise and perform closure activities in compliance with
2 established safety procedures.
- 3 • Whenever practicable, closure activities will be performed remotely using
4 manipulators, etc.
- 5 • Personnel will be equipped with appropriate PPE and be trained in comprehensive,
6 applicable safety procedures.
- 7 • The use of established radiological control procedures to ensure personnel and
8 equipment are radiologically decontaminated before leaving any radiologically
9 contaminated area.

10 Although closure will employ technologies to safeguard workers (e.g., HEPA-filtered
11 vacuum cleaners and portable containment), treatment technologies that minimize the generation
12 of radioactive air-borne particles (dust) will be preferentially selected.

13 **I-1c Maximum Waste Inventory [IDAPA 58.01.05.008; 40 CFR 264.112(b)(3)]**

14 The estimated total maximum HWMA/RCRA-regulated waste inventory at WMF-634 is
15 4,661 m³ (1,231,430 gal). HWMA/RCRA-regulated waste is stored in a variety of containers as
16 described in Section D-1(a)(1) of Attachment 1.A. Details on the methods for removing,
17 transporting, treating, storing or disposing of HWMA/RCRA-regulated waste are found in
18 Section I-1d of this Plan. The AMWTP has the goal of disposing all waste at the WIPP or other
19 off-Site disposal facility. Closure will not commence until all waste has been removed from
20 WMF-634.

21 **I-1d Disposal or Decontamination of Equipment, Structures, and Soils** 22 **[IDAPA 58.01.05.008; 40 CFR 264.112(b)(4) and 264.114]**

23 Because operational methods at the MWMUs place emphasis on the containment and
24 timely response to spills, and because of the MWMUs design, releases to the environment are
25 unlikely. Therefore, disposal of contaminated soils pursuant to this Plan is not anticipated.
26 However, if soil contamination is found it shall be addressed under the direction of DOE-ID.
27 The following subsections provide a description of the actions necessary to manage the disposal
28 or cleaning/decontamination of equipment or structures contaminated with HWMA/RCRA –
29 regulated waste or waste constituents. Before beginning closure activities, all waste will be

1 removed from the MWMU. The types of hazardous waste, if present, managed during closure
2 are expected to have the same HWNs found in Table C-1 of Attachment 2.

3 **I-1d(1) Sampling and Analysis**

4 All sampling and analysis performed for closure is performed in accordance with the
5 quality standards established in a Closure QAPjP, which will be submitted with the closure
6 notification 45 days before closure of the MWMU begins. The Closure QAPjP will detail
7 sampling and analysis procedures in accordance with *SW-846*, the ASTM Annual Book of
8 ASTM Standards, or other EPA-approved methods.

9 **I-1d(2) Disposal of Equipment**

10 Typically, contaminated ancillary equipment from a MWMU, which is to be disposed, is
11 decontaminated in accordance with the required treatment standards, or other technologies
12 available and approved for such use at the time of closure, for hazardous debris [IDAPA
13 58.01.05.011 (40 CFR 268.45)] to attain the clean debris surface standard.

14 An assessment of the Operating Record will be conducted to determine the extent of
15 potential contamination. Per this assessment, contaminated equipment will be decontaminated
16 for all HWMA/RCRA-regulated hazardous constituents of concern that are present. The specific
17 technology or technologies will be selected at the time of closure and during closure based upon
18 the hazardous constituents of concern present, and the effectiveness of the selected technology in
19 attaining the closure performance standard. Equipment for which the contaminated surface is not
20 readily visible (e.g., pipe) will be treated by an appropriate alternative treatment standard for
21 hazardous debris (e.g., macroencapsulation) per IDAPA 58.01.05.011 (40 CFR 268.45, Table 1)
22 requirements.

23 Disposal of decontaminated equipment shall be in accordance with the applicable
24 HWMA/RCRA requirements.

25 **I-1d(3) Equipment and Structures to be Reused**

26 To be protective of human health and the environment, ancillary equipment and
27 structures designated for reuse are decontaminated to meet the clean closure performance

1 standard, as verified by sampling and analysis. An assessment of the Operating Record will be
2 conducted to determine the extent of potential contamination. Contaminated equipment and
3 structures are decontaminated to meet the clean closure standard as verified by confirmatory
4 sampling and analysis as described in the Closure QAPjP. The following section provides
5 additional details for closure.

6 **I-1d(4) WMF-634 Closure Procedures**

7 Ventilation systems are maintained during closure, as required, to provide contamination
8 control. To control the spread of airborne and surface contamination, portable containment, such
9 as tents or glove bags, may also be employed during closure.

10 **Cleaning/Decontamination.** The MWMUs are designed and constructed to prevent
11 migration of MW constituents. Spills and leaks are cleaned up in a timely manner and
12 documented appropriately. See Attachment 7 for additional information.

13 After operations cease and all remaining waste has been removed from the MWMU,
14 surfaces used for storage of HWMA/RCRA-regulated waste containers shall be thoroughly
15 cleaned. These surfaces are swept or vacuumed using vacuum cleaners equipped with HEPA
16 filters, if required. Following cleaning, qualified personnel shall visually inspect the MWMU for
17 stains or other signs of spills and/or leaks of waste constituents. Additionally, the Operating
18 Record will be reviewed to determine if further cleaning and/or decontamination is required.

19 Any HWMA/RCRA-regulated waste residues generated during cleaning/decontamination
20 are placed in approved containers and managed in accordance with the applicable
21 HWMA/RCRA requirements.

22 **Cleaning/Decontamination Verification.** For ancillary equipment or structures to be
23 reused, confirmatory sampling and analysis (as outlined in the Closure QAPjP) will follow
24 cleaning/decontamination, until it is established that cleaning/decontamination procedures have
25 removed hazardous constituents of concern to the clean closure standard. If verification testing
26 detects hazardous constituents of concern above the clean closure standard, the contaminated
27 equipment or structure is decontaminated again, followed by confirmatory sampling and
28 analysis. Decontamination is achieved when analytical results verify that the clean closure

1 standard has been met. Once it has been established that the standard has been satisfied, the
2 equipment or structure can be considered free of HWMA/RCRA-regulated hazardous
3 constituents and released for reuse.

4 **Cracked or Unsealed Surfaces.** Surfaces used for storage of HWMA/RCRA-regulated
5 constituents are inspected on a regular basis to identify structural problems that could result in
6 migration of MW constituents. See Attachment 4 for additional information. If inspections
7 during closure identify that surfaces used for storage are cracked or unsealed, the following steps
8 are employed to meet the closure performance standard:

- 9 • Review the Operating Record to determine if HWMA/RCRA-regulated hazardous
10 constituents of concern may be present,
- 11 • Decontaminate/remediate as appropriate for the HWMA/RCRA-regulated hazardous
12 constituents of concern using a technology appropriate for the hazardous constituents
13 of concern, and
- 14 • Sample and analyze decontaminated surfaces in accordance with the Closure QAPjP
15 until the clean closure standard is achieved.

