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ADDENDUM H
CLOSURE

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CLOSURE

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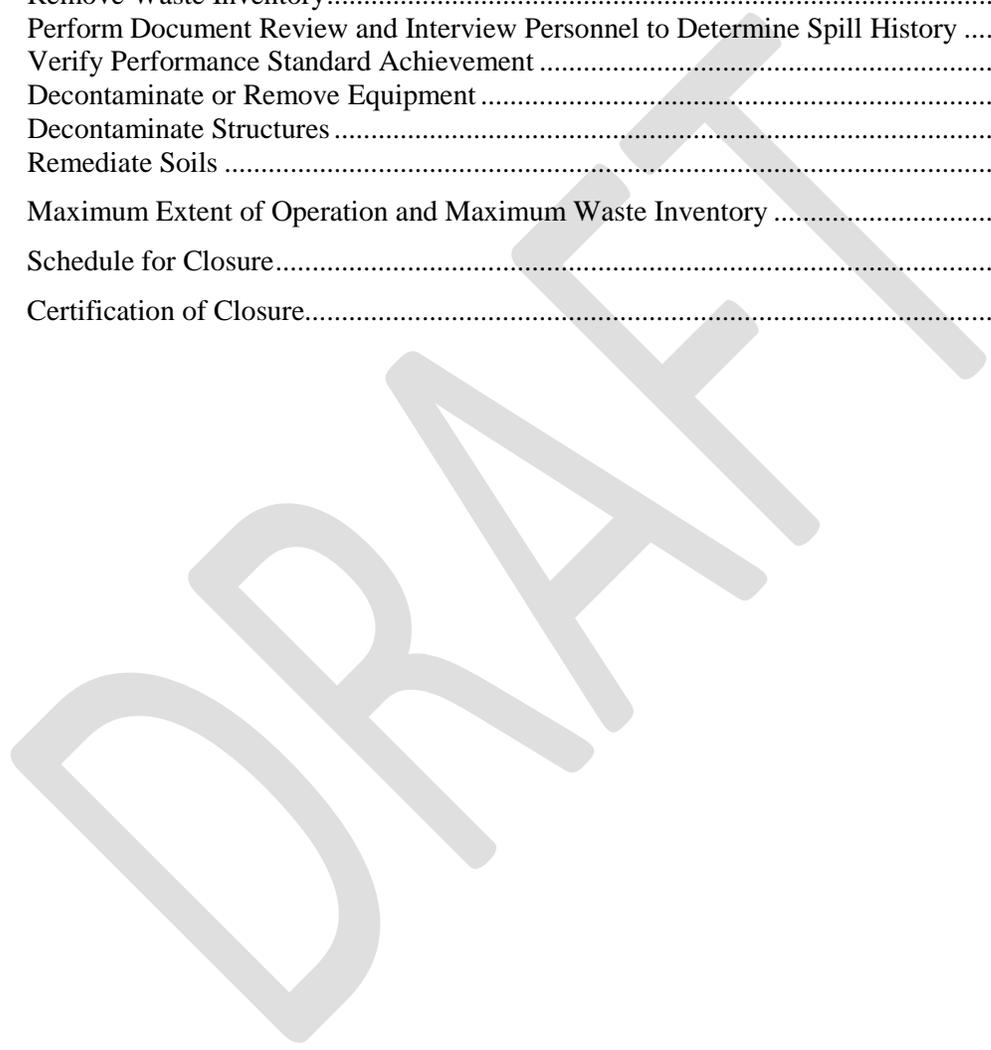
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1 **H CLOSURE**

2 The closure plan for the 400 Area WMU addresses closure of the two container storage units referred to
3 as the Fuel Storage Facility (FSF) and the Interim Storage Area (ISA). This closure plan is based on
4 closure by removal or decontamination, or "clean closure", and the general and unit-specific closure
5 criteria in [WAC 173-303-610\(2\)](#) and [WAC 173-303-630\(10\)](#). All mixed waste will be removed from the
6 FSF and ISA at the time of closure.

7 The following sections document the required closure performance standards and necessary closure
8 activities to close the two container storage units at the 400 Area WMU.

9 **H.1 Closure Performance Standard**

10 The closure performance standard for the FSF and the ISA, based on "clean closure", are established for
11 structures, equipment, bases, and liners under [WAC 173-303-610\(2\)\(b\)\(ii\)](#). Ecology may establish
12 closure standards under this authority on a case-by-case basis. FSF and ISA will be considered clean
13 when surfaces of structures, equipment, bases, liners, etc., meet the clean debris surface standard in
14 [40 CFR 268.45](#), Table 1, Footnote 3. This standard requires that potentially contaminated surfaces when
15 viewed without magnification shall be free of all visible contaminated soil and dangerous waste. Except
16 the residual staining, from soil and waste consisting of light shadows, slight streaks, or minor
17 discolorations, and soil and waste in cracks, crevices, and pits may be present provided such staining and
18 waste, and soil in cracks, crevices, and pits shall be limited to no more than 5 percent of each square inch
19 of surface area.

