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CLOSURE UNIT GROUP 24 PERMIT CONDITIONS
B PLANT COMPLEX

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1 **CLOSURE UNIT GROUP 24 PERMIT CONDITIONS**
2 **B PLANT COMPLEX**

3 **UNIT DESCRIPTION**

4 Closure Unit Group 24 consists of the dangerous waste management units within the B Plant Complex
5 unit group. The B Plant Complex is located in the western central portion of the 200 East Area and was
6 constructed in 1943, and began operations in April 1945. The 221-B Building is made of reinforced
7 concrete, and is approximately 247 meters long by 20 meters wide by 24 meters high, covering an area of
8 approximately 5,370 square meters. The first mission for the B Plant Complex was the recovery of
9 plutonium using a bismuth phosphate chemical separation process (1945 to 1952). In the early 1960's,
10 B Plant was modified for a second mission, recovery and purification of cesium and strontium. The
11 cesium and strontium were encapsulated and stored in the Waste Encapsulation and Storage Facility
12 (WESF), Operating Unit Group 14, which is attached to the west end of 221-B Building. The 221-
13 B Building used a remote process cell design to house the process tanks and associated equipment.
14 Typical cells are 5.5 meters long by 3.9 meters wide by 8.5 meters deep, and each cell is covered with
15 four concrete cover blocks. Additional operations were carried out in other various smaller support
16 buildings including the 221-BB Building, 221-BF Facility, and 276-BA Facility.

17 The B Plant Complex contains three categories of dangerous waste storage and/or treatment units: five
18 sets of tank systems, Cell 4 container storage, and containment building storage. Most waste handling
19 activities were conducted in the 221-B Building dangerous waste management units in Closure Unit
20 Group 24 and are located in the 221-B Building, the 221-BA Facility, the 221-BB Building, and the 221-
21 B Facility.

22 **LIST OF ADDENDA SPECIFIC TO CLOSURE UNIT GROUP 24**

- 23 Addendum A Part A Form, dated October 1, 2008
24 Addendum B Waste Analysis Plan (Reserved)
25 Addendum C Process Information
26 Addendum D Groundwater Monitoring (Reserved)
27 Addendum E Security (Reserved)
28 Addendum F Preparedness and Prevention (Reserved)
29 Addendum G Personnel Training
30 Addendum H Closure (Reserved)
31 Addendum I Inspection Plan

32 **DEFINITIONS**

33 Reserved

34 **ACRONYMS**

35 Reserved

1 **V.24.A COMPLIANCE WITH UNIT SPECIFIC PERMIT CONDITIONS**

2 **V.24.A.1** The Permittees will comply with all conditions in this Chapter and its addenda with
3 respect to storage of waste in Closure Unit Group 24 221-B Containment Building
4 dangerous waste management unit and the 221-B container storage unit dangerous waste
5 management unit as documented in Addendum C and closure of all dangerous waste
6 management units in B Plant Complex, in addition to applicable requirements in Parts I
7 and II.

8 **V.24.B GENERAL WASTE MANAGEMENT**

9 **V.24.B.1** The Permittees are authorized to store mixed waste and debris physically present and in
10 the Closure Unit Group 24 containment building and the container storage unit as
11 documented in Addendum A, Part A, as of the effective date of this Permit. Management
12 of these wastes will be as documented in Addendum C.

13 **V.24.B.2** The Permittees will operate the B Plant Complex to comply with the requirements of
14 Addendum C, Process Information, any applicable manufacturer's instructions or
15 specifications, and as necessary to protect human health and the environment.
16 [\[WAC 173-303-680\]](#)

17 **V.24.B.3** The Permittees will comply with any schedule of compliance and any applicable
18 associated work requirements included in the LDR report required by and enforceable
19 under HFFACO Milestone M-26, for the treatment and/or acquisition of treatment
20 capacity for and/or the continued storage of waste in the Closure Group 24 containment
21 building and container storage unit. Any such schedules and requirements are by this
22 reference incorporated under the terms of Permit Condition I.A.4, and apply under this
23 Permit as if they were fully set forth herein.