16 **Decontamination materials and equipment.** Spent decontamination materials (e.g.,
17 swabs, wipes, PPE, sampling equipment, HEPA vacuum cleaner filters) are characterized per
18 process knowledge or sampled and analyzed in accordance with the Closure QAPjP. Based on
19 the analytical results, the spent decontamination materials are placed in an appropriate container.
20 All HWMA/RCRA-regulated wastes shall be placed in a compatible container that is labeled
21 with a barcode identifier and managed in accordance with the applicable HWMA/RCRA
22 requirements.

23 Equipment used for closure cleanup/decontamination is managed using the same
24 procedures and standards as described previously in this section.

25 Any decontamination liquids are contained within the work area, then collected and
26 characterized by process knowledge or in accordance with the Closure QAPjP. Spill booms,
27 spill control pillows, swabs, or other absorbent material(s) may be used to contain the
28 decontamination liquids and to facilitate removal. Spent decontamination materials and other
29 wastes may be treated by an AMWTP technology (see discussion below for the order of closure),

1 or packaged for transport to another waste management unit. Following decontamination, the
2 work area is sampled and analyzed, as required, in accordance with the Closure QAPjP.

3 **I-1d(5) Order of Closure**

4 To the extent practicable, closure activities associated with the closure of a MWMU are
5 accomplished utilizing other HWMA/RCRA-permitted MWMUs at the AMWTP, including
6 treatment or storage at other AMWTP waste management units. Decontamination activities are
7 performed in a step-wise fashion to maximize the use of WMF-676 and thereby minimize the
8 quantity of HWMA/RCRA-regulated decontamination wastes requiring subsequent management.
9 The major steps in the closure of a MWMU include:

- 10 • Removal of waste inventory followed by treatment, to the extent practicable, at
11 WMF-676;
- 12 • Cleaning/decontamination in accordance with this Plan;
- 13 • Inspection and verification in accordance with this Plan and the Closure QAPjP to
14 assure that the clean closure and/or performance standards at IDAPA 58.01.05.008
15 (40 CFR 264.111) are satisfied;
- 16 • Management of HWMA/RCRA-regulated newly generated waste in accordance with
17 this Plan and the Closure QAPjP; and
- 18 • Closure certification.

19 **I-1e Amendment of Plan [IDAPA 58.01.05.008; 40 CFR 264.112(c)]**

20 Amendments to this Plan will be in accordance with IDAPA 58.01.05.008
21 [40 CFR 264.112(c)]. A copy of the Plan and supporting documentation is maintained as part of
22 the Operating Record. The Plan will be amended in the future:

- 23 • At the time of closure to address the schedule for closure, changes to regulatory
24 standards for cleanup, sampling based on the Operating Record, decontamination
25 methods/technologies to be employed, changes to how and where disposal of
26 equipment and structures will take place, and other changes necessary to accomplish
27 the closure performance standard specified at IDAPA 58.01.005.008
28 (40 CFR 264.111);
- 29 • If it becomes desirable or necessary to close the MWMU in advance of the schedule
30 included in the Plan;

- 1 • Whenever changes in a MWMU’s operating plans or design affects the Plan;
2 • If there is a change in the expected year of closure;
3 • If, when conducting closure activities, an unexpected event requires an amendment;
4 • If a change in HWMA/RCRA regulations require amending the Plan; or
5 • At the request of the Director.

6 The Permittee will submit a written notification that includes a copy of the amended Plan
7 to the Director 60 days before a proposed change in the operation or design of the MWMU that
8 affects the Plan; or no later than 60 days after an unexpected event occurs that affects the Plan; or
9 no later than 30 days after an unexpected event occurs during closure.

10 **I-1f Schedule and Notification of Closure [IDAPA 58.01.05.008;**
11 **-40 CFR 264.112(b)(6) and (d)]**

12 The AMWTP will complete its mission in approximately 2018. At that time, a decision
13 will be made to either close the MWMU or continue its use. The following schedule assumes
14 closure in 2019; if the decision is made to operate the MWMU beyond that date, this Plan will be
15 amended as previously described. The Director will be notified at least 45 days before the
16 planned start of closure activities. Refer to Table I-2 for a summary of the schedule calendar.

Table I-1. Closure Performance Standards

Closure Performance Standard	Attainment Strategy
<p>The owner or operator must close the facility in a manner that:</p> <p>a) Minimizes the need for further maintenance.</p>	<p>Prior to closure, all HWMA/RCRA-regulated waste and waste constituents of concern will be removed from the MWMU. No waste will be accepted in the MWMU once closure has commenced.</p>
<p>b) Controls, minimizes, or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous constituents, leachates, contaminated runoffs, or hazardous waste decomposition products to groundwater, surface water, or the atmosphere.</p>	<p>MWMU will be clean closed, which entails the removal of HWMA/RCRA-regulated wastes, waste constituents, and waste decomposition products, as well as the elimination of any source material that could generate contaminated leachates or runoff. In addition, pursuant to IDAPA 58.01.05.008 [40 CFR 264.110(b)] the HWMA/RCRA post-closure requirements at IDAPA 58.01.05.008 (40 CFR 264.116 through 40 CFR 264.120, and 40 CFR Part 264, Subpart H) are not applicable to the closure of a MWMU.</p>
<p>c) Complies with the closure requirements of IDAPA 58.01.05.008 (40 CFR Part 264, Subpart G), including but not limited to, the requirements of IDAPA 58.01.05.008 (40 CFR 264.178, 264.197, 264.228, 264.258, 264.280, 264.310, 264.351, and 264.1102).</p>	<p>The Plan describes the processes used to close a MWMU in accordance the IDAPA 58.01.05.008 (40 CFR Part 264, Subpart G) closure requirements. Of the additional requirements, only those at IDAPA 58.01.05.008 (40 CFR 264.178) apply. Closure of a MWMU in accordance with this Plan satisfies the requirements at IDAPA 58.01.05.008 (40 CFR 264.178).</p>

Table I-2. Closure Schedule

Activity	Day
Notify the Director	45 days before closure initiation
Initiate closure activities	Day 0
Complete equipment decontamination	Day 100
Complete decontamination of affected surfaces	Day 140
Decontaminate tools, complete waste assessments, remove closure waste	Day 160
Verify closure performance standard has been met	Day 180
Inspect and certify closure	Day 180
Complete all closure activities	Day 180
Submit closure certification to the Director	By 60 days after closure

1 **I-2 Extensions for Closure Time [IDAPA 58.01.05.008; 40 CFR 264.113(a) and**
2 **(b)]**

3 The schedule presented in Section I-1f and Table I-2 indicates closure of a MWMU
4 occurring within the 180 days specified at IDAPA 58.01.05.008 (40 CFR 264.113). No
5 extension is requested at this time. However, it is recognized that this schedule may be
6 ambitious, and that an extension may be required. That determination will be made closer to the
7 time of closure based on the operating history of a MWMU; or during closure based on how
8 rapidly closure activities are being accomplished. If an extension becomes necessary in the
9 future, it will be presented in the amended Plan (if based on operating history) or a request will
10 be submitted at least 30 days before day 180 (if the need for an extension is identified
11 during closure).

