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ADDENDUM K
POSTCLOSURE PLAN

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ADDENDUM K

POSTCLOSURE PLAN

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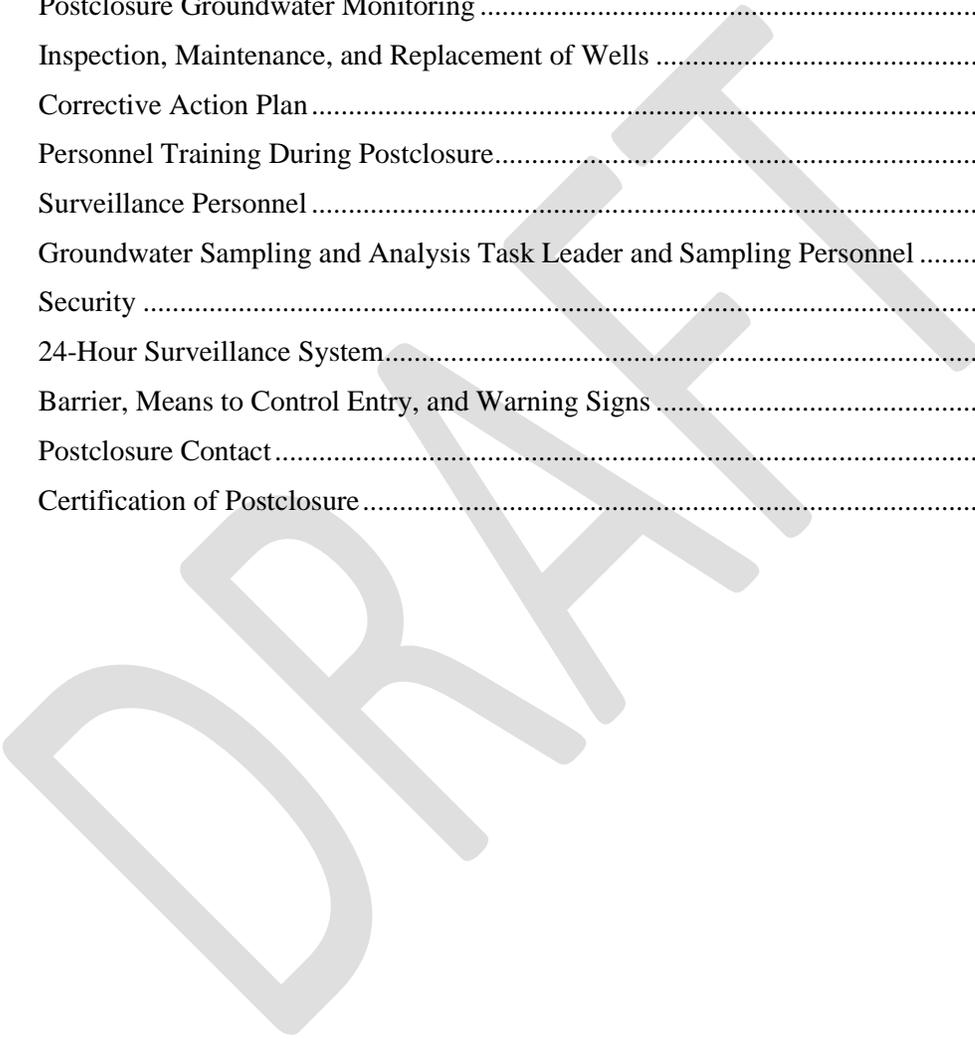
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1 **K POSTCLOSURE PLAN**

2 The 1324-N Surface Impoundment and 1324-NA Percolation Pond was closed per the closure plan in
3 Addendum H and details of the closure activities is in the "Cleanup Verification Package/Clean Closure
4 Report for the Soil Column of the 120-N-1 and 120-N-2 Dangerous Waste Treatment and Disposal Sites
5 and the 100-N-58 Site (CVP-2001-00021, Rev. 0). The IQRPE certification was submitted to Ecology on
6 February 7, 2003.

7 The soil column has been demonstrated to be able to meet clean closure standards under MTCA Method
8 B. However, sulfate concentrations exceed MTCA Method C groundwater protection standards because
9 MTCA Method B and Method C standards are identical when the basis is a federal drinking water
10 standard, as is the case with sulfate.

11 Units where contamination exceeds MTCA Method C may be required to close as a landfill. However, as
12 part of this postclosure plan, DOE/RL-96-39, Rev. 1, Attachment B-6 presents a demonstration that a
13 landfill cover is not required over the 1324-N and 1324-NA units and therefore modified closure is the
14 appropriate closure option for these units. The amount of clean soil meeting MTCA Method B cleanup
15 standards that will remain at the closed 1324-N and 1324-NA units would prevent a downward driving
16 force of precipitation that could contribute to further degradation of the groundwater. DOE/RL-96-39,
17 Rev. 1, Attachment B-6 shows that precipitation would not reach groundwater for over 200 years.
18 Because the soil column has been determined to be clean, and no downward driving force for further
19 groundwater contamination exists, there would be no need for a landfill cover system at 1324-N and
20 1324-NA.

21 **K.1 Institutional Controls**

22 No soil contamination that would present a hazard from direct exposure remains at 1324-N and 1324-NA.
23 Therefore, no measures are required to prohibit or limit access at the surface. For example, fences or
24 barriers will not be required.

