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PART VI, POSTCLOSURE GROUP 4 CONDITIONS
1324-N/NA SURFACE IMPOUNDMENT & PERCOLATION POND

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PART VI, POSTCLOSURE GROUP 4 CONDITIONS

1324-N/NA SURFACE IMPOUNDMENT & PERCOLATION POND

UNIT DESCRIPTION

The 1324-N Surface Impoundment (also known by WIDS number 120-N-2) and 1324-NA Percolation Pond (also known by WIDS number 120-N-1) are two units included in the 100-NR-1 operable unit (OU). Addendum A contains two Part A permits, one for the 1324-N Surface Impoundment and one for the 1324-NA Percolation Pond.

These RCRA units, and adjacent non-RCRA ponds, comprised the cascading corrosive effluent treatment and disposal system for 163-N Demineralization Plant and 183-N Filtered Water Plant. 1324-NA operated continuously from 1977 until 1991 while 1324-N operated from 1986 until 1988. Reports on quantities of effluent discharged to 1324 N & NA vary through the life of the combined unit but conservative estimates are approximately 1,500,000,000 pounds of corrosives waste (D002) were treated and disposed annually.

1324-NA Percolation Pond

The 1324-NA was an unlined man-made pond (earthen percolation unit) used to treat and dispose of corrosive effluent wastes from 163-N Demineralized Water Plant, 183-N Filtered Water Plant and 1324-N Surface Impoundment at varying times. From 1977 until 1983 the system operated as a cascade in which fines dropped out in settling ponds and effluent flowed through the ponds and percolated into the soil column. Dredging was done frequently to improve percolation.

In 1983 the entire treatment and disposal system was reconfigured:

- One of the adjacent non RCRA ponds was backfilled
- Another non RCRA pond (130-N-1) was built to solely accept 183-N Filtered Water Plant waste
- 1324-NA pond was enlarged from 4.5 million L (1.2 million gallons) to 11.4 million L (3 million gallons). The bottom area increased from 850m² (9,200ft²) to approximately 27,000m² (29,000ft²) to accept all remaining waste from 163-N Demineralization Plant.

1324-N Surface Impoundment

The 1324-N Surface Impoundment was a lined pond with two 45-mil Hypalon™ liners and a leachate collection system. It was built on the location of the previously backfilled pond. It was used to treat corrosive effluents from 163-N Demineralization Plant prior to discharge to 1324-NA Percolation Pond. 1324-N measured 43m (140ft) by 23m (75ft) at the surface and sloped to 24m (80ft) by 4.6m (15ft) at the bottom with a depth of 4.6m (15ft). 1324-N Surface Impoundment had a design capacity of 1,514,160 L (4000,000 gallons) per day. 1324-N Surface Impoundment operated from 1986 until 1988 when it was replaced by the Elemental Neutralization Unit installed in 163-N Demineralization Plant.

This postclosure group comprises both 1324-N&NA and the pipelines to the units and between the units.

LIST OF ADDENDA

- | | |
|------------|---|
| Addendum A | Part A Form |
| Addendum B | Sampling and Analysis Plan – Reserved |
| Addendum C | Process Information – Reserved |
| Addendum D | Groundwater Monitoring Plan |
| Addendum E | Security Requirements - Reserved |
| Addendum F | Preparedness and Prevention Plan – Reserved |
| Addendum G | Personnel Training- Reserved |
| Addendum H | Closure Plan and Post-Closure Plan |

1 Addendum I Inspection Schedule – Reserved

2 Addendum J Contingency Plan – Reserved

3 **DEFINITIONS**

4 Reserved

5 **ACRONYMS**

6 Reserved

7 **VI.4.A COMPLIANCE WITH PERMIT CONDITIONS**

8 The Permittees will comply with all permit conditions in this Chapter and its addenda
9 with respect to the applicable requirements in Part I and Part II of the Hanford Facility
10 Dangerous Waste Permit.