1 **I-3 Certification of Closure [IDAPA 58.01.05.008; 40 CFR 264.115]**

2 An independent Idaho-registered professional engineer will be present during critical
3 closure activities and will certify that the closure has been performed in accordance with this
4 Plan; thereby, satisfying the requirements at IDAPA 58.01.05.008 (40 CFR 264.111). The
5 certification will be submitted for approval to the Director within 60 days of completion of
6 closure. Upon Director approval, closure will be considered complete.

1 **I-4 Post-Closure Requirements [IDAPA 58.01.05.008; 40 CFR Part 264,**
2 **Subpart G]**

3 Pursuant to IDAPA 58.01.05.008 [40 CFR 264.110(b)] the HWMA/RCRA post-closure
4 requirements at IDAPA 58.01.05.008 (40 CFR 264.116 through 40 CFR 264.120) are
5 not applicable.

1 **I-5 Closure Financial Requirements [IDAPA 58.01.05.008; 40 CFR Part 264,**
2 **Subpart H]**

3 **I-5a Closure Cost Estimates [IDAPA 58.01.05.008; 40 CFR 264.142]**

4 DOE-ID, the owner of WMF-634, as a federal government agency, is exempt from the
5 closure cost estimate requirement, in accordance with IDAPA 58.01.05.008
6 [40 CFR 264.140(c)].

7 **I-5b Financial Assurance for Closure [IDAPA 58.01.05.008; 40 CFR 264.143]**

8 DOE-ID, the owner of WMF-634, as a federal government agency, is exempt from
9 providing a financial assurance mechanism for closure, in accordance with IDAPA 58.01.05.008
10 [40 CFR 264.140(c)].

11 **I-5c Liability Requirements [IDAPA 58.01.05.008; 40 CFR 264.147 and**
12 **264.148]**

13 DOE-ID, the owner of WMF-634, as a federal government agency, is exempt from the
14 liability requirements for closure, in accordance with IDAPA 58.01.05.008 [40 CFR 264.140(c)].

15 **I-5d Use of State Required Financial Mechanisms [IDAPA 58.01.05.008; 40**
16 **CFR 264.149]**

17 DOE-ID, the owner of WMF-634, as a federal government agency, is exempt from the
18 state required financial mechanism requirements for closure, in accordance with IDAPA
19 58.01.05.008 [40 CFR 264.140(c)].

20 **I-5e State Assumption of Responsibility [IDAPA 58.01.05.008; 40 CFR**
21 **264.150]**

22 DOE-ID, the owner of WMF-634, as a federal government agency, is exempt from the
23 state assumption of responsibility requirements for closure, in accordance with IDAPA
24 58.01.05.008 [40 CFR 264.140(c)].

1 **I-6 Post-Closure Financial Requirements [IDAPA 58.01.05.008; 40 CFR Part**
2 **264, Subpart H]**

3 Pursuant to IDAPA 58.01.05.008 [40 CFR 264.140(b)], the HWMA/RCRA post-closure
4 financial requirements at IDAPA 58.01.05.008 (40 CFR 264.144 and 264.145) are not applicable
5 to WMF-634.

AMWTP HWMA/RCRA PERMIT
FOR THE
IDAHO NATIONAL LABORATORY

ATTACHMENT 8.B

Section I

Type II Modules Closure Plan

Revision Date: December 2017

TABLE OF CONTENTS**ATTACHMENT 8.B****TYPE II MODULES CLOSURE PLAN**

I-1	Closure Plan	1
I-1a	Partial Closure Activities	1
I-1b	Closure Performance Standard.....	1
I-1c	Maximum Waste Inventory	1
I-1d	Disposal or Decontamination of Equipment, Structures, and Soils	2
I-1e	Amendment of Plan.....	2
I-1f	Schedule and Notification of Closure	2
I-2	Extensions for Closure Time.....	3
I-3	Certification of Closure.....	4
I-4	Post-Closure Requirements	5
I-5	Closure Financial Requirements	6
I-5a	Closure Cost Estimates	6
I-5b	Financial Assurance for Closure	6
I-5c	Liability Requirements	6
I-5d	Use of State Required Financial Mechanisms.....	6
I-5e	State Assumption of Responsibility	6
I-6	Post-Closure Financial Requirements	7

1 **I-1 Closure Plan [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.112(b) and**
2 **270.14(b)(13)]**

3 This section of the Closure Plan, hereinafter referred to as the “Plan,” describes the
4 closure process, standards, and activities to be employed during the closure of the Type II
5 Modules designated as WMF-628 through WMF-633. The design and operation of the Type II
6 Modules and the types of MW managed at the Type II Modules are described in detail in
7 Attachments 1, 1.B, 1.E, and 2.

8 **I-1a Partial Closure Activities [IDAPA 58.01.05.008; 40 CFR 264.112(b)(1 - 6)]**

9 No specific plans presently exist for partial closure of the Type II Modules. If partial
10 closure were to be considered in the future, the procedures for verification sampling,
11 decontamination, and confirmatory sampling presented in the following sections would be
12 applicable to such an approach.

13 **I-1b Closure Performance Standard [IDAPA 58.01.05.008; 40 CFR 264.111**
14 **and 264.112(b)(1) and 264.112(b)(2)]**

15 For information pertaining to Closure Performance Standard, see Section I-1b of
16 Attachment 8.A.

17 **I-1c Maximum Waste Inventory [IDAPA 58.01.05.008; 40 CFR 264.112(b)(3)]**

18 The estimated total maximum HWMA/RCRA-regulated waste inventory at each Type II
19 Module (WMF-629 through WMF-633) is 8,176 m³ (2,159,985 gal) and the maximum waste
20 inventory in WMF-628 is 4,192 m³ (1,107,290 gal). HWMA/RCRA-regulated waste is stored in
21 a variety of containers as described in Section D-1(a)(1) of Attachment 1.B. Details on the
22 methods for removing, transporting, treating, storing or disposing of HWMA/RCRA-regulated
23 waste are found in Section I-1c of Attachment 8.A. The AMWTP has the goal of disposing all
24 waste at the WIPP or other off-Site disposal facility. Closure will not commence until all waste
25 has been removed from the Type II Modules.