24 **V.24.C WASTE ANALYSIS**

25 **V.24.C.1** The Permittees will maintain a waste profile for the waste containers physically present
26 in the B Plant container storage unit and containment building as of the effective date of
27 this Permit. For purposes of this Permit condition, a waste stream will be any distinct
28 combination of waste (as identified by its physical and chemical description and
29 designation) and waste container. [\[WAC 173-303-380\(1\)\(a\)\]](#)

30 **V.24.C.2** The Permittees will place a copy of each waste profile required by Permit
31 Condition V.24.C.1 in the Hanford Facility Operating Record, B Plant Complex File
32 required by Permit Condition II.I.2. [\[WAC 173-303-380\(1\)\(a\), \(b\)\]](#)

33 **V.24.D RECORDKEEPING AND REPORTING**

34 **V.24.D.1** The Permittees will place the following in the Hanford Facility Operating Record,
35 B Plant Complex File required by Permit Condition II.I.2:

36 **V.24.D.1.a** Records required by [\(WAC 173-303-380\(1\)\(o\)\)](#), incorporated by reference, for which
37 information is available.

38 **V.24.E SECURITY**

39 **V.24.E.1** The Permittees will post signs at access points to Closure Unit Group 24 protected area
40 stating, *DANGER-UNAUTHORIZED PERSONNEL KEEP OUT*, or an equivalent legend.
41 These signs will be written in English, legible from a distance of 7.6 meters, and visible
42 from any approach to the active portion. [\[WAC 173-303-310\(2\)\(a\)\]](#)

43 **V.24.F PREPAREDNESS AND PREVENTION**

44 **V.24.F.1** The Permittees will comply with the preparedness and prevention requirements of
45 condition II.B [\[WAC 173-303-340\]](#)

1 **V.24.G RESERVED**

2 **V.24.H INSPECTIONS**

3 **V.24.H.1** The Permittees will implement the practices described in Addendum I, Inspection Plan,
4 which includes performing inspections of B Plant Complex monitoring equipment, safety
5 and emergency equipment, security devices, and operating and structural equipment that
6 help prevent, detect, or respond to hazards to the public health or the environment
7 pursuant to the requirements of [WAC 173-303-320](#).

8 **V.24.I TRAINING PLAN**

9 **V.24.I.1** The Permittees will include training requirements as specified in Addendum G, Personnel
10 Training, as required by [WAC 173-303-330](#)(2) and Permit Condition II.C.
11 [[WAC 173-303-330](#)]

12 **V.24.J OTHER GENERAL REQUIREMENTS**

13 **V.24.J.1** Reserved

14 **V.24.K CLOSURE**

15 **V.24.K.1** The Permittees, concurrent with submission to the lead regulatory agency of a CERCLA
16 ROD, will submit a Closure Plan to Ecology. This Closure Plan will identify elements of
17 the closure that will be coordinated with the CERCLA remedial action and utilize the
18 alternative requirements of [WAC 173-303-610](#)(1)(e), where appropriate. Following
19 completion of closure activities in coordination with the CERCLA remedial actions, the
20 Permittees, concurrent with submission to the lead regulatory agency will submit a
21 Permit modification request to attach Addendum H, Closure , which will demonstrate
22 compliance with the requirements of [WAC 173-303-610](#), [WAC 173-303-630](#)(10),
23 [WAC 173-303-640](#)(8), and [40 CFR 264.1102](#), incorporated by reference by
24 [WAC 173-303-695](#) for the containers, tank systems, and containment buildings identified
25 in Addendum A, unless these requirements are replaced through the provisions of [WAC](#)
26 [173-303-610](#)(1)(e).

27 **V.24.L POST CLOSURE**

28 **V.24.L.1** Reserved

29 **V.24.M CRITICAL SYSTEMS**

30 Reserved.

31 **V.24.N RESERVED**

32 **V.24.O CONTAINERS**

33 **V.24.O.1** Container Management Standards

34 The Permittees will maintain documentation of and the location of the containers stored
35 in Cell 4 of the 221-B Building according to Permit Condition V.24.A in the Hanford
36 Facility Operating Record, B Plant Complex file, as required by Permit Condition II.I.2.
37 [[WAC 173-303-630](#)(3)]

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39 **V.24.P CONTAINMENT BUILDINGS**

40 **V.24.P.1** The Permittees will maintain a certification by a qualified professional engineer that the
41 B Plant Containment Building documented in Addendum C, Section C.1.3.4, meets the
42 requirements of [40 CFR 264.1101](#)(a) and (c)(1), incorporated by reference by
43 [WAC 173-303-695](#). [[40 CFR 264.1101](#)(c)(2), incorporated by reference by

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[WAC 173-303-695](#)]. The Permittees will maintain this certification in the Hanford Facility Operating Record, B Plant Complex File required by Permit Condition II.I.2. [\[40 CFR 264.1101\(c\)\(2\)](#), incorporated by reference by [WAC 173-303-695](#)].

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