20 The clean closure standard will be achieved by documenting the absence of, or removing the mixed waste
21 inventory. This includes all mixed waste and dangerous waste constituents from the 400 Area WMU.
22 The operating practices used for waste management at the FSF and the ISA will identify and cleanup any
23 spills or releases that may occur during operation of the units, and document in the Hanford Facility
24 Operating Record, 400 Area WMU File the occurrence of a response to any spill or release. Cleanup of
25 spills and releases from waste management operations will be consistent with the closure performance
26 standard established in this plan, so that no additional cleanup or verification will be necessary at the time
27 of closure. [[WAC 173-303-610\(2\)](#) and [WAC 173-303-630\(10\)](#)].

28 Contamination of soil, groundwater, surface water, or air related to operations at the FSF and ISA is not
29 anticipated to be a concern at the time of closure. Therefore, the closure standards identified in
30 [WAC 173-303-610 \(2\)\(b\)\(i\)](#) for soils, ground water, surface water, and air are not discussed at this time.
31 However, if the operating records or other sources of information indicate that there was a possibility of a
32 spill resulting in soil contamination, the Closure Plan will be amended with an approved Permit
33 modification and in accordance with [WAC 173-303-610\(3\)\(b\)](#) to incorporate soil closure performance
34 standards.

35 **H.2 Closure Activities**

36 Clean closure of the 400 Area WMU container storage units will be achieved if it is demonstrated that the
37 storage areas are not contaminated with mixed waste or dangerous waste constituents. Contamination
38 from the FSF and ISA operations is not expected to be present at the time of closure provided that the
39 permit condition governing dangerous waste management activities are followed that require that any
40 spills or releases be promptly identified and cleaned up to a performance standard equivalent to the clean
41 closure performance standard established in this closure plan. Therefore, no decontamination is expected
42 to be necessary at the time of closure, no sampling is planned in support of clean closure, and no other
43 closure activities are anticipated.

44 If evaluation of spill records, field observations, personnel interviews, or other sources of information
45 indicates the likelihood of waste contamination that was not previously cleaned up, or that the results of
46 past spill cleanup cannot be verified, this Closure Plan will be amended with an approved Permit
47 modification and in accordance with Permit Condition II.J.2. Any unanticipated decontamination
48 activities, sampling and analysis activities, or other activities required for clean closure will be

1 accomplished in accordance with the amended Closure Plan. The Closure Plan will contain the necessary
2 provisions at the time of closure.

3 At a minimum, closure activities will accomplish the following.

- 4 • Remove stored waste inventory and transfer to a permitted on-site dangerous waste management
5 unit, or to an off-site facility meeting the definition of a "designated facility" in [WAC 173-303-](#)
6 [040](#), incorporated by reference, as appropriate.
- 7 • Perform document review and interview personnel to determine spill history and ensure spills
8 were completely cleaned up consistent with closure performance standards for the FSF and ISA.
- 9 • Verify that performance standard has been achieved.
- 10 • Obtain certification described in Section H.5 upon performance standard verification.
- 11 • Prepare a Permit modification in accordance with Permit Condition II.J.2 to amend the Closure
12 Plan and include the additional work requirements necessary to achieve clean closure upon an
13 initial finding that the performance standard(s) was not achieved.

14 Detailed information for the closure activities are provided as follows.

15 **H.2.1 Remove Waste Inventory**

16 All containers of waste will be removed from each container storage dangerous waste management unit.
17 If the containers are removed from the FSF to the ISA to close the FSF in advance of the ISA, a waste
18 transfer to consolidate wastes in the ISA will be accomplished without the need for specialized
19 equipment. Waste transfers will be in compliance with [WAC 173-303-380\(1\)\(b\)](#).

20 If the containers require transportation from the FSF or the ISA to another on-site dangerous waste
21 management unit or off-site TSD Facility, special transportation containment will be designed and
22 fabricated for the waste stored in the FSF. For waste stored in the ISA, specialized transportation
23 containment and/or packaging will be determined on a case-by-case basis. In addition, the receiving on-
24 site dangerous waste management unit or off-site TSD Facility may require time to modify documents in
25 order to receive the containers of waste.

26 No waste treatment capacity is currently available for the inventory of wastes expected to be managed at
27 the FSF or the ISA. No waste is expected to be generated during closure activities following removal of
28 the waste inventory. This closure plan will be amended in accordance with Permit Condition II.J.2 in the
29 event that waste will be generated.

30 If the ISA never managed any waste at the time of closure, the inspection/survey below will document
31 that condition.