1 **I-1d Disposal or Decontamination of Equipment, Structures, and Soils**
2 **[IDAPA 58.01.05.008; 40 CFR 264.112(b)(4) and 264.114]**

3 For information pertaining to disposal or decontamination of equipment, structures, and
4 soils, see Section I-1d of Attachment 8.A.

5 **I-1e Amendment of Plan [IDAPA 58.01.05.008; 40 CFR 264.112(c)]**

6 For information pertaining to amendment of plan, see Section I-1e of Attachment 8.A.

7 **I-1f Schedule and Notification of Closure [IDAPA 58.01.05.008;**
8 **40 CFR 264.112(b)(6) and (d)]**

9 For information pertaining to schedule and notification of closure, see Section I-1f of
10 Attachment 8.A.

1 **I-2 Extensions for Closure Time [IDAPA 58.01.05.008; 40 CFR 264.113(a)**
2 **and (b)]**

3 For information pertaining to extensions for closure time, see Section I-2 of
4 Attachment 8.A.

1 **I-3 Certification of Closure [IDAPA 58.01.05.008; 40 CFR 264.115]**

2 For information pertaining to certification of closure, see Section I-3 of Attachment 8.A.

1 **I-4 Post-Closure Requirements [IDAPA 58.01.05.008; 40 CFR Part 264,**
2 **Subpart G]**

3 Pursuant to IDAPA 58.01.05.008 [40 CFR 264.110(b)] the HWMA/RCRA post-closure
4 requirements at IDAPA 58.01.05.008 (40 CFR 264.116 through 40 CFR 264.120) are
5 not applicable.

1 **I-5 Closure Financial Requirements [IDAPA 58.01.05.008; 40 CFR Part 264,**
2 **Subpart H]**

3 **I-5a Closure Cost Estimates [IDAPA 58.01.05.008; 40 CFR 264.142]**

4 DOE-ID, the owner of the Type II Modules designated as WMF-628 through WMF-633,
5 as a federal government agency, is exempt from the closure cost estimate requirement, in
6 accordance with IDAPA 58.01.05.008 [40 CFR 264.140(c)].

7 **I-5b Financial Assurance for Closure [IDAPA 58.01.05.008; 40 CFR 264.143]**

8 DOE-ID, the owner of the Type II Modules designated as WMF-628 through WMF-633,
9 as a federal government agency, is exempt from providing a financial assurance mechanism for
10 closure, in accordance with IDAPA 58.01.05.008 [40 CFR 264.140(c)].

11 **I-5c Liability Requirements [IDAPA 58.01.05.008; 40 CFR 264.147 and**
12 **264.148]**

13 DOE-ID, the owner of the Type II Modules designated as WMF-628 through WMF-633,
14 as a federal government agency, is exempt from the liability requirements for closure, in
15 accordance with IDAPA 58.01.05.008 [40 CFR 264.140(c)].

16 **I-5d Use of State Required Financial Mechanisms [IDAPA 58.01.05.008;**
17 **40 CFR 264.149]**

18 DOE-ID, the owner of the Type II Modules designated as WMF-628 through WMF-633,
19 as a federal government agency, is exempt from the state required financial mechanism
20 requirements for closure, in accordance with IDAPA 58.01.05.008 [40 CFR 264.140(c)].

21 **I-5e State Assumption of Responsibility [IDAPA 58.01.05.008;**
22 **40 CFR 264.150]**

23 DOE-ID, the owner of the Type II Modules designated as WMF-628 through WMF-633,
24 as a federal government agency, is exempt from the state assumption of responsibility
25 requirements for closure, in accordance with IDAPA 58.01.05.008 [40 CFR 264.140(c)].

1 **I-6 Post-Closure Financial Requirements [IDAPA 58.01.05.008;**
2 **40 CFR Part 264, Subpart H]**

3 Pursuant to IDAPA 58.01.05.008 [40 CFR 264.140(b)], the HWMA/RCRA post-closure
4 financial requirements at IDAPA 58.01.05.008 (40 CFR 264.144 and 264.145) are
5 not applicable.

AMWTP HWMA/RCRA PERMIT
FOR THE
IDAHO NATIONAL LABORATORY

ATTACHMENT 8.C

Section I

Type I Module Closure Plan

Revision Date: December 2017

TABLE OF CONTENTS**ATTACHMENT 8.C****TYPE I MODULE CLOSURE PLAN**

I-1	Closure Plan	1
I-1a	Partial Closure Activities	1
I-1b	Closure Performance Standard.....	1
I-1c	Maximum Waste Inventory	1
I-1d	Disposal or Decontamination of Equipment, Structures, and Soils	2
I-1e	Amendment of Plan.....	2
I-1f	Schedule and Notification of Closure	2
I-2	Extensions for Closure Time.....	3
I-3	Certification of Closure.....	4
I-4	Post-Closure Requirements	5
I-5	Closure Financial Requirements	6
I-5a	Closure Cost Estimates.....	6
I-5b	Financial Assurance for Closure	6
I-5c	Liability Requirements	6
I-5d	Use of State Required Financial Mechanisms.....	6
I-5e	State Assumption of Responsibility	6
I-6	Post-Closure Financial Requirements	7

1 **I-1 Closure Plan [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.112(b) and**
2 **270.14(b)(13)]**

3 This section of the Closure Plan, hereinafter referred to as the “Plan,” describes the
4 closure process, standards, and activities to be employed during the closure of the Type I
5 Module. The design and operation of the Type I Module and the types of MW managed at the
6 Type I Module are described in detail in Attachments 1, 1.C, and 2.

7 **I-1a Partial Closure Activities [IDAPA 58.01.05.008; 40 CFR 264.112(b)(1 - 6)]**

8 No specific plans presently exist for partial closure of the Type I Module. If partial
9 closure were to be considered in the future, the procedures for verification sampling,
10 decontamination, and confirmatory sampling presented in the following sections would be
11 applicable to such an approach.