25 Institutional controls are required to be maintained in order to ensure that groundwater is not used as a
26 drinking water source. Because DOE-RL will maintain control over this site for the near future, it is not
27 anticipated that additional actions will be required to limit controls over groundwater usage. Should
28 groundwater use restrictions be required after DOE-RL relinquishment of the area, appropriate
29 institutional controls will be established.

30 **K.2 Groundwater Monitoring Postclosure Requirements**

31 **K.2.1 Postclosure Groundwater Monitoring**

32 During the postclosure period, monitoring of groundwater will continue under a corrective action program
33 in accordance with WAC 173-303-645(11). A groundwater-monitoring plan will be developed for
34 1324-N and 1324-NA and implemented prior to incorporation of this postclosure plan into the Permit.

35 **K.2.2 Inspection, Maintenance, and Replacement of Wells**

36 Each time a well is sampled, the wellhead and associated structures are inspected. Problems with the
37 pump or with the sample (e.g., excessive turbidity) are also noted. Repairs are made according to
38 approved contractor procedures. Subsurface inspection and maintenance is performed on a 3- to 5-year
39 schedule, or as needed to repair problems identified during sampling.

40 If a monitoring well becomes unsuitable for use, the monitoring program will be reevaluated to determine
41 if a new or existing well should be substituted.

42 **K.3 Corrective Action Plan**

43 Because the groundwater monitoring data continues to show exceedences of sulfate concentrations above
44 the secondary drinking water standard (250 mg/L), corrective action to remove or treat the sulfate will be
45 required. Corrective actions will be determined in a ROD for the 100-NR-2 OU. The sulfate plume is
46 described in the DOE/RL-95-111, *Corrective Measures Study for the 100-NR-1 and 100-NR-2 Operable*

1 *Units*, Section 3.3.3.2, Nature and Extent of Contamination. Alternatives for its remediation are presented
2 and analyzed in DOE/RL-95-111, Sections 5 through 7. A Proposed Plan and ROD for the 100-NR-2 OU
3 will determine any corrective actions required to remediate the sulfate plume.

4 **K.4 Personnel Training During Postclosure**

5 This section describes the training of personnel required to complete postclosure care requirements
6 contained in this closure plan and the Permit. It is intended to supplement the training plan currently in
7 place and identified in DOE/RL-96-39, Rev. 1, Attachment B-4. A brief description of how training will
8 be designed to meet job tasks is presented below.

9 **K.4.1 Surveillance Personnel**

10 The following outline provides potential information on classroom or on-the-job training that surveillance
11 personnel will complete before conducting independent site surveillance at 1324-N and 1324-NA during a
12 postclosure period.

- 13 • Security inspections
- 14 • Location, integrity, and inspection of benchmarks, if appropriate
- 15 • Location, integrity, and inspection of groundwater wells
- 16 • Erosion damage
- 17 • Vegetative cover condition.

18 **K.4.2 Groundwater Sampling and Analysis Task Leader and Sampling Personnel**

19 This section describes the training of the groundwater sampling and analysis task leader and sampling
20 personnel required to complete postclosure care requirements as contained in this postclosure plan. A
21 brief description of how training will be designed to meet job tasks is presented below.

22 The sampling and analysis task leader or delegate and samplers will be responsible for:

- 23 • Monitoring and reporting on groundwater well security and maintenance
- 24 • Collecting groundwater level data
- 25 • Collecting , packaging, and shipping groundwater samples to field and offsite laboratories
- 26 • Sampling and monitoring equipment operation and maintenance
- 27 • Providing sample chain of custody to the laboratory.

28 The training of the sampling and analysis task leader and sampling personnel will receive either
29 classroom instruction or on-the-job training. Sampling and analysis personnel will be trained to perform
30 these functions in accordance with the *Hanford Analytical Services Quality Assurance Requirements*
31 *Documents* (DOE-RL 1996). A person successfully completing the required training courses will be
32 qualified as a groundwater sampler and/or task leader. All personnel will undergo training and at least an
33 annual review for required courses.

34 **K.5 Security**

35 **K.5.1 24-Hour Surveillance System**

36 The 100 Area will remain an area controlled by the DOE-RL for the near future. These areas will be
37 under 24-hour surveillance by Hanford Patrol protective force personnel.

38 **K.5.2 Barrier, Means to Control Entry, and Warning Signs**

39 No direct exposure hazards remain at 1324-N and 1324-NA. However, roadways to the unit and site
40 access will remain administratively restricted to use by authorized personnel only. Access to the
41 100-N Area from the Columbia River is restricted by posted federal warning signs.

42 **K.6 Postclosure Contact**

43 The DOE-RL will be the official contact during the postclosure period at the following address:

1 Director, Office of Environmental Services *
2 U.S. Department of Energy
3 Richland Operations Office
4 P.O. Box 550
5 Richland, Washington 99352

6 *or its equivalent should there be a future reorganization at DOE-RL

7 **K.7 Certification of Postclosure**

8 No later than 60 days after completion of the postclosure care period, the DOE-RL will submit to Ecology
9 a certification of completion of postclosure care. This certification, stating that postclosure care for the
10 unit was performed in accordance with the approved closure plan, will be signed by DOE-RL and an
11 independent registered professional engineer. The certification will be submitted by registered mail or an
12 equivalent delivery service. Documentation supporting the independent registered professional engineer's
13 certification will be supplied upon request of the regulatory authority.

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