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**FACT SHEET**  
**PART VI, POST-CLOSURE UNIT GROUP 1, 300 AREA PROCESS TRENCHES**

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3 **UNIT DESCRIPTION**

4 The 300 Area Process Trenches (300 APT) unit consists of two trenches. Each trench is 1500 feet long,  
5 15 feet deep, and 10 feet wide at the bottom. They are about 1000 feet from the Columbia River, a few  
6 miles north of Richland, Washington.

7 The 300 APT started receiving waste in 1975. They received process effluents from the uranium fuel-  
8 making facilities. Waste from the 300 Area laboratories was also discharged to the trenches. The  
9 trenches had no outlet. All of the effluent either infiltrated the soil column or evaporated.

10 The 300 APT gained Resource Conservation and Recovery Act (RCRA) interim status in 1985. The  
11 Permittees used administrative controls to stop discharges to the unit. Discharges to the 300 APT  
12 permanently ended in December 1994, meeting Tri-Party Agreement Milestone M-17-10.

13 **TYPE AND QUANTITY OF WASTE**

14 There are no accurate records available on the quantity of waste disposed to the 300 APT. The design of  
15 the trenches was for 3-million gallons per day of waste water. Much of the waste water was out of the  
16 scope of the permit (radioactive rather than dangerous waste).

17 The Permittees also disposed of dangerous waste in the trenches. This waste included discarded  
18 chemicals, corrosive waste, chromium, and spent solvents.

19 **BASIS FOR PERMIT CONDITIONS**

20 This permit is intended to protect human health and the environment while ensuring proper management  
21 of contamination at the 300 APT. The permit addenda are incorporated into this permit and are  
22 enforceable by reference.

23 We base the conditions and addenda for the 300 APT on the Hanford Facility Dangerous Waste Permit,  
24 Revision 8C. The permit includes requirements for complying with environmental standards and  
25 maintaining and modifying the permit. The permit conditions address specifics such as groundwater  
26 monitoring and post-closure activities.

27 **CLOSURE**

28 The Permittees submitted a certification of closure on July 9, 1998. It stated that groundwater  
29 contamination from the trenches still exceeded cleanup standards. On August 10, 1998 Ecology accepted  
30 the certification. The 300 APT then moved into post-closure status.

31 **CORRECTIVE ACTION REQUIREMENTS**

32 The Permittees requested a permit modification to incorporate the post-closure plan. In the request, the  
33 Permittees noted that compliance wells still show contamination. Therefore, a corrective action  
34 groundwater-monitoring program is needed.

35 Ecology revisited the need for changing the permit to reflect corrective action. Instead, Ecology accepted  
36 the remediation of groundwater under a Comprehensive Environmental Response, Compensation, and  
37 Liability Act (CERCLA) Record of Decision (ROD). The Permittees were already remediating the  
38 groundwater in the area as part of remedial actions for the 300-FF-5 operable unit.

39 The initial 300-FF-5 interim action ROD selected monitored natural attenuation (MNA), combined with  
40 institutional controls, as the remedy for uranium in groundwater. The Permittees had believed the  
41 cleanup could be reached in 3 to 10 years. The MNA remedy has not achieved the desired goals. When  
42 the area did not meet remedial action objectives after 10 years, the Permittees started a Phase III remedial  
43 investigation / feasibility study.

1 A final CERCLA ROD will be written to address the uranium in groundwater to protect human health and  
2 the environment. This is consistent with state regulations that allow corrective action requirements to be  
3 replaced in an enforceable document [[WAC 173-304-645\(1\)\(e\)](#)].

4 The Permittees are continuing to characterize the extent of the organic contamination in groundwater.  
5 Ecology is basing post-closure requirements for the 300 APT on the standing commitment to implement  
6 corrective action for groundwater. These requirements include:

- 7 1. Continuing post-closure care in accordance with the permit (primarily based on the approved plan  
8 for post-closure care).
- 9 2. Conducting groundwater monitoring for dichloroethene, trichloroethene, and tetrachloroethene  
10 organics and uranium in groundwater in accordance with this permit.
- 11 3. Meet the requirements of RCRA through the CERCLA remedy.

12 The corrective action requirements of RCRA will be met when Ecology accepts the final CERCLA  
13 remedy for the 300-FF-5 operable unit impacted by the 300 APT.

#### 14 **GROUNDWATER MONITORING REQUIREMENTS**

15 Groundwater monitoring meets the corrective action requirements at the 300 Area Process Trenches. The  
16 Permittees base the monitoring on “*Groundwater Monitoring Plan for the 300 Area Process Trenches*”  
17 (WHC-SD-EN-AP-185), which has been in effect since 1997. The network has eight wells:

- 18 • 399-1-10A
- 19 • 399-1-10B
- 20 • 399-1-16A
- 21 • 399-1-16B
- 22 • 399-1-17A
- 23 • 399-1-17B
- 24 • 399-1-18A
- 25 • 399-1-18B

26 The Permittees must sample all wells (compliance and background) at least twice a year during the  
27 compliance period. Each time they sample the compliance wells, they will compare results to the  
28 groundwater concentration limits in the permit.

29 The Permittees must take samples when the river level is high (March, April, May, or June) and again  
30 when it is low (September, October, November, or December). This is a change to the groundwater  
31 monitoring plan which requires that the wells be sampled eight times per year.

32 Condition VI.1.C.2.2 supersedes the requirement in the groundwater monitoring plan and requires the  
33 Permittees to sample the wells twice a year. The original requirement, to sample eight times per year,  
34 was to better understand the plumes. Since the Permittees have collected data for 14 years, the plumes are  
35 well understood. We no longer need eight samples per year.

36 Due to the time and expense to reissue the groundwater monitoring plan issued in 1997 by a contractor no  
37 longer at Hanford, and because the CERCLA remedy will replace this plan, we decided not to revise the  
38 groundwater monitoring plan. Instead, we make this change by including a permit condition.

39 When the final CERCLA decision for 300-FF-5 is issued, Ecology will evaluate the groundwater  
40 monitoring requirements required by the CERCLA remedy. Based on that evaluation, Ecology has some  
41 options:

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- 1       • Ecology may determine the CERCLA-required monitoring is sufficient and revise the permit to  
2       reference the CERCLA-required monitoring plan.
- 3       • Ecology may determine the CERCLA-required monitoring plan is an appropriate replacement for  
4       the 1997 plan with specific additional sampling requirements and revise the permit accordingly.
- 5       • Ecology may determine the CERCLA-required monitoring plan is not adequate, and independent  
6       permit-required monitoring will be performed.

7       **CERTIFICATION OF POSTCLOSURE**

8       No later than 60 days after completing the post-closure period, the U.S. Department of Energy (USDOE)  
9       will submit a certification of completion of post-closure care signed by both USDOE and an independent  
10      qualified registered professional engineer. This document will certify that post-closure for the unit was  
11      performed in accordance with the approved closure plan.

12      **REQUESTED VARIANCES OR ALTERNATIVES**

13      There are no requested variances or alternatives for 300 APT.

14      **STATE ENVIRONMENTAL POLICY ACT (SEPA)**

15      The SEPA determination for 300 APT is in the Hanford-Wide Permit Fact Sheet.

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