12 **I-1b Closure Performance Standard [IDAPA 58.01.05.008; 40 CFR 264.111**
13 **and 264.112(b)(1) and (2)]**

14 For information pertaining to Closure Performance Standard, see Section I-1b of
15 Attachment 8.A.

16 **I-1c Maximum Waste Inventory [IDAPA 58.01.05.008; 40 CFR 264.112(b)(3)]**

17 The estimated total maximum HWMA/RCRA-regulated waste inventory at the Type I
18 Module is 2,529 m³ (667,979 gal). HWMA/RCRA-regulated waste is stored in a variety of
19 containers as described in Section D-1(a)(1) of Attachment 1.C. Details on the methods for
20 removing, transporting, treating, storing or disposing of HWMA/RCRA-regulated waste are
21 found in Section I-1c of Attachment 8.A. The AMWTP has the goal of disposing all waste at the
22 WIPP or other off-Site disposal facility. Closure will not commence until all waste has been
23 removed from WMF-635.

1 **I-1d Disposal or Decontamination of Equipment, Structures, and Soils**
2 **[IDAPA 58.01.05.008; 40 CFR 264.112(b)(4) and 264.114]**

3 For information pertaining to disposal or decontamination of equipment, structures, and
4 soils, see Section I-1d of Attachment 8.A.

5 **I-1e Amendment of Plan [IDAPA 58.01.05.008; 40 CFR 264.112(c)]**

6 For information pertaining to amendment of plan, see Section I-1e of Attachment 8.A.

7 **I-1f Schedule and Notification of Closure [IDAPA 58.01.05.008;**
8 **40 CFR 264.112(b)(6) and (d)]**

9 For information pertaining to schedule and notification of closure, see Section I-1f of
10 Attachment 8.A.

1 **I-2 Extensions for Closure Time [IDAPA 58.01.05.008; 40 CFR 264.113(a) and**
2 **(b)]**

3 For information pertaining to extensions for closure time, see Section I-2 of
4 Attachment 8.A.

1 **I-3 Certification of Closure [IDAPA 58.01.05.008; 40 CFR 264.115]**

2 For information pertaining to certification of closure, see Section I-3 of Attachment 8.A.

1 **I-4 Post-Closure Requirements [IDAPA 58.01.05.008; 40 CFR Part 264,**
2 **Subpart G]**

3 Pursuant to IDAPA 58.01.05.008 [40 CFR 264.110(b)] the HWMA/RCRA post-closure
4 requirements at IDAPA 58.01.05.008 (40 CFR 264.116 through 40 CFR 264.120) are not
5 applicable.

1 **I-5 Closure Financial Requirements [IDAPA 58.01.05.008; 40 CFR Part 264,**
2 **Subpart H]**

3 **I-5a Closure Cost Estimates [IDAPA 58.01.05.008; 40 CFR 264.142]**

4 DOE-ID, the owner of the Type I Module, as a federal government agency, is exempt
5 from the closure cost estimate requirement, in accordance with IDAPA 58.01.05.008
6 [40 CFR 264.140(c)].

7 **I-5b Financial Assurance for Closure [IDAPA 58.01.05.008; 40 CFR 264.143]**

8 DOE-ID, the owner of the Type I Module, as a federal government agency, is exempt
9 from providing a financial assurance mechanism for closure, in accordance with
10 IDAPA 58.01.05.008 [40 CFR 264.140(c)].

11 **I-5c Liability Requirements [IDAPA 58.01.05.008; 40 CFR 264.147 and**
12 **264.148]**

13 DOE-ID, the owner of the Type I Module, as a federal government agency, is exempt
14 from the liability requirements for closure, in accordance with IDAPA 58.01.05.008
15 [40 CFR 264.140(c)].

16 **I-5d Use of State Required Financial Mechanisms [IDAPA 58.01.05.008;**
17 **40 CFR 264.149]**

18 DOE-ID, the owner of the Type I Module, as a federal government agency, is exempt
19 from the state required financial mechanism requirements for closure, in accordance with
20 IDAPA 58.01.05.008 [40 CFR 264.140(c)].

21 **I-5e State Assumption of Responsibility [IDAPA 58.01.05.008;**
22 **40 CFR 264.150]**

23 DOE-ID, the owner of the Type I Module, as a federal government agency, is exempt
24 from the state assumption of responsibility requirements for closure, in accordance with
25 IDAPA 58.01.05.008 [40 CFR 264.140(c)].

1 **I-6 Post-Closure Financial Requirements [IDAPA 58.01.05.008;**
2 **40 CFR Part 264, Subpart H]**

3 Pursuant to IDAPA 58.01.05.008 [40 CFR 264.140(b)], the HWMA/RCRA post-closure
4 financial requirements at IDAPA 58.01.05.008 (40 CFR 264.144 and 264.145) are not
5 applicable.

AMWTP HWMA/RCRA PERMIT
FOR THE
IDAHO NATIONAL LABORATORY

ATTACHMENT 8.D

Section I

SWEPP Closure Plan

Revision Date: December 2017

TABLE OF CONTENTS**ATTACHMENT 8.D****SWEPP CLOSURE PLAN**

I-1	Closure Plan	1
I-1a	Partial Closure Activities	1
I-1b	Closure Performance Standard.....	1
I-1c	Maximum Waste Inventory	1
I-1d	Disposal or Decontamination of Equipment, Structures, and Soils	2
I-1e	Amendment of Plan.....	2
I-1f	Schedule and Notification of Closure	2
I-2	Extensions for Closure Time.....	3
I-3	Certification of Closure.....	4
I-4	Post-Closure Requirements	5
I-5	Closure Financial Requirements	6
I-5a	Closure Cost Estimates	6
I-5b	Financial Assurance for Closure	6
I-5c	Liability Requirements	6
I-5d	Use of State Required Financial Mechanisms.....	6
I-5e	State Assumption of Responsibility	6
I-6	Post-Closure Financial Requirements	7

1 **I-1 Closure Plan [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.112(b)**
2 **270.14(b)(13)]**

3 This section of the Closure Plan, hereinafter referred to as the “Plan,” describes the
4 closure process, standards, and activities to be employed during the closure of SWEPP. The
5 design and operation of SWEPP and the types of MW managed at SWEPP are described in detail
6 in Attachments 1, 1.D, and 2.

7 **I-1a Partial Closure Activities [IDAPA 58.01.05.008; 40 CFR 264.112(b)(1 - 6)]**

8 No specific plans presently exist for partial closure of SWEPP. If partial closure were to
9 be considered in the future, the procedures for verification sampling, decontamination, and
10 confirmatory sampling presented in the following sections would be applicable to such
11 an approach.