11 **VI.4.B POST-CLOSURE CARE AND MAINTENANCE**

12 **VI.4.B.1** The Permittees will comply with the post-closure plan in Addendum H.

13 **VI.4.B.2** The Permittees will submit a revised, update postclosure plan 6 months after the Record
14 of Decision is issued for the 100-NR-1 Operable Unit that includes: VI.4.B.2.a A
15 design for a final cover per [WAC 173-303-650](#)(6)(a)(ii), or

16 **VI.4.B.2.a** A technical report that could justify Ecology granting alternative requirements under
17 [WAC 173-303-610](#)(1)(e).

18 **VI.4.C GENERAL WASTE MANAGEMENT REQUIREMENTS**

19 **VI.4.C.1** All waste analysis required by this chapter will be conducted according to the approved
20 sampling and analysis plan in Addendum D.

21 **VI.4.C.2** Changes to the analytical methods used in this permit will require prior Ecology approval
22 according [WAC 173-303-830](#).

23 **VI.4.D GROUNDWATER MONITORING REQUIREMENTS FOR REGULATED UNITS**

24 **VI.4.D.1** Permittees will submit a revised integrated groundwater monitoring plan for the 100-NR-
25 2 operable unit in accordance with the requirements in [WAC 173-303-610](#)(8) and [-650](#)(6)
26 6 months after the Record of Decision is issued for the 100-NR-1 Operable Unit.

27 **VI.4.D.2** The requirements and schedules for performance monitoring for the 100-NR-2 operable
28 unit, to be included in the 100-NR-2 RD/RA Work Plan, are incorporated herein by
29 reference, under the terms of Permit.

30 **VI.4.D.3** Permittees will comply with the interim status groundwater monitoring plan contained in
31 Addendum D.

32 **VI.4.D.3.a** In addition to the requirements of Permit Condition VI.4.D.3, Permittees shall also
33 include sampling for:

34 **VI.4.D.3.b** Metals (unfiltered) including, but not limited to barium, chromium, chromium VI,
35 copper, lead, manganese, mercury, and zinc.

36 **VI.4.D.3.c** Anions including, but not limited to chloride, nitrate, and sulfate.

37 **VI.4.D.4** Permittees is required to sample wells as described in Addendum D three times per year.

38 **VI.4.D.5** Permittees shall evaluate the effectiveness of the 100-NR-2 remedy for groundwater.

39 **VI.4.D.6** Permittees shall summarize all evaluations in the Annual Hanford Site Groundwater
40 Monitoring Report.

1 **VI.4.E RECORDKEEPING AND REPORTING**

2 The Permittees will place documentation of all work conducted pursuant to this Chapter
3 including results of all monitoring, testing, or analytical work and associated quality
4 assurance and quality control data in the Hanford Facility Operating Record, as required
5 by Permit Condition II.I.2. [[WAC 173-303-380](#)]

6 **VI.4.F SECURITY**

7 The Permittees will post signs at points surrounding the 1324-N/NA Surface
8 Impoundment & Percolation Pond stating the following (or an equivalent legend):
9 Danger – Unauthorized Personnel Keep Out. These signs will be written in English,
10 legible from a distance of 7.6 meters (25 feet), and visible from all angles of approach.
11 [[WAC 173-303-310](#)(2)(a)]

12 **VI.4.G PREPAREDNESS AND PREVENTION**

13 Reserved

14 **VI.4.H CONTINGENCY PLAN**

15 Reserved

16 **VI.4.I INSPECTIONS**

17 **VI.4.I.1** The Permittees will follow the inspection schedule in Permit Condition II and Addendum
18 I. In the event of any potential threats to human health or the environment, the Permittees
19 will increase inspections to quarterly until the threats are removed.

20 **VI.4.J TRAINING PLAN**

21 The Permittees will comply with the training requirements as described in Permit
22 Condition II.C (Personnel Training) and Permit Attachment 5 (Hanford Facility
23 Personnel Training Plan).

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