32 **H.2.2 Perform Document Review and Interview Personnel to Determine Spill History**

33 If spills should occur, the Hanford Facility Operating Record, 400 Area WMU File, will contain
34 documentation of how the spills were cleaned up. Proper clean up of spills will be determined by
35 demonstrating that any residuals from the spills have been removed and the Hanford Facility Operating
36 Record, 400 Area WMU File, will document how the spill was cleaned up. A visual performance
37 standard will allow for clean closure of structures, equipment, bases, liners, etc. The spill clean up
38 records in the Hanford Facility Operating Record, 400 Area WMU File, will become a basis to support
39 clean closure of the ISA gravel areas without the need for sampling. If review of the Hanford Facility
40 Operating Record, 400 Area WMU File, reveals a problem, the Closure Plan will be amended to include
41 the necessary steps (to potentially include sampling) to satisfy the closure performance standard.

42 **H.2.3 Verify Performance Standard Achievement**

43 After all waste has been removed from a container storage dangerous waste management unit(s) and the
44 document review has been completed, a visual inspection/survey will be performed on any structures,
45 equipment, bases, liners, etc, to verify that the surface meets the clean debris surface in [40 CFR 268.45](#)
46 Table 1, Footnote 3, incorporated by reference. The inspection/survey will evaluate all surfaces, with

1 special emphasis on information derived from evaluation of the operation records, logbooks, and
2 personnel interviews.

3 If no spills occurred in the gravel area of the ISA, the visual inspection/survey will document that "no
4 spills occurred". If there was a spill in the gravel area, and a document review shows that the spill was
5 properly and completely cleaned up, a visual inspection/survey will document the review finding(s). If
6 information indicates from evaluation of the operation records, logbooks, personnel interviews, or other
7 information that contamination is possible from TSD unit activities, this Closure Plan will be amended
8 with an approved Permit modification in accordance with Permit Condition II.J.2, to incorporate the steps
9 and requirements, (to potentially include sampling) to achieve clean closure.

10 Once the inspection/survey is complete and results verify clean closure achievement, the certification
11 described in Section H.5 will be obtained.

12 **H.2.4 Decontaminate or Remove Equipment**

13 No decontamination or equipment removal is expected to be required to achieve clean closure. In the
14 event a problem occurs where decontamination or equipment removal is necessary, a Permit modification
15 will be prepared to amend the closure plan in accordance with Permit Condition II.J.2.

16 **H.2.5 Decontaminate Structures**

17 It is unlikely that structures will require decontamination to achieve clean closure. In the event a problem
18 occurs where structures will require decontamination, a Permit modification will be prepared to amend
19 the closure plan in accordance with Permit Condition II.J.2.

20 **H.2.6 Remediate Soils**

21 Soil remediation activities are not expected to be necessary. Any spills occurring during the operating life
22 of the FSF and ISA are expected to have been properly and completely cleaned up to standards consistent
23 with the closure performance standards. In the event that sampling is necessary for the surrounding
24 gravel areas of the ISA, the Closure Plan will be amended through a Permit modification in accordance
25 with Permit Condition II.J.2.

26 **H.3 Maximum Extent of Operation and Maximum Waste Inventory**

27 As authorized by Permit Condition III.16.B.1, the FSF and ISA provide storage capacity for waste
28 generated from decommissioning of the Fast Flux Test Facility (FFTF) before final treatment and/or
29 disposal. The estimated maximum waste inventory is consistent with the combined storage capacity of
30 the FSF and the ISA, or 20,000 gallons.

31 **H.4 Schedule for Closure**

32 In accordance with [WAC 173-303-610\(3\)\(c\)](#), notification to Ecology is required at least 45 days prior to
33 the start of closure of the FSF or the ISA.

34 The closure schedule is based on the time required to perform applicable closure activities described in
35 Section H.2. Closure of the FSF and the ISA will be completed 180 days after the start of closure
36 activities at each unit, respectively. When a closure date is established for a container storage dangerous
37 waste management unit(s), the schedule will be evaluated, including any additional closure activities
38 required for clean closure. If Closure Plan modifications are necessary to achieve clean closure, a revised
39 schedule will be proposed as part of the Permit modification package prepared in accordance with Permit
40 Condition II.J.2.

41 **H.5 Certification of Closure**

42 Within 60 days of completion of closure activities required by this closure plan, the Permittees will
43 submit to the Ecology by registered mail, a certification that the dangerous waste management unit(s) has
44 been closed in accordance with the specifications in this Plan that are in effect at the time of completion
45 of closure activities. This certification of closure will address only requirements of this closure plan

1 covered by the completed closure activities (i.e., either the FSF or the ISA, or both). The Permittees and
2 an independent registered professional engineer will sign this certification. The independent registered
3 professional engineer certification is to confirm that the activities took place and that the unit was closed
4 in accordance with the approved Closure Plan. Documentation supporting the independent registered
5 professional engineer's certification must be furnished to Ecology, upon request.

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