12 **I-1b Closure Performance Standard [IDAPA 58.01.05.008; 40 CFR 264.111**
13 **and 264.112(b)(1) and (2)]**

14 For information pertaining to Closure Performance Standard, see Section I-1b of
15 Attachment 8.A.

16 **I-1c Maximum Waste Inventory [IDAPA 58.01.05.008; 40 CFR 264.112(b)(3)]**

17 The estimated total maximum HWMA/RCRA-regulated waste inventory at SWEPP is
18 108 m³ (28,380 gal). HWMA/RCRA-regulated waste is stored in a variety of containers as
19 described in Section D-1(a)(1) of Attachment 1.D. Details on the methods for removing,
20 transporting, treating, storing or disposing of HWMA/RCRA-regulated waste are found in
21 Section I-1c of Attachment 8.A. The AMWTP has the goal of disposing all waste at the WIPP or
22 other off-Site disposal facility. Closure will not commence until all waste has been removed
23 from WMF-610.

1 **I-1d Disposal or Decontamination of Equipment, Structures, and Soils**
2 **[IDAPA 58.01.05.008; 40 CFR 264.112(b)(4) and 264.114]**

3 For information pertaining to disposal or decontamination of equipment, structures, and
4 soils, see Section I-1d of Attachment 8.A.

5 **I-1e Amendment of Plan [IDAPA 58.01.05.008; 40 CFR 264.112(c)]**

6 For information pertaining to amendment of plan, see Section I-1e of Attachment 8.A.

7 **I-1f Schedule and Notification of Closure [IDAPA 58.01.05.008;**
8 **40 CFR 264.112(b)(6) and (d)]**

9 For information pertaining to schedule and notification of closure, see Section I-1f of
10 Attachment 8.A.

1 **I-2 Extensions for Closure Time [IDAPA 58.01.05.008; 40 CFR 264.113(a)**
2 **and (b)]**

3 For information pertaining to extensions for closure time, see Section I-2 of
4 Attachment 8.A.

1 **I-3 Certification of Closure [IDAPA 58.01.05.008; 40 CFR 264.115]**

2 For information pertaining to certification of closure, see Section I-3 of Attachment 8.A.

1 **I-4 Post-Closure Requirements [IDAPA 58.01.05.008; 40 CFR Part 264,**
2 **Subpart G]**

3 Pursuant to IDAPA 58.01.05.008 [40 CFR 264.110(b)] the HWMA/RCRA post-closure
4 requirements at IDAPA 58.01.05.008 (40 CFR 264.116 through 40 CFR 264.120) are
5 not applicable.

1 **I-5 Closure Financial Requirements [IDAPA 58.01.05.008; 40 CFR Part 264,**
2 **Subpart H]**

3 **I-5a Closure Cost Estimates [IDAPA 58.01.05.008; 40 CFR 264.142]**

4 DOE-ID, the owner of SWEPP, as a federal government agency, is exempt from the
5 closure cost estimate requirement, in accordance with IDAPA 58.01.05.008
6 [40 CFR 264.140(c)].

7 **I-5b Financial Assurance for Closure [IDAPA 58.01.05.008; 40 CFR 264.143]**

8 DOE-ID, the owner of SWEPP, as a federal government agency, is exempt from
9 providing a financial assurance mechanism for closure, in accordance with IDAPA 58.01.05.008
10 [40 CFR 264.140(c)].

11 **I-5c Liability Requirements [IDAPA 58.01.05.008; 40 CFR 264.147 and**
12 **264.148]**

13 DOE-ID, the owner of SWEPP, as a federal government agency, is exempt from the
14 liability requirements for closure, in accordance with IDAPA 58.01.05.008 [40 CFR 264.140(c)].

15 **I-5d Use of State Required Financial Mechanisms [IDAPA 58.01.05.008;**
16 **40 CFR 264.149]**

17 DOE-ID, the owner of SWEPP, as a federal government agency, is exempt from the state
18 required financial mechanism requirements for closure, in accordance with IDAPA 58.01.05.008
19 [40 CFR 264.140(c)].

20 **I-5e State Assumption of Responsibility [IDAPA 58.01.05.008;**
21 **40 CFR 264.150]**

22 DOE-ID, the owner of SWEPP, as a federal government agency, is exempt from the state
23 assumption of responsibility requirements for closure, in accordance with IDAPA 58.01.05.008
24 [40 CFR 264.140(c)].

1 **I-6 Post-Closure Financial Requirements [IDAPA 58.01.05.008;**
2 **40 CFR Part 264, Subpart H]**

3 Pursuant to IDAPA 58.01.05.008 [40 CFR 264.140(b)], the HWMA/RCRA post-closure
4 financial requirements at IDAPA 58.01.05.008 (40 CFR 264.144 and 264.145) are
5 not applicable.

AMWTP HWMA/RCRA PERMIT
FOR THE
IDAHO NATIONAL LABORATORY

ATTACHMENT 8.E

Section I

WMF-636 Pad 2 Closure Plan

Revision Date: June 2018

TABLE OF CONTENTS**ATTACHMENT 8.E****WMF-636 PAD 2 CLOSURE PLAN**

I-1	Closure Plan	1
I-1a	Partial Closure Activities	2
I-1b	Closure Performance Standard.....	2
I-1c	Maximum Waste Inventory	2
I-1d	Disposal or Decontamination of Equipment, Structures, and Soils	2
I-1e	Amendment of Plan.....	2
I-1f	Schedule and Notification of Closure	6
I-2	Extensions for Closure Time.....	7
I-3	Certification of Closure.....	8
I-4	Post-Closure Requirements	9
I-5	Closure Financial Requirements	10
I-5a	Closure Cost Estimates	10
I-5b	Financial Assurance for Closure	10
I-5c	Liability Requirements	10
I-5d	Use of State Required Financial Mechanisms.....	10
I-5e	State Assumption of Responsibility	10
I-6	Post-Closure Financial Requirements	11

1 **I-1 Closure Plan [IDAPA 58.01.05.008 and 58.01.05.012; 40 CFR 264.112(b)**
2 **270.14(b)(13)]**

3 As described in Attachment 1.F, the entire area under the building structure over the
4 WMF-636 Pad 2 area is permitted for container storage. The surface structure located under the
5 building structure consists of the original Pad 2 asphalt pad (built in the late 1960's), a concrete
6 pad (poured in 2004), a newly poured asphalt pad (poured in 2007), and soil. The soil areas are
7 not used for container storage. Initially, the original asphalt pad was regulated under the
8 HWMA/RCRA Interim Status container management regulations found at IDAPA 58.01.05.009
9 (40 CFR 265), and the building structure was not considered to be part of the container storage
10 unit. Later, the original asphalt pad was removed as an interim status and fully permitted in
11 accordance with IDAPA 58.01.05.008 (40 CFR 264) along with the building structure and the
12 surfaces located under the building structure around the original asphalt pad.

13 During operations under interim status, a comprehensive review showed there were five
14 known spills or historical releases that were found either on the original asphalt pad or in the
15 overburden and side burden soil surrounding the original cell storage configuration. See
16 Attachment 1.F for additional information on the original cell storage configuration of Pad 2. Of
17 the five spills/releases, four of the spills/releases were cleaned up to the levels specified in the
18 State of Idaho DEQ approved "Soil Sampling and Disposition Plan for the Transuranic Storage
19 Area Retrieval Enclosure," (SSDP-01, current revision). All waste generated during the cleaning
20 of the spill/release were dispositioned as required under the HWMA/RCRA regulations. The last
21 spill/release was fixed to the asphalt pad using standard AMWTP radiological methods and a
22 metal plate was installed over the contaminated area. No known spills or releases have occurred
23 where MW constituents have migrated to the soil located under the original asphalt pad or the
24 soil areas surrounding the original asphalt pad.

25 A comprehensive review of all historical spills and releases during permitted operations
26 will be performed at the time of closure.

27 This section of the Closure Plan, hereinafter referred to as the "Plan," describes the
28 closure process, standards, and activities to be employed during the closure of the WMF-636
29 Pad 2 container storage unit. The design and operation of WMF-636 Pad 2 and the types of MW
30 managed at WMF-636 Pad 2 are described in detail in Attachments 1, 1.F, and 2.

1 **I-1a Partial Closure Activities [IDAPA 58.01.05.008; 40 CFR 264.112(b)(1 - 6)]**

2 No specific plans presently exist for partial closure of WMF-636 Pad 2. If partial closure
3 were to be considered in the future, the procedures for verification sampling, decontamination,
4 and confirmatory sampling presented in the following sections would be applicable to such
5 an approach.

6 **I-1b Closure Performance Standard [IDAPA 58.01.05.008; 40 CFR 264.111**
7 **and 264.112(b)(1) and (2)]**

8 For information pertaining to Closure Performance Standard, see Section I-1b of
9 Attachment 8.A.

10 **I-1c Maximum Waste Inventory [IDAPA 58.01.05.008; 40 CFR 264.112(b)(3)]**

11 The estimated total maximum HWMA/RCRA-regulated waste inventory at WMF-636
12 Pad 2 is 24,038 m³ (6,350,140 gal). HWMA/RCRA-regulated waste is stored in a variety of
13 containers as described in Section D-1(a)(1) of Attachment 1.F. Details on the methods for
14 removing, transporting, treating, storing or disposing of HWMA/RCRA-regulated waste are
15 found in Section I-1c of Attachment 8.A. The AMWTP has the goal of disposing all waste at the
16 WIPP or other off-Site disposal facility. Closure will not commence until all waste has been
17 removed from WMF-636 Pad 2.

18 **I-1d Disposal or Decontamination of Equipment, Structures, and Soils**
19 **[IDAPA 58.01.05.008; 40 CFR 264.112(b)(4) and 264.114]**

20 Because operational methods at WMF-636 Pad 2 place emphasis on the containment and
21 timely response to spills, and because of the design of WMF-636 Pad 2, uncontrolled releases to
22 the environment are unlikely. Therefore, disposal of contaminated soils other than any
23 remaining side burden or overburden left from original WMF-636 Pad 2 retrieval activities
24 pursuant to this Plan is not anticipated. However, if soil contamination is found it shall be
25 addressed as outlined below. The following subsections provide a description of the actions
26 necessary to manage the disposal or cleaning/decontamination of equipment or structures
27 contaminated with HWMA/RCRA – regulated waste or waste constituents. Before beginning
28 closure activities, all waste will be removed from WMF-636 Pad 2. The types of hazardous

1 waste, if present, managed during closure are expected to have the same HWNs found in
2 Table C-1 of Attachment 2.

3 **I-1d(1) Sampling and Analysis**

4 For information pertaining to sampling and analysis, see Section I-1d(1) of
5 Attachment 8.A.

6 **I-1d(2) Disposal of Equipment**

7 For information pertaining to disposal of equipment, see Section I-1d(2) of
8 Attachment 8.A.

9 **I-1d(3) Equipment and Structures to be Reused**

10 For information pertaining to equipment and structures to be reused, see Section I-1d(3)
11 of Attachment 8.A.

12 **I-1d(4) WMF-636 Pad 2 Closure Procedures**

13 To control the spread of airborne and surface contamination, portable containment, such
14 as tents or glove bags, may also be employed during closure.

15 **Closure of Fire Water Collection Tank.** As discussed in Attachment 1.F, a 20,000 gal
16 double-walled tank used for the collection of fire water is located underground outside of the
17 TSA-RE building. This fire water collection tank is not intended to collect any run-off or
18 spills/leaks of MW from WMF-636 Pad 2 operations. Rather the tank is provided to collect fire
19 water in accordance with NFPA requirements. Therefore, closure of the fire water collection
20 tank under the HWMA/RCRA requirements is not anticipated at this time. In the event that a
21 spill/leak of MW enters the fire water collection tank or a fire occurs that involves MW which
22 results in MW contaminated fire water entering the fire water collection tank, then the Closure
23 Plan will be amended per Section I-1e. Upon closure of WMF-636 Pad 2, the Operating Record
24 will be reviewed to ensure that no MW leaks/spills have occurred which could result in MW
25 contamination of the fire water collection tank.

1 **Container Storage Area Asphalt/Concrete Pad and Soil Removal.** After operations
2 cease and all remaining waste has been removed from WMF-636 Pad 2, all asphalt and concrete
3 pads will be deemed MW. The asphalt/concrete pads will be removed with a minimal amount of
4 soil that underlies these areas. All asphalt and concrete pads and soil removed with the pads will
5 be disposed of in accordance with HWMA/RCRA requirements. Upon removal of the
6 asphalt/concrete pads, the soils located underneath the pads and the soils surrounding the pads
7 (only soils located within WMF-636 Pad 2 area) will be representatively sampled and analyzed
8 for the presence of MW constituents. All sampling and analysis data gathered during closure of
9 WMF-636 Pad 2 will be provided to the DEQ and EPA in accordance with CERCLA and the
10 “Idaho National Engineering Laboratory (“INEL”) Federal Facility Agreement and Consent
11 Order, December 9, 1991.”

12 The following subsections provide a description of the actions necessary to manage the
13 disposal or cleaning/decontamination of equipment or structures contaminated with
14 HWMA/RCRA-regulated waste or waste constituents. Before beginning closure activities, all
15 waste will be removed from WMF-636 Pad 2. The types of hazardous waste, if present,
16 managed during closure are expected to have the same HWNs found in Table C-1 of
17 Attachment 2.

18 **Cleaning/Decontamination.** WMF-636 Pad 2 is designed and operated to prevent
19 migration of MW constituents into the environment. Spills and leaks are cleaned up in a timely
20 manner and documented appropriately. See Attachment 7 for additional information.

21 Any HWMA/RCRA-regulated waste residues generated during cleaning/decontamination
22 are placed in approved containers and managed in accordance with the applicable
23 HWMA/RCRA requirements.

24 **Cleaning/Decontamination Verification.** For ancillary equipment or structures to be
25 reused, confirmatory sampling and analysis (as outlined in the Closure QAPjP) will follow
26 cleaning/decontamination, until it is established that cleaning/decontamination procedures have
27 removed hazardous constituents of concern to the clean closure standard. If verification testing
28 detects hazardous constituents of concern above the clean closure standard, the contaminated
29 equipment or structure is decontaminated again, followed by confirmatory sampling and

1 analysis. Decontamination is achieved when analytical results verify that the clean closure
2 standard has been met. Once it has been established that the standard has been satisfied, the
3 equipment or structure can be considered free of HWMA/RCRA-regulated hazardous
4 constituents and released for reuse.

5 **Decontamination materials and equipment.** Spent decontamination materials (e.g.,
6 swabs, wipes, PPE, sampling equipment, HEPA vacuum cleaner filters) are characterized per
7 process knowledge or sampled and analyzed in accordance with the Closure QAPjP. Based on
8 the analytical results, the spent decontamination materials are placed in an appropriate container.
9 All HWMA/RCRA-regulated wastes shall be placed in a compatible container that is labeled
10 with a barcode identifier and managed in accordance with the applicable HWMA/RCRA
11 requirements.

12 Equipment used for closure cleanup/decontamination is managed using the same
13 procedures and standards as described previously in this section.

14 Any decontamination liquids are contained within the work area, then collected and
15 characterized by process knowledge or in accordance with the Closure QAPjP. Spill booms,
16 spill control pillows, swabs, or other absorbent material(s) may be used to contain the
17 decontamination liquids and to facilitate removal. Spent decontamination materials and other
18 wastes may be treated by an AMWTP technology (see discussion below for the order of closure),
19 or packaged for transport to another waste management unit. Following decontamination, the
20 work area is sampled and analyzed, as required, in accordance with the Closure QAPjP.

21 **I-1d(5) Order of Closure**

22 To the extent practicable, closure activities associated with the closure of a MWMU are
23 accomplished utilizing other HWMA/RCRA-permitted MWMUs at the AMWTP, including
24 treatment or storage at other AMWTP waste management units. Decontamination activities are
25 performed in a step-wise fashion to maximize the use of WMF-676 and thereby minimize the
26 quantity of HWMA/RCRA-regulated decontamination wastes requiring subsequent management.
27 The major steps in the closure of a MWMU include:

- 1 • Removal of waste inventory followed by treatment, to the extent practicable, at
2 WMF-676;
- 3 • Cleaning/decontamination in accordance with this Plan;
- 4 • Inspection and verification in accordance with this Plan and the Closure QAPjP to
5 assure that the appropriate closure criteria (e.g., CERCLA, HWMA/RCRA)
6 are satisfied;
- 7 • Management of HWMA/RCRA-regulated newly generated waste in accordance with
8 this Plan and the Closure QAPjP; and
- 9 • Closure certification.

10 **I-1e Amendment of Plan [IDAPA 58.01.05.008; 40 CFR 264.112(c)]**

11 For information pertaining to amendment of plan, see Section I-1e of Attachment 8.A.

12 **I-1f Schedule and Notification of Closure [IDAPA 58.01.05.008;**
13 **40 CFR 264.112(b)(6) and (d)]**

14 For information pertaining to schedule and notification of closure, see Section I-1f of
15 Attachment 8.A.

1 **I-2 Extensions for Closure Time [IDAPA 58.01.05.008; 40 CFR 264.113(a)**
2 **and (b)]**

3 For information pertaining to extensions for closure time, see Section I-2 of
4 Attachment 8.A.

1 **I-3 Certification of Closure [IDAPA 58.01.05.008; 40 CFR 264.115]**

2 For information pertaining to certification of closure, see Section I-3 of Attachment 8.A.

1 **I-4 Post-Closure Requirements [IDAPA 58.01.05.008; 40 CFR Part 264,**
2 **Subpart G]**

3 Pursuant to IDAPA 58.01.05.008 [40 CFR 264.110(b)] the HWMA/RCRA post-closure
4 requirements at IDAPA 58.01.05.008 (40 CFR 264.116 through 40 CFR 264.120) are
5 not applicable.

1 **I-5 Closure Financial Requirements [IDAPA 58.01.05.008; 40 CFR Part 264,**
2 **Subpart H]**

3 **I-5a Closure Cost Estimates [IDAPA 58.01.05.008; 40 CFR 264.142]**

4 DOE-ID, the owner of WMF-636 Pad 2, as a federal government agency, is exempt from
5 the closure cost estimate requirement, in accordance with IDAPA 58.01.05.008
6 [40 CFR 264.140(c)].

7 **I-5b Financial Assurance for Closure [IDAPA 58.01.05.008; 40 CFR 264.143]**

8 DOE-ID, the owner of WMF-636 Pad 2, as a federal government agency, is exempt from
9 providing a financial assurance mechanism for closure, in accordance with IDAPA 58.01.05.008
10 [40 CFR 264.140(c)].

11 **I-5c Liability Requirements [IDAPA 58.01.05.008; 40 CFR 264.147 and**
12 **264.148]**

13 DOE-ID, the owner of WMF-636 Pad 2, as a federal government agency, is exempt from
14 the liability requirements for closure, in accordance with IDAPA 58.01.05.008
15 [40 CFR 264.140(c)].

16 **I-5d Use of State Required Financial Mechanisms [IDAPA 58.01.05.008;**
17 **40 CFR 264.149]**

18 DOE-ID, the owner of WMF-636 Pad 2, as a federal government agency, is exempt from
19 the state required financial mechanism requirements for closure, in accordance with
20 IDAPA 58.01.05.008 [40 CFR 264.140(c)].

21 **I-5e State Assumption of Responsibility [IDAPA 58.01.05.008;**
22 **40 CFR 264.150]**

23 DOE-ID, the owner of WMF-636 Pad 2, as a federal government agency, is exempt from
24 the state assumption of responsibility requirements for closure, in accordance with
25 IDAPA 58.01.05.008 [40 CFR 264.140(c)].

1 **I-6 Post-Closure Financial Requirements [IDAPA 58.01.05.008;**
2 **40 CFR Part 264, Subpart H]**

3 Pursuant to IDAPA 58.01.05.008 [40 CFR 264.140(b)], the HWMA/RCRA post-closure
4 financial requirements at IDAPA 58.01.05.008 (40 CFR 264.144 and 264.145) are
5 not applicable.